Volume 39 . Issue 1 September 2020 ISSN : 2231 - 3265

International Journal of Health, Physical Education & Computer Science in Sports

A Peer Reviewed (Refereed) International Research Journal
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Special Edition

INTERNATIONAL VIRTUAL CONFERENCE 2020

22nd & 23rd August

DIGITAL TEACHING, TRAINING & COACHING

AN APPROACH TO PHYSICAL EDUCATION & SPORTS SCIENCES

Collaboration With

International Federation of Physical Education, Fitness & Sports Science Association

Organized By

Government First Grade College - K G F - Kolar - Karnataka. &

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International Journal of Health, Physical Education and Computer Science in sports ISSN 2231-3265 (On-line and Print) ISRA Journal Impact factor is 6.997. Journal published Quarterly for the months of March, June, September and December. IJHPECSS is refereed Journal. Index Journal of Directory of Research Journal Indexing, J-Gate, 120R etc.

International Journal of Health, Physical Education and Computer Science in Sports is multidisciplinary peer reviewed journal, mainly publishes original research articles on Health, Physical Education and Computer Science in Sports, including applied papers on sports sciences and sports engineering, computer and information, health managements, sports medicine etc. The International Journal of Health, Physical Education and Computer Science in sports is an open access and print International journal devoted to the promotion of health, fitness, physical Education and computer sciences involved in sports. It also provides an International forum for the communication and evaluation of data, methods and findings in Health, Physical education and Computer science in sports. The Journal publishes original research papers and all manuscripts are peer review. Index Journal of Directory of Research Journal Indexing and J-Gate etc. The Indian Federation of Computer Science in Sports has been set up the objectives of Dissemination of scientific knowledge concerning computer science in sport and Physical Education. Providing a forum for the exchange of ideas among the Physical Educationists,Coaches,Sports Experts Etc. It is a Peer Reviewed (Refereed) International Research Journal.

Publisher
Indian Federation of Computer Science in sports,
www.ijhpecss.org and www.ifcss.in under the auspices of International Association of Computer Science in sports.
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PREFACE

The Government First Grade College, K G F and Smt.G B A Government First Grade College, Shiggaon is humbled and privileged to organize an International Virtual Conference on "Digital Teaching, Training and Coaching - An Approach to Physical Education & Sports sciences" in collaboration with the International Federation of Physical Education, Fitness and Sport Science Association (IFPEFSSA).

This virtual conference is a sincere effort to address the sports science and physical education as an inseparable component for the digital era. This is first of its kind – virtual conference. This conference has paved way for digital presentation. We gladly place on record that the research papers presented will be published in the International Journal of Health, Physical Education and Computer Science in Sports, (IJHPECSS) A Peer Reviewed International Research Journal.

On behalf of the convenors we heartily welcome and render our heartfelt thanks to the International Federation of Physical Education, Fitness and Sport Science Association President, Prof. Rajesh Kumar and Prof. L.B. Laxmikanth Rathod, General Secretary for associating with us in organizing this mega event.

We also extend our sincere thanks to the resource persons across the world in imparting their knowledge, educationists, participants and presenters for contributing for this virtual conference.

Department of physical education and sports extend their heartfelt thanks to our chief patrons Prof. M. Krishnamurthy, Principal, Government First Grade College, K G F and Prof. M.B. Nagalapur, Smt.G.B.A Government First Grade College, Shiggaon and staff for their implicit trust on us.

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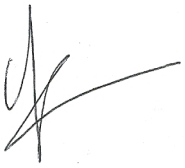
Prof. Rajesh Kumar

President, International Federation of Physical Education, Fitness and Sports Science Association

MESSAGE

International Federation of Physical Education, Fitness and Sports Science Association with great pleasure extend the warmest greetings to the Organizers, Delegates and Speakers of the International Virtual Conference on "Digital Teaching, Training & Coaching - An Approach to Physical Education & Sports Sciences" 22nd and 23rd August 2020 Organized by Government First Grade College, K G F - Kolar - Karnataka. & Smt. G.B. Ankalkoti Govt. First Grade College, Shiggaon - Haveri - Karnataka. This Virtual Conference will provide a platform to all the Professors, Sports Scientists, Physical Education Teachers and other participants to share their views and promote the knowledge in the field of Physical Education and sports at the International Level. I wish the Organizers a grand success.



Prof. Rajesh Kumar, President

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Prof. L.B. Laxmikanth Rathod

Gen. Secretary, International Federation of Physical Education, Fitness and Sports Science Association

MESSAGE

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Dr. Sundar Raj Urs.

Former Principal, University College of Physical Education, Regisrar (Evaluation) Bengaluru North University, I/C Finance Officer, Bengaluru North University, I/C DIRECTOR, Bangalore University

MESSAGE

It brings me a great pleasure to know that the organizing committee is publishing the original research work of the paper presented at the International Virtual Conference on Digital Teaching, Training & Coaching – An Approach to Physical Education & Sports Sciences by Government First Grade College, Kolar Gold Fields – Karnataka & Smt. G.B.A Govt. First Grade College, Shiggaon – Haveri – Karnataka in collaboration with International Federation of Physical Education, Fitness & Sports Science Association from 22nd & 23rd August 2020.

I am happy to know that more than 125 research papers will be presented by the Research Scientists, Coaches, Physical Education Professionals & other aspirants, not only in India and also across the world in this virtual conference. And also all the research papers will be published in the International peer reviewed (Refereed) Journal is an excellent sign from the point of the academic endeavors; I appreciate each and every participants of this virtual conference a great success. Further I congratulate both the Principal Prof.M.Krishnamurthy & Prof.M.B.Nagalapur and Conveners Lt. Shivakumar.K.R & Dr.Chandrashekar.C for their innovative ideas of organizing this conference through virtual mode. This could only possible because of pandemic, this kind of virtual conference and webinars definitely going to open the doors for the world for imparting and assimilation of knowledge across the globe.

Once again I wish the conference a great success.

With Regards,
Dr. Sundar Raj Urs

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Prof. M. Krishnamurthy

Principal, Government First Grade College, Kolar Gold Fields – Kolar – Karnataka

MESSAGE

I feel much delighted for that Government First Grade College, K G F. & Smt.Gouramma.B. Ankalakoti Government First Grade College, Haveri in collaboration with International federation of Physical Education, Fitness & Sports Sciences Association, organized International Virtual Conference which will be held on 22nd and 23rd August 2020. On "Digital Teaching, Training and coaching an approach to Physical Education and sports".

The major purpose of this conference is to establish sports E-learning platform in order to provide athletic related teaching such as athletic teaching materials such as physical motions and exercise rules. The platform can integrate the multimedia teaching materials which include video and 2D Animation.

Multimedia contents of teaching materials not only increase the learning efficiency learning interesting especially in the area of physical education.

We hope that with the usage of physical education E-learning platform player's platform efficiently and foster self-leaning. Mutual help, cooperation by abiding norms of the play. It also aims to encourage athletics to learn and recreate new knowledge in the field.

I congratulate all the organizers, participants for the success of this conference.

Prof. M. Krishnamurthy

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Prof. M. B. Nagalapur

Principal, Smt. G B Ankalkoti, Government First Grade College, Shiggaon – 581 205,
Dist: Haveri Karnataka

MESSAGE

Greetings To All,

"If you can't do great things, Do the small things in a great way"
Like the saying, a small and rural college like ours is going organize a big event.

It's a matter of great pride for our college as our Physical Education department is organizing an International Virtual Conference on **"Digital teaching, training and coaching, an approach to Physical Education and Sports."**

This conference will definitely provide a nice platform for all the participants, scholars, delegates and experts in the field of Physical education and Sports to share exchange their views, ideas and it has to be concepts to pertaining to the theme of the conference.

In this context, the conference would definitely strive a bit further to meet the key challenges and innovations in the field of physical education and Sports.

I wish the conference a grand success.

Prof. M. B. Nagalapur

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Research Article

Impact of yoga ball training on physical fitness among college athletes

Lt. N. Ashok Babu[1], J. K. Sumangala[2]

[1]Physical Education Director, Government First College, Malur, Karnataka, India
[2]Assistant Professor, Department of Commerce, Government First College, Malur, Karnataka, India

ABSTRACT

The purpose of the study was to find out the effect of Yoga ball training on physical fitness among college athletes. To achieve this purpose of the study, ten college athletes were selected as subjects who were from the Government First Grade College, Malur, Karnataka. The selected subjects were aged between 18 and 22 years. The selected criterion variable such as physical fitness was tested on.

Keywords: Physical fitness, Psychological environment, Yoga ball

INTRODUCTION

We all need a yoga ball, at home, on the job, in class. Yoga balls are versatile and fun exercise tools that, despite their name, can be applied to so much more than the practice of yoga. You'll find them a regular fixture in fitness classes, rehabilitation centers and gyms. They are just as effective for core training in Pilates and will leave you with a stronger and firmer abdomen, back and butt.

Fitness can be conceived as the matching of the individual to his or her physical and social environment. The World Health Organization defined Fitness as "the ability to perform muscular work satisfactorily." In keeping with this definition, fitness implies that the individual has attained those characteristics that permit a good performance of a given physical task in a specified physical, social, and psychological environment. The components of fitness are numerous and are determined by several variables including the individual's pattern of living habits, diet, and heredity.

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USING A YOGA BALL

As an introduction to exercising on the ball, it is often recommended that one simply sit on one for 30 min a day and bounce lightly, continually finding, and maintaining balance on the ball.

Another recommended first step on the exercise ball is to find a neutral lumbar spine position.

- Slouch slightly on the exercise ball, rounding the lower and upper back
- Begin bouncing lightly on the exercise ball
- Allow the body to automatically find the straightened

posture, which promotes staying balanced while continuing to bounce on the exercise ball.

This balanced position on the exercise ball is also referred to as the center of gravity, where the upper body is balanced on a stable pelvic base. Even a slight change in this neutral posture position will change the center of gravity and require a correction to stay on the exercise ball. The stomach muscles are required to work the entire time to keep this balanced, neutral posture[1].

BENEFITS OF YOGA BALL

A primary benefit of exercising with a yoga ball as opposed to exercising directly on a hard flat surface is that the body responds to the instability of the ball to remain balanced, engaging many more muscles. Those muscles become stronger over time to keep balance.

A major benefit of using an unstable surface is the ability to recruit more muscle units without the need to increase the total load. The greatest benefit of moving an exercise onto an unstable surface is achieving a greater activation of the core musculature, exercises such as curl-up or push-up performed on a yoga ball. An unstable surface increases activation of the rectus abdominis and allows for greater activity per exercise when compared to a stable surface. Exercises such as a curl-up on an exercise ball yields a greater amount of electromyography (EMG) activity compared to exercises on a stable platform. Performing standard exercises, such as a push-up, on an unstable surface can be used to increase activation of core trunk stabilizers and, in turn, provide increased trunk strength and greater resistance to injury[2].

Performance outcomes are more likely to be achieved when what is done before and during a competition. They have been planned, practiced and shown to be successful. In contests, an athlete should never use new approaches, techniques, or strategies without first being tested, refined, and trained. An athlete should compete with only what is known and has been practiced.

Athletes can learn to think very clearly in physical activity. Training sessions need to combine thinking practice with physical practice to develop the skill of controlling one's thought so that it can be used in a competition. Yoga functioning should be trained to overcome physically stressful conditions.

1 http"//www.spine-health.com/treatment/physical-therapy/yoga-ball-uses

2 Anderson GS, Gaetz M, Holzmann M, Twist P. Comparison of EMG activity during stable and unstable push-up protocols. Eur J Sports Sci 2013;13:42-8.

At all times, in practices and competitions, an athlete should remain mentally calm. The initial stages of developing this capacity will require concentrated effort by the athlete.[3]

As more and more people become interested in health and fitness and realize that exercise is an essential part of keeping the body in good shape, all the various ways of keeping fit are increasing in popularity. Strongly enough, while women are supposed to be more concerned with their looks and their figures than man, the man have led the way in the new revival of interest in most forms of sport and exercise for fitness and general health. However, aerobics is one form of exercise which has really caught on among women and become one of the most popular ways of improving fitness and getting in shape mainly because its effective and it is great fun! And in aerobics, it is the women who are showing the men, the road to health, and fitness.

A yoga posture is usually called an Asana, literally mean "seat." Overtime the term Asana in the parlance of yoga became associated with the physical position or "posture" assumed by the yogin or the practitioner of yoga.

Yogasanas have been practiced in India, since time immemorial to maintain the physical fitness and also to cure certain ailments or diseases. It is identified that each asana in yoga has a different effect and can be practiced to get specific relief. To be precise and specific in selection of the yogasanas for the experiment, the researcher specifically depended on the protocols of asanas (series of asanas) recognized by various eminent yoga specialists.

Yoga eliminates stress and strain; it improves and increases physical and mental fitness. Physical fitness prepares the body to perform strenuous activity without getting fatigue. Mental fitness prepares the mind to face tough tasks and challenges[4].

Most frequently, the core body muscles – the abdominal muscles and back muscles – are the focus of yoga ball fitness programs.

Health-Related Fitness Variables

- Cardio vascular endurance
- Body composition
- Flexibility.

Table 1 shows that the pre-test means of yoga ball, up are 2420.50, 2425, 2410.50, and 2400.50, respectively. The

3 Rushall BS. Yoga Skills Training for Sports. Springvalley, CA: Sports Science Association; 1995. p. 8.1-8.3.

4 Morehouse LE. Yoga and Health. New York: McGraw Hill Book Co.; 1982. p. 55.

Table 1: Analysis of covariance of data on physical fitness of yoga ball training on physical fitness

Test	YTG	PITG	CTG	CG	Source of variance	Sum of squares	df	Mean squares	Obtained "F" ratio
Pre-test									
Mean	2420.50	2425.00	2410.50	2400.50	B:	157945.17	3	52648.39	0.96
SD	8.73	9.65	10.49	12.38	W:	3066423.04	56	54754.34	
Post-test									
Mean	2845.50	2842.50	2954.50	2425.50	B:	766434.36	3	255478.12	4.86*
S.D.	7.67	10.72	10.67	12.19	W:	2945166	56	52592.25	
Adjusted post-test									
Mean	2860.50	2840.50	2968.50	2410.50	B:	21.533	3	82457.48	40.26*
					W:	12.352	55	2048.15	

*Significant at 0.05 level of confidence. The table value for significance at 0.05 level with df 3 and 56 and 3 and 55 are 3.16 and 3.03, respectively

obtained "F" ratio of 0.96 for pre-test means is less than the table value of 3.16 for df 3 and 56 required for significance at 0.05 level. The post-test means of yoga ball, training groups, and control group are 2845.50, 2842.50, 2954.50, and 2425.50, respectively. The obtained "F" ratio of 4.86 for post-test mean is more than the table value 3.16 for df 3 and 56 required for significance at 0.05 level.

CONCLUSIONS

It is concluded from the study that yoga ball training is having a great impact on the physical fitness of selected college athletes. We all need yoga ball. At home, on the job, in class.

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Volume 39 • Issue 1 ISSN 2231-3265

International Virtual Conference on
"Digital Teaching, Training & Coaching - An Approach to Physical Education & Sports Sciences"
22nd and 23rd August 2020

Organized by
Government First Grade College, K G F - Kolar - Karnataka. &
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International Journal of Health, Physical Education and Computer Science in Sports
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Research Article

Role of selected anthropometric variables on basketball passing ability

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INTRODUCTION

Basketball is a team sport in which two teams, most commonly of five players each, opposing one another on a rectangular court, compete with the primary objective of shooting a basketball (approximately 9.4″ [24 cm] in diameter) through the defender's hoop (a basket 18″ [46 cm] in diameter mounted ten feet [3.048 m] high to a backboard at each end of the court) while preventing the opposing team from shooting through their own hoop. A field goal is worth two points, unless made from behind the three-point line, when it is worth three. After a foul, timed play stops and the player fouled or designated to shoot a technical foul is given one or more one-point free throws. The team with the most points at the end of the game wins, but if regulation play expires with the score tied, an additional period of play (overtime) is mandated.

Players advance the ball by bouncing it while walking or running (dribbling) or by passing it to a teammate, both of which require considerable skill. On offense, players may use a variety of shots – the lay-up, the jump shot, or a dunk; on defense, they may steal the ball from a dribbler, intercept passes, or block shots; either offense or defense may collect a rebound, that is, a missed shot that bounces from rim or backboard. It is a violation to lift or drag one's pivot foot without dribbling the ball, to carry it, or to hold the ball with both hands then resume dribbling.

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The physical structure especially the height and length have definite have definite and decisive advantage in many games and sports. Similarly, segmental length of individual body parts especially height and arm length is of considerable advantage in certain games. Anthropometric measurements have revealed correction between body structure and physical characteristics and sports capabilities. This knowledge of mathematical correlation permits sports physicians to evaluate and to predict performance potentialities on the requirements of the sports and games, the prediction prognostics. The higher level performance of a basketball does not depend only on the mastery of technical, tactical aspects alone but also on the anthropometric measurements.

FITNESS FOR BASKETBALL

Fitness is a very important component of success in basketball. Of course you generally need to be tall and have good skills, but you also need the right physical fitness attributes. Players require excellent strength and power, running speed, balance and agility, as well as a good level of aerobic endurance fitness.

Objective of the Study

The objective of the study was to know the role of selected anthropometric measurements in passing ability of basket players.

METHODOLOGY

A total of 40 university level basketball players were randomly selected as subjects for this study. The anthropometric variables selected for this study were height, weight, fore arm length, leg length, upper arm girth, chest girth, thigh girth, and calf girth. Passing ability data were collected by conducting standardized basketball passing test. The statistical technique person product moment correlation was used to analyze the data.

RESULTS

The statistical analysis shows that there was a correlation between the selected anthropometric measurements and passing ability of basketball players.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Study the effect of self-concept, self-esteem, and self-actualization on job satisfaction of physical education teachers

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The self-concept is best conceived as a system of attitudes toward one self. All attitudes are import determinants of behavior, but attitudes concerning the self are much more basic than those in which the individual is less ego-involved and are, therefore, correspondingly more potent in deferring behavior.

A person's self is the sum of all that he possesses. This self includes among other things a system of ideas, attitudes, values and commitments, the attitudes, values, and commitments. The self is a person's total subjective environment. It is the distinctive center of experience and significance. The self-constitutes a person's inner world as distinguished from the outer would consisting of all other people and things.

Self-esteem is generally considered the evaluative component of the self-concept, a broader representation of the self that includes cognitive and behavioral aspects as well as evaluative or affective ones (Blascovich and Tomaka, 1991). Self-esteem describes how people think and feel about themselves, how they regard themselves, and the degree of worth they attribute to themselves.

Self-esteem lies at the heart of one's ability to learn, overcome setbacks and respond assertively to others. It is the foundation of all self-development and it is increasingly recognized as a vital area of the management development. A self-esteem result from an individual's continuing self-evaluation. In psychology, self-esteem reflects a person's overall self-appraisal of his or her own worth. Psychologists usually regard self-esteem as an enduring personality characteristic (trait self-esteem), though normal, short-term variations (state self-esteem) occur. Self-esteem, how positively or negatively we feel about ourselves, is a very important aspect of personal well-being, happiness, and adjustment (Brown, 1998; Diener, 2000). Self-esteem is generally considered as the evaluative component of the self-concept, a broader representation of the self that includes cognitive and behavioral aspects as well as evaluative or affective ones (Blascovich and Tomaka, 1991). Self-acceptance, self-love, a positive self-image, and the freedom to be ourselves; all these are crucial aspects of self-esteem.

Self-actualization is essentially a Humanist concept. Humanism as an approach in psychology is a kin to existentialism as a school of philosophy. It considers and accepts man as essentially worthy and good. It is from his low level of existence that man has risen to truly human levels. And education is meant to facilitate this elevation. In this chapter, an attempt has been made to analyze the views of Abraham Maslow, Kurt Goldstein, and Carl Rogers views regarding the process of self-actualization and to understand the role of education in its process.

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Self-actualization need not, however, take the form of creative activity characteristic of genius. A fine mother, an athlete, a good workman may be actualizing their potential abilities in doing well what they can do best. It is, nevertheless, true that self-actualizers are comparatively rare and disproportionately represented among the gifted. Most of us, apparently, are seeking the satisfaction of lower–order needs.

Job satisfaction is how content an individual is with his or her job. Scholars and human resource professionals generally make a distinction between affective job satisfaction and cognitive job satisfaction. Affective job satisfaction is the extent of pleasurable emotional feelings individuals have about their jobs overall and is different to cognitive job satisfaction which is the extent of individuals' satisfaction with particular facets of their jobs, such as, pay, pension arrangements, working hours, and numerous other aspects of their jobs.

REVIEW

Studies on Self-concept

Maikhuri and Kiran (1997) studied the self-concept of adolescents in relation to their academic achievement. Objective: The objective of the study was to investigate the self-concept of adolescents in relation to their academic achievement. Major Findings: (i) Academic achievement and self-concept were not significantly related. (ii) Significant relationship was observed with academic achievement of adolescents having high and low self-concept. (iii) No significant difference was found between academic achievement of adolescents belonging to high and low self-concept.

Ferrer (2012) studied "Influence of Emotional Intelligence on Self-Concept." The objective of this work is to study the impact of emotional intelligence and self-concept, being the sample size of 134 students. To measure emotional intelligence 24 and TMMS was used for self AF5 was used. The results released into the Cronbach's alpha show that all scales have adequate internal consistency. The data analysis showed that there is an influence of emotional intelligence on self-concept, emotional care being the dimension which has a higher weight.

Studies on Self-esteem

Meera and Prathapan (2008) conducted "A Study on Classroom Learning Environment and Self-esteem as Correlates of Achievement in Social Studies." The major objectives of the study were: (i) To study the main effect of classroom learning environment and "self-esteem" on achievement in social studies for the total sample and sub samples. (ii) To study the interaction effect of classroom learning environment and self-esteem on achievement in social studies for the total sample and sub samples. The study was conducted on a representative sample of 600 students from 16 schools of Thrissur district in Kerala. Stratified random sampling technique was used. The major findings were: (i) Achievement in social studies vary with regard to difference in their classroom learning environment. (ii) Achievement in social studies varies with regard to difference in their self-esteem. (iii) The main effect of classroom learning environment for boys is significant, that is, achievement in social studies of boys vary with regard to difference in their classroom learning environment. (iv) The main effect of self-esteem on achievement in social studies for the sub sample girls is found to be not significant. (v) Achievement in social studies of rural school pupils varies with regard to their classroom learning environment. (vi) The interaction effect due to classroom learning environment and self-esteem on achievement in social studies is found to be not significant for rural school pupils.

Kanmani and Annaraja (2009) conducted "A Study on Influence of Self-esteem and Awareness of ICT on Academic Achievement of M.Ed. Students." This study is designed to find out the influence of self-esteem and information and communication technology (ICT) on academic achievement of M.Ed. students. The sample consisted of randomly selected 42 M.Ed. students. Self-esteem inventory and Awareness of Information and Communication Technology tools were used to gather data. Multiple Correlation, Pearson Product Moment Correlation Co-efficient, t–test, and F test were used to analyze the data. The result clearly shows that there is a significant difference between the government-aided and university Department M.Ed. students' academic achievement; there is no correlation between self-esteem and awareness on information and communication technology, and there is no influence of self-esteem and awareness of information and communication technology and academic achievement.

Studies on Self-actualization

Bhagyavathy (1983) studied the studies in self-actualization. The main objective of the study was to investigate different levels of self-actualization among postgraduate students. The major findings were: (1) Persons who perceived themselves as belonging to a high level of self-actualization were directed more by internal than by external reinforcements in comparison with those who perceived themselves as belonging to a low level of self-actualization. (2) Persons belonging to a high level of self-actualization were more flexible and less rigid in their behavior than those belonging to a low level of self-actualization. (3) There were no significant differences between the high and the low self-actualization persons in seeking approval of others. (4) Persons belonging to a high level of self-actualization were more capable of accepting their own self with all its shortcomings and discrepancies than those belonging to a low level of self-actualization. (5) Persons belonging to a high level of self-actualization were more capable of accepting others for what they were than those belonging to a low level of self-actualization. (6) Persons belonging to a high level of self-actualization.

Rupinderjit Kaur Kamboj (2007) examined the relationship between emotional intelligence and self-actualization of secondary school teachers. The study was conducted on a sample of 1360 secondary school teachers (680 Males and 680 Females) from different rural, urban, and government and private secondary schools affiliated to Punjab School Education Board in the Punjab State. The tools used for the data collection were Emotional Intelligence Scale by Anukool Hyde, Sanjyot Pethe and Upinder Dhar, and Self- Actualization Inventory by K. N. Sharma. The study revealed that there is a positive and significant correlation between Emotional Intelligence and self-actualization of secondary school teachers. Therefore, it can be concluded that those teachers who have high emotional intelligence are more self-actualized than who have low emotional intelligence.

Studies on Job Satisfaction

Priya (2004) conducted a study on job satisfaction of women teachers of schools and colleges. The purpose of the study was to study the level of job satisfaction of women teachers of schools and colleges in general and individually. Four hundred women teachers served as sample. Job satisfaction questionnaire was used for data collection. For analysis mean, SD, and critical ratio was used. Major findings were the women teachers of high school, higher secondary and college showed high job satisfaction and there was no significant difference between the job satisfaction among women teachers in schools and colleges. Salim and Mustafa (2012) conducted a study to ascertain the role of emotional intelligence on job satisfaction and the effect of gender on the relationship between emotional intelligence and job satisfaction. The results of the study showed a significant positive relationship between emotional intelligence and job satisfaction and no effect of gender was observed on the relationship between the two variables.

The purpose of the present article was to examine the self-concept, self-esteem, and self-actualization of physical education teachers toward job satisfaction.

Objectives

The study was designed with the following objectives in view:

i. To investigate the effect of self-concept on the job satisfaction of physical education teachers.
ii. To investigate the effect of self-esteem on the job satisfaction of physical education teachers.
iii. To investigate the effect of self-actualization on the job satisfaction of physical education teachers.
iv. To investigate the interaction effect of self-concept X self-esteem on the job satisfaction of physical education teachers.
v. To investigate the interaction effect of self-concept X self-actualization on the job satisfaction of physical education teachers.
vi. To investigate the interaction effect of self-esteem X self-actualization on the job satisfaction of physical education teachers.
vii. To investigate the interaction effect of self-concept X self-esteem X self-actualization on the job satisfaction of physical education teachers.

Research Design

The study was a descriptive analysis with interaction effects of selected independent variables on criterion.

Tools Used

The tools used were: (i) Self-concept scale constructed by investigator; (ii) self-esteem inventory (SEI) constructed by Prasad and Thakur (1977) was adopted. (iii) Self-actualization constructed by K.N. Sharma was adopted; (iv) job satisfaction scale constructed by Saxena.

Sample

Six hundred government and private physical education teachers of Dharwad district were considered as the sample. The schools and teachers were selected using random sampling technique.

Statistical Technique

3-way analysis of variance (ANOVA) technique was used. It is an indication regarding the main effects and interaction effects of selected independent variables on dependent variable.

RESULTS

Interpretation

Significance of the obtained F_A, F_B, F_C, F_{AB}, F_{BC}, and F_{ABC} ratios was determined by referring to Table–F (Garrett, 1966, p. 466). The corresponding table F value for these factors is 3.87 with df 1 and 209 at 0.05 level and 2.14 with df 6 and 209 at 0.05 level.

1. The obtained F-value in respect of the Factor-A is 5.996 and the corresponding tabled F-value is 3.87. Since the obtained F-value is greater than the tabled F-value at 0.05 levels, the difference is significant. Therefore, the hypothesis is accepted.
2. The obtained F-value in respect of the Factor-B is 4.586 and the corresponding tabled F-value is 3.87. Since the obtained F-value is greater than the tabled F-value at 0.05 levels, the difference is significant. Therefore, the hypothesis is accepted.
3. The obtained F-value in respect of the Factor-C is 9.986 and the corresponding tabled F-value is 3.87. Since the obtained F-value is greater than the tabled F-value at 0.05 levels, the difference is significant. Therefore, the hypothesis is accepted.
4. The obtained F-value in respect of interaction between the Factor-A and B is 5.124 and the corresponding tabled F-value is 2.14. Since the obtained F-value is greater than the tabled F-value at 0.05 levels, the difference is significant. Therefore, the hypothesis is accepted.

Table 1: Interaction effect of self-concept, self-esteem, and self-actualization on job satisfaction scores

Sources of variance	df	SS	MSS	F-value	*P*-value	Significance
Main effects						
Self-concept (A)	1	134.5996	134.5996	5.996	3.87	Yes
Self-esteem (B)	1	127.7460	127.7460	4.586	3.87	Yes
Self-actualization (C)	1	219.9265	219.9265	9.986	3.87	Yes
Two – way Interactions						
SC X SE (A X B)	1	170.8644	170.8644	5.124	2.14	Yes
SC X SA(A X C)	1	173.9214	173.9214	4.126	2.14	Yes
SE X SA (B X C)	1	244.8866	244.8866	11.851	2.14	Yes
Three – way Interactions						
SC X SE X SA (A X B X C)	1	120.2936	120.2936	4.943	2.14	Yes

5. The obtained F-value in respect of interaction between the Factor-A and C is 4.126 and the corresponding tabled F-value is 2.14. Since the obtained F-value is greater than the tabled F-value at 0.05 levels, the difference is significant. Therefore, the hypothesis is accepted.
6. The obtained F-value in respect of interaction between the Factor-B and C is 11.851 and the corresponding tabled F-value is 2.14. Since the obtained F-value is greater than the tabled F-value at 0.05 levels, the difference is significant. Therefore, the hypothesis is accepted.
7. The obtained F-value in respect of interaction between the Factor-A X B X C is 4.943 and the corresponding tabled F-value is 2.14. Since the obtained F-value is greater than the tabled F-value at 0.05 levels, the difference is not significant. Therefore, the hypothesis is accepted.

CONCLUSION

It is concluded that self-concept, self-esteem, and self-actualization of physical education teachers have direct and interaction effects on their job satisfaction.

Implications

A satisfied happy physical education teacher is very likely to exert himself, work with enthusiasm, and deliver the goods more efficiently, and thereby make his pupils efficient, satisfied, enthusiastic, and happy. Likewise a dissatisfied physical education teacher is likely to make his pupils also dissatisfied in several aspects. Hence, the welfare of physical education teacher should be of supreme concern to the educational administrators, the government and the society. Although, the government has been doing moderately good work to enhance the prestige of the physical education teachers by increasing the salaries, much remains yet to be done.

The majority of the physical education teachers were dissatisfied with their profession in general. It is well known that a dissatisfied physical education teachers cannot perform their duty effectively. Hence, the government and management of the private schools should take up all possible steps to reduce the dissatisfaction vertically and control horizontally.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

A study on role of information technology and its contribution in sports and games

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ABSTRACT

The field of physical education and sports can make a significant contribution to the role that technologies play in our lives by carefully considering the benefits and liabilities of new information technologies on the whole person, body, as well as mind. Information technology play key role in the human being in particularly in field of sports and games, the use of technology in sports and games is growing rapidly. For instance, new devices are used for different reasons such as to help referees in decision-making and to quantify the athlete's performance during a game, thus helping the Coach to set the training program and the game strategy. It helps to avoid mistake in organization and administration of various sports and games at world level. Information technology in sports has established scientific discipline, Research activities, improve Learning and Coaching, Bio-Mechanical analysis, and field research have evolved. The contribution of technology in sports and games are Cricket, Athletics, and Basketball. Here are five exciting technologies being used in the sports industry, Instant Replay, Sensor Tools, Timing System, RFID Chips, and Equipment Development.

Keywords: Athletics, Basketball, Cricket, Information technology, Physical education, Sports and games

INTRODUCTION

Technology can be most broadly defines as the entities, both material and immaterial, created by the application of mental and physical effort to achieve some value. In the usage, technology refers to tools and machines that may be used to solve real world problems in sports and games. Technology has intrinsic in the development and advancement of sports; much like it has in other aspects of life. With significant advances in technology, players now receive competitive advantages from the use of certain sporting equipment, and many view this as anathema to the spirit of sport. Using latest trends of technology is making sports safer in a number of ways. For example, the evolution of smart helmets and other wearable tech allows for better monitoring of potentially traumatic injuries, which paves the way for more immediate and effective medical care.

Instant replay is an example of the remarkable technology being used in sports today. With this technology, officials are able to see exactly what happened, providing a second perspective on sports events. Instant replay is used in games such as cricket, American Football, Rugby, Soccer, and even in combat sports. Sensor tools are often used to analyze whether a goal is valid or not. It is often used in cases where the naked eye cannot truly tell if a ball went past the goal line. Different sports use varying sensor tools. For example, cricket's Hawk-Eye is also used to determine where the ball would have landed if it had

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not hit a player's foot. This establishes whether the ball was unfairly blocked from striking the wicket. On the other hand, tennis sensor tools use laser beams to determine whether the tennis ball went out of bounds or not. Sensor technologies help to accurately determine the position of the ball at a given time. Timing systems, nobody uses a stopwatch when timing a race anymore. This means that differences in reaction time no longer affect the precision and consistency of a racing even. In many races today, the starter pistol is linked to a clock. Once the pistol goes off, the clock immediately starts timing the race. On the other hand, swimming uses a touch pad placed at the finish lanes as well as wearable inertial sensors to determine performance. Many racing events also use laser beams and photographs to determine winners. The results of timing systems are often provided to the nearest thousand of a second. However, world and olympic records are only recorded to the nearest hundredth of a second. This technique was established to eliminate insignificant errors. RFID chips are often used to time individual contestants in an event. The devices use antennas that relay wireless signals. RFID chips are often used in long distance races to help broadcasters and viewers track the exact locations of contestants during a race. There are two types of chips used in races: Active and passive chips. Active chips have an in-built battery or power source and can determine the exact time a participant crosses a specific line. Passive chips can only be used with sensors placed in a mat because they do not have an in-built power source. Equipment development in sports and games safety is a key factor; equipment manufacturers have developed devices to reduce injuries on athletes. In the 2010 season, special helmets were used in the National Football League after several players experienced concussion injuries. The helmets were designed to absorb shock caused by collisions and protect athletes from suffering head and neck injuries. Similar technology is being used for games such as auto racing and hockey to enhance the safety of participants. Technology has taken over today's modern world. Many professional and amateur sports bodies have embraced new technologies featuring certain gears and gadgets to protect athletes and make it easier to officiate the games.

BENEFITS OF INFORMATION TECHNOLOGY IN PHYSICAL EDUCATION

Technology, in general, has positively reshaped physical education classes with apps, online videos, personal computer, laptop, Zoom app, Google Meets, and Google class room, using these online aides instructors create a more varied and dynamic classroom in modernization of world using technology to teach physical health allows educators to create more activities and show how important their goals are and how to achieve their goals in a stipulated time and with proper planning and better utilization of technology in physical education. Pedometers are probably one of the first examples that come to mind when discussing technology and physical activity. Heart rate monitors are used to measure a student's pulse while engaged in activities. The goal of physical education is to develop physically literate individuals who have the knowledge, skills, and confidence to enjoy a lifetime of healthful physical activity.

BENEFITS OF INFORMATION TECHNOLOGY CONTRIBUTION IN SPORTS AND GAMES

Increase accuracy in time measurements of sport performance. Enabling referees, umpires, and sport officials to make better decisions on rule infringements. Improvements in the design of sport equipment and apparel. Providing spectators with better viewing of sport performance. The game-changing benefits of technology in sports and games are weather control, improved field conditions, better viewing experience, better coaching and scouting, modernized training, and make the game fair.

The future technology of sport and games, technological innovation is a major driving force behind change in usage of latest trends in for better accuracy and fair play in sports and games. Technology is helping to build better sportsmen and women while keeping athletes safer in the field and enhancing the fan experience to improve decision-making and entertainment value technology has entirely revolutionized the manner in which we are able to design apparel and equipment. From shoes and uniforms to gloves, helmets, and sporting equipment is now more high-tech and high functioning.

Cricket

Is having the best of the technology on the field and off the field. By which we can take an accurate decision with the help of using different aides such as cameras different situations to take a decision about the game with a very fair decision by which fair game can be continued. Hawkeye, a computer system first used in 2001 for showing the path of the cricket ball. Snick-o-Meter, a very sensitive micro phone located in one of the stumps, which pick up the sound when ball nicks the bat.

Athletics

The increasingly high-tech tools used computer simulations, advanced video cameras, wind tunnels, and sophisticated mathematical and physics models that enable athletes to break down their physics models that enable athletes to break down their physical motions into their component parts to look for flaws or ways to improve.

Basketball

The NBA uses replay vision to review "last touch" decisions in the final 2 min of games and also to determine whether

players release the ball before the shot clock expires. Use of technology in basketball helps the referees to judge better helps the coaches to train better and finally helps the players to review and perform better in future matches.

CONCLUSION

The contribution of information technology plays an prominent role in for the development of physical education and it is also very essential to promote the friendly and fair play in sports and games by which we can see many changes and developments takes place to improve the standard of sports and games in today's millennium world teaching methodology and usage of proper technology to improve the standard of sportsmanship and quality of output of a good coach using scouting for the future development. Hence, my study says that The contribution of Information Technology is a rapidly growing and adopting new trends to change the future of world sports and games.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

A comparative study of aggression level between yoga persons and athletes

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INTRODUCTION

Yoga is a Sanskrit term meaning to join, unite or yoke together, and the essential purpose of yoga is to bring together body, mind, and spirit into a harmonious whole. The central methods of yoga are physical postures or "asanas" and movement, breathing techniques or "pranayama," and meditation. Yoga includes guidance on healthy lifestyle, eating habits, mental attitude, and Ayurvedic medicine is also part of the Yogic path to health and balance.

Athletics is a group of sporting events that involve competitive running, jumping, throwing, and walking. The most common types of athletics competitions are track and field, road running, cross country running, and race walking.

Sports offer an especially attractive research setting for those interested I the testing of prediction derived from various theories of human behavior, aggression, which is said to have its roots in the instinct of pugnacity, has for reaching social and psychological consequences for men's civilized life, possession, expansion, and domination are major underlying motives of aggression.

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METHODOLOGY

Buss and Perry aggression questionnaire test conducted to both yoga persons and athletes this test consists of 20 questions and each had 5 points with total of 100 points to score, and these are based on psychological aspects.

RESULTS

After completion of this test when compared to yoga persons, athletes have more aggressive and extremely characteristic in nature, where yoga persons had less aggressive has an extremely uncharacteristic in nature.

CONCLUSION

By this, we can conclude that athletes have more aggressive in nature when compared to yoga persons.

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Volume 39 • Issue 1 ISSN 2231-3265

International Virtual Conference on
"Digital Teaching, Training & Coaching - An Approach to Physical Education & Sports Sciences"
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Research Article

Self-talk in sportsman and its impact on competitive sports: Review study

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ABSTRACT

Self-talk is something which naturally done throughout waking hours. People are becoming more aware that positive self-talk is a powerful tool for increasing self-confidence and curbing negative emotions. People who can master positive self-talk are thought to be more confident, motivated, and productive. Self-talk plays an important role in sports. It serves as a powerful learning tool and self-regulatory strategy that players can use to facilitate the learning of new motor skills and enhance performance. Self-talk is the internal dialogue. It is influenced by subconscious mind, and it reveals thoughts, beliefs, questions, and ideas. Positive self-talk relates to the ability to overcome negative thinking. Those who practice positive self-talk are more likely not to suffer from negative thoughts. Positive self-talk allows performers to be more relaxed and focused. Negative thoughts will increase anxiety levels. In reverse, positive self-talk creates happiness and excitement that lead to successful performance. This study is focused on the role of self-talk in sports and performance enhancement.

Keywords: Benefits, Course of action, Performance, Positive self-talk

INTRODUCTION

If you want to become a career success, you need to react positively to the people and events you encounter – especially the negative people and events. Self-talk is the process, of which an individual may guide him/herself to accomplish a goal. Whether or not the goals are specific or broad, all goals are important to keep in realistic, attainable, measurable, and specific. Self-talk has been studied from the earliest days of research in the experimental psychology. In sport psychology, the cognitive revolution of the 1970s led researchers and practitioners to explore the ways in which self-talk affects performance. Recently, a clear definition of self-talk that distinguishes self-talk from related phenomena such as imagery and gestures and describes self-talk has emerged. Self-talk is defined as the expression of a syntactically recognizable internal position, in which the sender of the message is also the intended received. Self-talk may be expressed internally or out loud and has expressive, interpretive, and self-regulatory functions. Various categories of self-talk such as self-talk valence, overtness, demands on working memory, and grammatical form have all been explored.

Self-talk has been studied scientifically for almost as long as experimental psychology has been in existence, with researchers in the1880s taking an interest in understanding the nature and function of inner speech and the things people say to themselves

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(Reed, 1916). (Vygotsky's, 1986) cultural-historical psychology was one of the earliest theories in which inner speech/self-talk played a prominent role. He suggested that inner speech develops and becomes the medium of consciousness as children internalize culture and meaning in the form of language. Vygotsky asserted that the capacity for inner speech is necessary for purposeful and independent thinking and action (Yasnitsky *et al*., 2014).

In recent years, goal setting has shown to been one of the key components in athletic performance. This has been backed by both athletes themselves and more recently, sport scientific research. While knowing goals are important and setting them is a good first step, it is the more complex foundation of how that goal was developed which determines the outcome. Perhaps one of the most overlooked aspects of goal setting is the attitude of which one approaches a goal.

POSITIVE SELF-TALK

Self-talk is the internal narrative that holds about themselves. It generally thought to be a mix of conscious and unconscious beliefs and biases that we hold about ourselves and the world generally. Self-talk can be positive or negative and paying attention to which you most often sway toward and help start making proactive changes. Positive self-talk sees our internal narrative switching to ideas like "I can do better next time" or "I choose to learn from my mistakes, not be held back by them." Positive self-talk is about blocking negative thoughts. For example, develop awareness of how well you perform and praise yourself accordingly. Assess the impact of positive benefits to yourself both for mind and body.

One of the most prevalent hypotheses in the applied self-talk literature is that self-talk with a positive valence is best for sport performance (Tod *et al*., 2011). The underlying idea behind this hypothesis is that positive self-talk is linked to cognitive, motivational, behavioral, and affective mechanisms such that athletes who use positive self-talk are likely to decrease anxiety, improve concentration and focus, and perform better. Research testing the role of positive self-talk indicates that positive self-talk is effective in many circumstances but may not be ideal for everyone. Wood *et al*., 2009, found that participants with low self-esteem felt worse when using positive self-talk. Harvey, (Van Raalte *et al*., 2002), found that positive self-talk was correlated with worse golf putting accuracy. Van Raalte *et al*., 2000, studied competitive adult tennis players during tournament matches and found that only 1 player performed better after using positive self-talk, 2 players performed worse, and 15 players' point outcomes were unaffected by their self-talk.

Conroy and Metzler, 2004, explored the ways self-talk impacts cognitive anxiety in sports performance. They looked at state specific self-talk, so the way athletes spoke to themselves while failing, while succeeding, while wishing for success, and while fearing failure. They measured these alongside expressions of situation-specific trait performance anxiety; fear of failure, fear of success, and sport anxiety. They found the strongest results for self-talk associated with fear of failure and sports anxiety, essentially the athlete's experienced higher anxiety when using negative self-talk. Kendball and Treadwell, 2007, also explored the ways self-talk effects anxiety. They investigated self-talk as a predictor for anxiety in children with and without a diagnosis of an anxiety disorder. They found that reducing negative self-talk mediated substantial treatment gains in the children with a diagnosis.

NEGATIVE SELF-TALK

Unlike positive self-talk, negative self-talk is the use of negative words such as "cannot," "will not," "could have," and "should have." All of these phrases cast doubt and have shown to create increased somantic (physical) and cognitive anxiety (Hatzigeorgiadis and Biddle, 2011). Anxiety such as this creates debilitative performance systems such as increased heart rate, irregular breathing, self-doubt, and lack of focus.

KEYS TO DEVELOP POSITIVE SELF-TALK

Choose A Mantra

To get started with creating more positive self-talk, choose one of two mantras you can use during your training. This could be a simple affirmation, such as "I feel strong," or the mantra "Go, Go, Go," or another simple, positive phrase you can repeat over and over.

Practice Multiple Scenarios

Once you have developed the habit of repeating this phrase during practice to the point where it is automatic, start expanding the dialog so that you have familiar and comfortable statements for a variety of situations during your sport. For example, if you are cycling and reach a hill, you might say, "I'm a great hill climber," or "I've done this before and it's doable." If you get dropped from the pack you can say, "Anything can happen, and I'm definitely not out of this. Don't let up."

Create A Positive Mental Image or Visualization

The phrases and words you choose should be those that you can immediately call up and create a visual picture of yourself doing exactly what you say. The image along with the words is a powerful combination that creates a positive message tied to a belief.

Some Examples of Positive and Negative Self-talk

- Negative Statement – "I'll never be able to do this." Positive Statement – "I can and will accomplish anything I choose to do."

- Negative Statement – "I'm afraid I can't do this, so I won't even try." Positive Statement – "I will look my fears in the eye and do something. I will conquer them."
- Negative Statement – "I am stuck where I'm at." Positive Statement – "I have lots of choices. I can decide what I want.
- Negative Statement – "I'm afraid." Positive Statement – "I'm courageous and confident."
- Negative Statement – "I'm mad." Positive Statement – "I'm calm and determined."
- Negative Statement – "I'm pessimistic and hopeless." Positive Statement – "I'm optimistic and hopeful."
- Negative Statement – "I'm resentful over what I've lost or don't have." Positive Statement – "I'm grateful for what I do have."
- Negative Statement – "I don't care." Positive Statement – "I'm curious."
- Negative Statement – "No one will help me." Positive Statement – "Other people are supportive and will help me."
- Negative Statement – "I don't deserve to become a career success." Positive Statement – "I deserve to become a career success."

CONCLUSION

While there has been an extensive amount of research conducted surrounding positive versus negative self-talk, this review is meant to assist in familiarizing oneself with the importance of performance related talk. Positive self-talk has shown to improve performance not only during and after activity but also has shown to be a positive predictor of future performance satisfaction. On the other hand, negative self-talk has shown to increase anxiety and serves as a detriment to overall performance. The general benefits of positive self-talk have been demonstrated, but further research is needed to help clarify under what circumstances and for whom positive self-talk is most effective. The general benefits of positive self-talk have been demonstrated, but further research is needed to help clarify under what circumstances and for whom positive self-talk is most effective.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Mental toughness among taekwondo sports

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ABSTRACT

Mental toughness means ability to balance in one's daily living. In other words, toughness is a complex phenomenon depends on a set of familiarly personal, psychological, and social variables. Mental toughness is as an important feature as the physical health of a person to make him complex with balance mental disposition of the children to cope with life more effectively and productively. Good mental toughness depends on the good state of both mind and body. Each exerts a direct influence on the other, but due to the power of matter, good mental toughness is of supreme importance according to Hadfield (1952) mental toughness is the harmonious functioning of the whole personality.

INTRODUCTION

Mental Toughness

(Seller and Birrer) The roles of mental toughness increasingly recognized in the discussion about health. In this article, health is considered to be a dynamic balance between resources and potential risk factors. Sports and physical activity may represent resources that do not only contribute to an increased well-being but also to an improved self-concept as a cognitive representation of one's health status.

To study the most important aspect of players a means of promoting interpersonal, national and international understanding. It would provide clue whether players are truly fulfilling this much publicized purpose or the difference in their mental toughness status are defeating the fundamental purpose of players' promotion.

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Objectives

The objectives of the study are as follows:

- To examine the level of mental toughness between the taekwondo and non-taekwondo players of Kalaburagi District.
- To know the age factors influence on mental toughness of taekwondo and non-taekwondo players.

Hypothesis

- There would be significant difference between in the mental toughness level of taekwondo and non-taekwondo players of Kalaburagi District.
- There would be significant difference in the level of mental toughness between taekwondo and non-taekwondo players on age factor.

Factors

- Independent: Mental toughness.
- Dependent: Level of mental toughness age.

METHODOLOGY

The present investigation pertaining to "Mental Toughness among Taekwondo Sports" is in the frame work of ex-post facto research. The particulars of samples, tools, collection of data, and statistical techniques are given as under:

Sample

Keeping the objectives in view, appropriate research design is adopted. The sample for the study is drawn from the taekwondo and non-taekwondo players of Kalaburagi District 50 Taekwondo players and 50 non-taekwondo players were administered mental toughness scale to assess the differences in their mental toughness. The sample design is as under.

Distribution of Sample

S. No.	Taekwondo players	Non-taekwondo players	Total
1	50	50	100

Tools

1. Personal data schedule: This is framed to collect information regarding the personal and socio-demographic status of the sample.
2. Mental toughness scale developed by Dr. Jagadish and Dr. A.K. Srivastava was used in the present study. The inventory contains 54 questions. The responses are scored with the help of manual.

Collection of Data

The data were collected from the taekwondo and non-taekwondo players of Kalaburagi District who were administered the Mental Toughness scale during the level of competitions.

Analysis of Data

Table 1 and graph show the mean, SD, and t-value of taekwondo and non-taekwondo players in relation to their level of mental toughness. The mean and SD of taekwondo players is 127.20 and 15.55, respectively, and the mean and SD of non-taekwondo players is 145.10 and 11.00, respectively.

The mean score of taekwondo players is higher than the non-taekwondo players. It shows that the taekwondo players have high mental toughness and non-taekwondo players have low mental toughness. Because taekwondo players involves in sports and physical activity that may represent resources that do not only contribute to an increased well-being but also to an improved self-confidence as a cognitive representation of taekwondo players mental toughness status. When t-value is 6.54, so it indicates the significant difference between these two groups, statistically significant at 0.05 levels.

Table 2 and graph show the Mean, SD and t-value of age groups of taekwondo and non-taekwondo players in relation to their

Table 1: Mental toughness level of taekwondo and non-taekwondo players

	Mean	SD	t-value
Taekwondo players	127.20	15.55	6.54**
Non-taekwondo players	145.10	11.00	

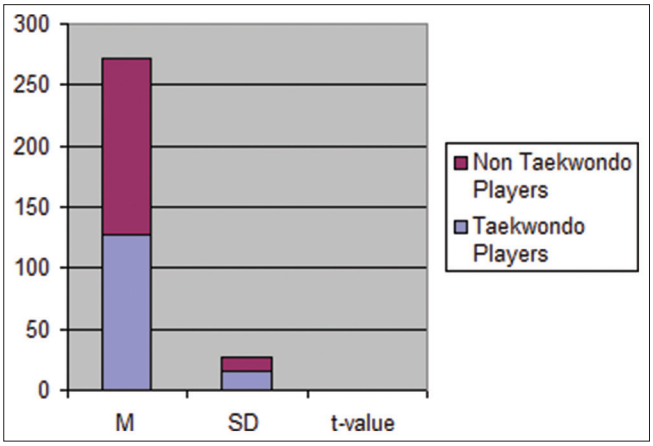
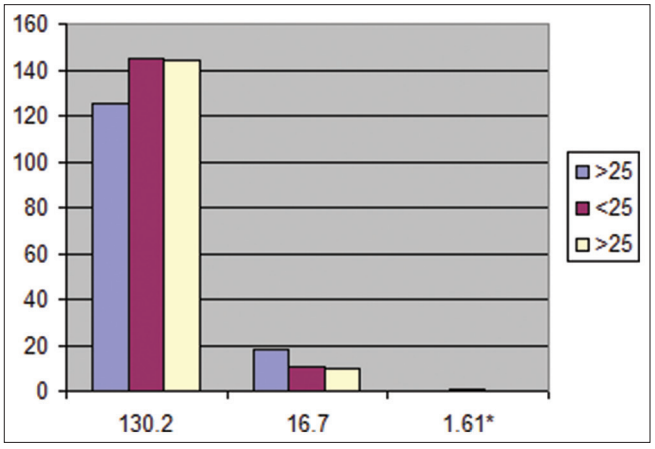


Table 2: Mental toughness level of taekwondo and non-taekwondo players on age factor

Sources	Age	Mean	SD	t-value
Taekwondo players	<25	130.20	16.70	1.61*
	>25	125.44	18.43	
Non-taekwondo players	<25	145.23	10.55	0.53
	>25	144.12	9.88	



level of mental toughness. The mean and SD of below 25 age taekwondo players is 130.20 and 16.70, respectively, and the mean and SD of above 25 age taekwondo players is 125.44 and 18.53, respectively.

The mean score of below 25 age taekwondo players is higher than the above 25 age taekwondo players. It shows that the above 25 age taekwondo players the better mental toughness

than the below 25 age taekwondo players. Because the above 25 age taekwondo players are have more experiences, mentally matured in the game and also well settled in their life. When t-value was applied to know the significant difference it was found that obtained t-value is 1.61, so it indicates the significant difference between these two age groups of taekwondo players. Statistically significant was at 0.05 levels.

CONCLUSIONS

- The taekwondo players have high mental toughness and non-taekwondo players have low mental toughness.
- The above 25 age taekwondo players have better mental toughness than the below 25 age taekwondo players.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Comparative analysis of speed and cardiovascular endurance between in degree collegiate men soccer players and hockey players of Hyderabad District

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ABSTRACT

The purpose of the study was to measure the variance on speed and cardiovascular endurance between the degree collegiate men soccer players and Hockey players. To achieve the purpose of the study, the investigator randomly selected 40 players 20 players in soccer players and 20 players in hockey from affiliated to Osmania University degree collegiate men soccer players and Hockey tournament. The criterion variables selected for this study were 50 m dash shuttle run for speed and cooper test for cardiovascular endurance. The collected data were analyzed using the independent "*t*" test, to interpret the results. The level of confidence was fixed at 0.05 levels. It was concluded that there was no significant difference found on speed where the cardiovascular endurance was significantly improved between degree collegiate men soccer players and hockey players of affiliated to Osmania University.

Keywords: Hockey, Soccer, Speed and cardiovascular endurance

INTRODUCTION

The game of Soccer is both an art and science. It involves techniques of running, passing, kicking, tackling, blocking, heading, juggling, and dribbling. Often all these activities have to be performed at great speed. Although these individual skills are very important, it should not be forgotten that it is a team game and the players have to work together in offence or defense. Therefore, a player must develop his skills and understanding for his contribution as per the demands of the game. The game was introduced to the dominions of colonies by British soldiers. A natural flair for the game was shown by the Indians. They possessed superior technical skills and had an instinctive feel for tactics. They rode high on the crest of a were of success in a glittering golden chariot throughout the length the length and breadth of the world until they suffered their first major reverse Rome in 1960.

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METHODOLOGY

The purpose of the study was to measure the variance on speed and cardiovascular endurance between the degree collegiate men soccer players and Hockey players. To achieve the purpose of the study, the investigator randomly selected 40 degree collegiate players were selected as subject randomly from soccer players and Hockey game. The subjects were selected from the degree collegiate men Football and Hockey players who participated in the intercollegiate tournament of Osmania

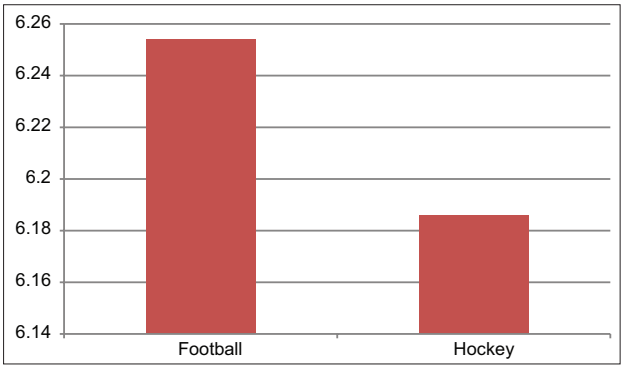

Figure 1: Bar diagram showing the mean difference between the degree collegiate men soccer and hockey players on speed

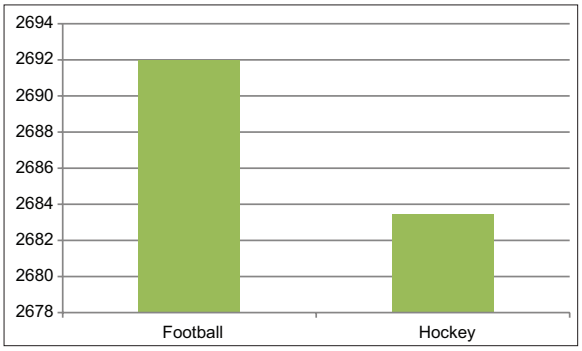

Figure 2: Bar diagram showing the mean difference between the degree collegiate men soccer and hockey players on cardiovascular endurance

University. The age of the subjects was ranged from 18 to 22 years. The researcher selected the speed and cardiovascular endurance as variables for this study. The investigator conducted 50 m dash shuttle run for speed and cooper test for cardiovascular endurance for all the subjects for the both soccer players and Hockey players and the obtained data were analyzed statistically using independent "*t*"-test to find out the significant difference between the soccer players and Hockey players. The result was tested at 0.05 levels of confidence.

RESULTS

Table 1 reveals that the mean of speed for degree collegiate men soccer players was 6.2740 with the standard deviation of 0.13241 and soccer players were 6.1960 with the standard deviation of 0.13553. The obtained "*t*" ratio 0.139 was found to be lesser than the required table value of 0.172 at 0.05 level of confidence for 28 degrees of freedom. This indicates that there was no significant difference on speed between the degree collegiate men soccer and Hockey players.

Table 2 reveals that the mean of cardiovascular endurance for inter collegiate men soccer players was 2693.000 with the standard deviation of 157.86536 and Hockey players were 2693.4667 with the standard deviation of 240.70045.

Table 1: Computation of "*t*" ratio on speed between the degree collegiate men soccer and hockey players

Speed	M	SD	σ DM	DM	*t*-ratio
Soccer players	6.2740	0.13241	0.04956	0.06900	0.139
Hockey players	6.1960	0.13553			

*Significant at 0.05 levels.

Table 2: Computation of "*t*' ratio on cardiovascular endurance between the degree collegiate men soccer and hockey players

Speed	M	SD	σ DM	DM	*t*-ratio
Soccer players	2702.000	157.86536	75.18137	9.53333	1.783
Hockey players	2693.4667	240.70045			

*Significant at 0.05 levels.

The obtained "*t*" ratio 1.783 was found to be greater than the required table value of .909 at 0.05 level of confidence for 28 degrees of freedom. This indicates that there was a significant difference on cardiovascular endurance between the degree collegiate men soccer and Hockey players.

DISCUSSION AND CONCLUSION

The results of the study reveals that there was insignificant difference found on speed between the inter collegiate soccer and Hockey players and also when comparing the mean values of speed for the degree collegiate football ball and hockey players the inter collegiate soccer players were slightly better than hockey players.

- The results of the study reveal that there was significant difference found on cardiovascular endurance between the degree collegiate soccer and Hockey players and also when comparing the mean values of cardiovascular endurance for the inter collegiate soccer and hockey players the inter collegiate Football players were slightly better than hockey players.
- Based on the results of the study, it was concluded that there was insignificant difference found on speed and whereas cardiovascular endurance was significantly improved between the degree collegiate soccer and Hockey players affiliated of Osmania University.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Sports nutrition and performance

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ABSTRACT

Participation in physical activity (PA) is essential for the physical and mental health of children. Adolescents taking part in sports have high demands of nutrients due to additional needs of increased PA besides growth, development, and wellness. The health and nutritional status may be compromised in this population due to a lack of proper nutritional counseling. Furthermore, misinformation about healthy and nutritious foods by the media targeting school going children can be quite hazardous. The purpose of this review paper is to represent the nutritional needs of adolescents participating in different games and also to empower and teach adolescents to know about the importance of nutrition during participation in PA or games; hydration level (Fluids) that deliver nutrients involves proper fuelling and recovery.

Keywords: Fuel, Hydration, Nutrition, Physical activity

INTRODUCTION

"You are what you eat," so if you are planning to be the strongest athlete; then, your food intake is the key factor. Nutrition got an importance in today's hectic life. It is get more importance when it comes to sportsperson. Sports nutrition is a specialized wing within the field of nutrition. It is part of the study of the human body and exercise science.[1,2] Sports Nutrition can be defined as the study and practice of nutrition and diet with regard to improving player's performance. It means the application of nutrition and diet plan to provide the fuel for physical activity (PA), as well as the repair and building process. It is important after hard physical work to achieve athletic performance in competitive events. It also promotes overall health and wellness. It is also needed for healing. Physical training and dietary habits are reliant on each other to produce optimal performance.[3] In this study, we can see the practical relevance of sport nutrition knowledge on the individual sportsperson who is participating in any sport or PA.[4]

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Objectives

The aims of this study were as follows:

- To know sports nutrition.
- To know the importance of Sports Nutrition.
- To know the basic nutrients.

METHODS

This study is carried out using the survey method. Internet articles, newspaper cuttings, discussion with few dieticians, sportspersons, coaches, physical directors, and physical training instructors were the sources of information.

WHAT IS SPORTS NUTRITION?

Sports nutrition is an interdisciplinary field which involves dieticians, biochemists, exercise physiologists, cell and molecular biologists, and psychotherapists. Everyone's role is important in it. It has a basic science aspect such as understanding the body's use of nutrients during competition and after competition to enhance an athlete's performance.

WHY IS IT SO IMPORTANT?

If you are planning to increase the level of your daily PA; then, it is also necessary that you increase your nutrition intake to match your body's demand. Normal nutrition is important for a normal person, but the specific nutrition required for the athletes to get the required energy to perform the activity. The food we eat impacts on our strength, training, performance, and recovery. Not only the type of food but also the times we eat throughout the day also have an impact on our performance and our ability to recover after a workout. An athlete tests his body throughout physical training and competitions regularly; the athlete requires enough energy for his body on day to day basis[5] to cope up with it. Targeted fitness growth at an early age, especially in the teenage years, is considered the foundation of an active lifestyle, avoiding potential overweight, reducing motor deficiencies, and thus improving the general quality of life.[6]

At the time of final performance, an athlete is supposed to be well-nourished, uninjured, fit, focused, and ready to compete. General recommendations need to be suggested by sports nutrition experts to accommodate the specific requirements of individual athlete regarding health, sports, nutrient, food choices, and body weight and body composition.[7]

An athlete needs to pay close attention about when, what, and how much does he eat or drink prior to a game or match.[8]

Proper nutrition must be provided prior, during, and post-competition. Greany and Jeukendrup stated that from fuelling to recovery, muscle building weight, and making optimal nutrition ensure the best platform for success in any sport.[9,10] As a habit, an athlete should eat before 2 h before any performance, and the intake should be high in carbohydrates, low in fat, and low to moderate in protein. Carbohydrates are the main source of energy that provides power to an athlete in an exercise regime. Protein is required to develop muscle growth.

THE BASIC NUTRIENTS

Food and beverages consist of six nutrients that are vital to produce energy in the human body. It contributes to the growth and development of tissues, regulates body processes, and prevents deficiency and diseases. The six nutrients are classified as essential nutrients. They are very necessary for human being. They are carbohydrates, proteins, fats, vitamins, minerals, and water. The body requires these nutrients to function properly; however, the body is unable to endogenously manufacture them in the quantities needed on a daily basis.[11]

Carbohydrates

Carbohydrates are stored in the body in a form of glycogen, which can be used during PA. They are stored mostly in the muscles and liver. A little more than half of your calories should come from carbohydrates. They are necessary to meet the demands of energy needed during exercise, maintain blood glucose level, and replenish muscle glycogen store. During sub-maximal exercise, carbohydrates in the body are the major source of fuel.[12]

Protein

Protein is important for muscle growth. Protein can also be used by the body for energy, but only after carbohydrate stores have been used up. Protein is needed for nutrient transfer in the blood, connective tissue support, and the repair of tissue in response to periods of exercise.[4] It can put an added burden on the kidneys.

Fats

Fats are mostly used as a fuel during low to moderate intensity exercises. Fats are also engaged in providing structure to cell membranes, helping in the production of hormones, lining of nerves for proper activity, and make it easier for the process of absorption of fat-soluble vitamins.[4]

Vitamin and Minerals

Vitamins are required in a wide variety of bodily functions and operations which help to sustain the body healthy and disease-free. The function of minerals is for the structural development of tissues as well as the regulation of bodily process.[13]

Water

The human body can survive for a long duration without any of the micro and macro nutrients but not without water. The body is made of 55–60% water, representing a nearly ubiquitous presence in bodily tissues and fluids. In athletics, water is important for temperature regulation, lubrication of joints, and the transport of the nutrients to active tissues. It regulates the body temperature, cushion and protects vital organs, aids the digestive system, and acts within each cell to transport nutrients and dispel waste.[4] The body can lose several litters of sweat in an hour of vigorous exercise, water is essential to keep the body hydrated. Drink about a liter of water 2 h before a workout. It is important to start exercising with enough water in your body. Continue to sip

water during and after you exercise, about 1/2 to 1 cup of fluid every 15–20 min.

GUIDELINES ON WHAT TO EAT AND WHEN

- Eat a meal 2–4 h before the game or event: Choose a protein and carbohydrate meal.
- Eat a snack <2 h before the game: If you have not had time to have a pre-game meal, be sure to have a light snack such as low-fiber fruits or vegetables such as plums, melons, cherries, carrots, crackers, and low-fat yogurt.

Consider not eating anything for an hour before you compete or have practice because digestion requires energy that you want to use to the best performance. Furthermore, eating too soon before any kind of activity can leave food in the stomach, making you feel full, heavy, and sick. Everyone is different, so get to know what works best for you. You may want to experiment with meal timing and how much to eat on practice days so that you are better prepared for game day.

CONCLUSION

Diet is of great importance to athletes, the key to achieving an optimal sports diet in relationship to peak performance and good health is balance. Athletes must fuel their bodies with the proper nutritional foods to meet their energy requirements for training, competition, and recovery periods. If not, there is an increased risk of poor performance, injuries, and other health issues. The use of nutritional supplements under the supervision of a dietician is always beneficial for the athlete. There are many studies which shown the effectiveness of different supplements to improve anaerobic capacity strength and lean body mass in combination with training. There is sports specific difference in the food trend and custom which indicates the strong impact on coaches and athletes. It is very important to make them aware of the proper dietary pattern to avoid the failure in performance due to the false belief in markets and constant fear of eating prohibited foods.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Effect of different training packages on agility of school boys

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ABSTRACT

The purpose of the study was to find out the effect of different training packages on agility of school boys. To achieve the purpose of this study, 60 school boys were randomly selected from Navy Children School, Visakhapatnam, Andhra Pradesh. The age of the subjects ranged from 13 to 15 years. Group-I circuit training, Group-II underwent speed, agility, and quickness training, Group-III underwent yoga practice, and Group-IV acted as control who does not participate in any training program. The data collected from the five groups before and post-experimentation was statistically analyzed by analysis of covariance (ANCOVA). Since four different groups were involved, whenever the "F" ratio for adjusted post mean was found to be significant, the Scheffe's test followed as a *post hoc* test to determine the paired means difference. The result of the study stated that there was a significant improvement on agility of the different training package groups when compared to the control group.

Keywords: Circuit, Speed, Agility and quickness training, Yoga practice and agility

INTRODUCTION

Many sports like football or track focus on straight ahead speed and quickness. The goal is to get the athlete from a starting position to full speed in a straight line. Most soccer movement is played within a 6–10 yard box which emphasizes quick explosive bursts and change of direction. Front to back and side to side movements with acceleration, deceleration and change of pace and change of direction are the keys to soccer speed, agility, and quickness (SAQ). Agility drills can cause a huge benefit to athletes if the drills duplicate or use the cutting action. In this way, the athlete gets reinforcement of the action and will be able to get a little quicker or faster as his sports skill is fine tuned. Being able to duplicate the key action that is involved in execution of the sports agility skill is the secret to the success of any agility drill. When the drills are executed often enough, there is a transfer of how the athlete executes the skill to game play. The drill to be successful in relation to improving sports performance on the field or court, it must include cutting actions (Verkhoshansky and Mel, 2006).

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The origins of yoga may date back to pre-Vedic Indian traditions. The earliest accounts of yoga practices are to found in the Buddhist Nikayas. Parallel developments were recorded around 400 CE in the *Yoga Sutras of Patanjali*, which combines pre-philosophical speculations and diverse ascetic practices of the first millennium BCE with Samkhya philosophy. Hatha yoga emerged from tantra by the turn of the first millennium (Burley, 2000).

METHODOLOGY

The purpose of the study was to find out the effect of different training packages on agility of school boys**.** To achieve the

Table 1: Analysis of covariance on agility of experimental and control groups

	Circuit training	SAQ training	Yoga practice	Control group	SOV	Sum of squares	df	Mean squares	"F" ratio
Pre-test Mean	17.89	17.81	17.82	17.84	B	0.072	3	0.024	0.065
SD	0.58	0.61	0.62	0.61	W	20.82	56	0.37	
Post-test Mean	17.41	17.16	17.63	17.72	B	2.95	3	0.98	4.18*
SD	0.57	0.30	0.34	0.63	W	13.16	56	0.23	
Adjusted post-test Mean	17.38	17.17	17.65	17.75	B	3.07	3	1.026	8.07*
					W	6.98	55	0.12	

The required table value for significance at 0.05 level of confidence with degrees of freedom 3 and 55 is 2.77 and degree of freedom 3 and 56 is 2.77.
*Significant at 0.05 level of confidence.

purpose of this study, 60 school boys were randomly selected from Navy Children School, Visakhapatnam, Andhra Pradesh. The age of the subjects ranged from 13 to 15 years. Group-I circuit training, Group-II underwent SAQ training, Group-III underwent yoga practice, and Group-IV acted as control who does not participate in any training program. The experimental group's subjects were participated in their respective training program 3 days/week for 12 weeks, duration of the training program on 40 min (including warm up and warm down) per day. Once in 2 weeks, the training load was increased. Agility was measured by shuttle run test. The data collected from the four groups before and post-experimentation was statistically analyzed by analysis of covariance (ANCOVA). Since five different groups were involved whenever, the "F" ratio for adjusted post mean was found to be significant, the Scheffe's test followed as a *post hoc* test to determine the paired means difference.

RESULTS

The adjusted post-test means on agility of circuit training, SAQ training, yoga practice, and control groups are 17.38, 17.17, 17.65, and 17.75, respectively. The obtained "F" ratio value of 8.07 on agility was greater than the required table value of 2.77 for the degrees of freedom 3 and 55 at 0.05 level of confidence. It is observed from this finding that significant differences exist among the adjusted post-test means of experimental and control groups on agility.

Since the adjusted post-test "F" ratio value is found to be significant, the Scheffe's test is applied as *post hoc* test to determine the paired mean differences, and it is presented in Table 2.

Table 2 shows the Scheffe's test results that there are significant differences between the adjusted post-tests means of circuit training and yoga practice groups; circuit training and control groups; SAQ training and yoga practice groups; and SAQ training and control groups on agility. Furthermore, the result of the study reveals that there are no significant differences between the circuit training and SAQ training groups; yoga practice and control groups on agility.

Table 2: Scheffe's test for the difference between the adjusted post-test paired means of agility

Adjusted post-test means				DM	CI
Circuit training	SAQ training	Yoga practice	Control group		
17.38	17.17			0.21	0.25
17.38		17.65		0.27*	0.25
17.38			17.73	0.35*	0.25
	17.17	17.65		0.48*	0.25
	17.17		17.73	0.56*	0.25
		17.65	17.73	0.08	0.25

*Significant

DISCUSSION AND FINDINGS

The present study result showed that the 12 weeks of the different training packages training influenced to increase on agility of school boys. It is observed from this finding that significant differences exist among the circuit training and yoga practice groups; circuit training and control groups; SAQ training and yoga practice groups; and SAQ training and control groups on agility. Furthermore, the result of the study reveals that there are no significant differences between the circuit training and SAQ training groups; yoga practice and control groups on agility. The following studies are supporting my study findings.

Muneer (2016) determined the effect of SAQ training on selected biomotor variables such as SAQ among female Kho-Kho players. The findings it was concluded that there was significant improvement on agility due to the effect of SAQ training among female Kho-Kho players when compared to control group. Trecroci and others (2016) examined the effects of SAQ training on acceleration (5 and 20 m), change of direction speed (CODS), and reactive agility in preadolescent soccer players. These findings indicated that SAQ training

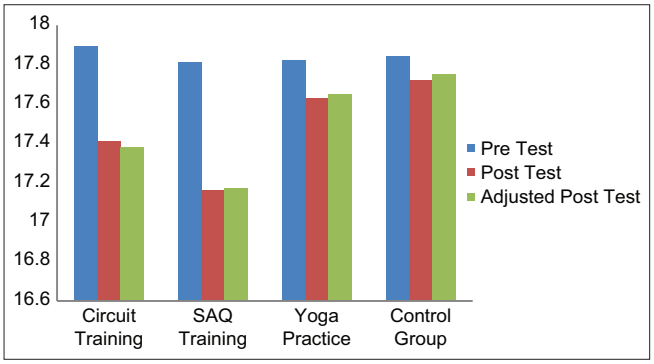

Figure 1: Cone diagram showing the mean value on agility of experimental and control groups

could positively affect cognitive skills and initial sprint acceleration through the middle childhood, offering useful guidance to soccer coaches. Arjunan (2015) found out the effect of SAQ training on selected physical fitness variables among school soccer players. The result of the study stated that SAQ training has significantly contributed to improve agility of soccer players. Prasad *et al*. (2014) investigated the effect of 8 weeks SAQ training program on selected physical fitness variables. Significant effect of SAQ training was found on reaction time, explosive strength, and flexibility. Significant effect of SAQ training was found on speed agility and quickness. Zoran and others (2013) determined the effects of a 12-week conditioning program involving SAQ training and its effect on agility performance in young soccer players. This suggests that SAQ training is an effective way of improving agility, with and without the ball, for young soccer players and can be included in physical conditioning programs.

CONCLUSION

The conclusion of the study stated that there was a significant improvement on agility of the different training packages groups when compared to the control group. Moreover, among the experimental groups, the SAQ training group had better improvement on agility.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Stress management and the Bhagavad Gita

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ABSTRACT

Stress may be positive or negative. Negative stress affects the entire gamut of an individual's life. Hence, the need for stress management the Bhagavad Gita offers vital guidelines for stress management. The purpose of this paper is to bring out the factors affecting stress and its coping, as envisaged in the Bhagavad Gita. A discussion on stress management in the light of the Bhagavad Gita provides the perception that the Bhagavad Gita identifies stress management a state of emotional stability. Further, the discussion presents (a) the characteristic features of a person possessing emotional stability, (b) the pathway toward emotional stability, and (c) the factors affecting emotional stability and its coping methods. The intrapersonal perception of the Bhagavad Gita is effective for managing stress and for the overall personal development of individuals.

Keywords: Emotional stability, Stress management, The Bhagavad Gita

INTRODUCTION

Stress may be described as a state of physical and mental challenge/strain resulting from demanding/adverse circumstances. Factors that are responsible for causing stress are called as "stressors."

Stress may be positive or negative. Positive stress is one that motivates individuals for better effort and performance, while negative stress adversely affects the motivation, effort, and performance of individuals. Negative stress leads to a number of complications such as physical discomfort, high blood pressure, stroke, heart attacks, depression, suicidal tendencies, anger, and conflicts. In short, negative stress affects the entire gamut of an individual's life. It acts as a major impediment to actualize the inherent potentialities of individuals. Hence, arise the vital need for managing stress.

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Stress management may refer to the techniques involved in coping of negative stress/tension, generated by the stressors, that is, experienced by individuals. Such being the importance, stress management necessitates a holistic approach from the perspectives of different world views.

THE BHAGAVAD GITA

The Bhagavad Gita,[1] considered as the essence of *Vedanta*, is a holistic practical manual that offers numerous guidelines for the various domains of human existence. Generally to combat stress, primary importance is given to the "external" stressors and its management for individuals. By "external" stressors, we refer to the stressors that emerge outside of an individual.

Interpersonal relationship, financial worries, family problems, work-related issues, etc., are examples of external stressors. The Bhagavad Gita identifies the vital role played by the "internal" stressors and with its coping, for an enduring and holistic development of individuals. By "internal" stressors, we refer to the stressors that emerge/operate within an individual. Attitude, thoughts, feelings of fear and anger, etc., are examples of internal stressors.

This paper attempts to deliberate on the internal stressors and its management identified in the Bhagavad Gita, to combat stress.

THE CONCEPT OF EMOTIONAL STABILITY IN THE BHAGAVAD GITA

The state of stress is a state of mental disturbance/tension experienced by individuals, devoid of mental calmness, and stability. Identifying the state of stress management as a state of emotional stability, the Bhagavad presents the characteristic features of an individual possessing emotionally stable wisdom (or) individuals attaining a state of emotional stability (*Sthitaprajna*). Further, it analyzes the impediments and provides appropriate solutions to achieve the state of emotional stability.

Let us now proceed to discuss the state of emotional stability, as perceived in the Bhagavad Gita.

CHARACTERISTIC FEATURES OF A PERSON POSSESSING EMOTIONAL STABILITY

According to the Bhagavad Gita, a person of emotional stability is one who has casts off all the desires of the mind,[2] not shaken by adversity and duality, free from attachment, fear, and anger[3] and has complete control over attachment or detachment.[4] In short, a person of stable wisdom has complete control of his/her emotions in all situations. The Bhagavad Gita proclaims that the state of emotional stability leads to experiencing immortality,[5] peace,[6] free from fear,[7] and tranquility.[8]

PATHWAY TOWARD EMOTIONAL STABILITY

According to the Bhagavad Gita, individuals attain a state of emotional stability as a consequence of controlling (a) their senses,[9] (b) their desires,[10] (c) their anger,[11] and (d) their mind[12]

Let us now discuss how these factors may be controlled, according to the Bhagavad Gita.

(a) Control of the Senses (*gunas*)

The senses of a person consist of three vital elements/traits, namely, *sattva* (representing knowledge and calmness), *rajas* (representing activity and desire), and *tamas* (representing laziness and ignorance).[13] The three *gunas* are present in every individual in varying proportions and constantly act on one another. In fact, the three *gunas* are the basis for forming the personality traits of individuals.[14]

According to the Bhagavad Gita, senses control/senses purification is an inner journey of individuals from a pre-dominantly tamasic state of existence to the rajasic state, and in turn, from a pre-dominantly rajasic state to the sattvic state of existence.[15] This process lies in performing action/work motivated by one's own duty and not by the consequences/ results of the action/work.[16]

(b) Control of Desires (*Kama*)

It must be stated here that Indian tradition recognizes two types of desires, namely, desires regulated by ethics (*dharma*) and desires not regulated by ethics. While the former refers to the positive desires of individuals, the latter refers to the negative desires of individuals. When the Bhagavad Gita talks about desire control and management, it refers to the negative desires of individuals.

According to the Bhagavad Gita, the negative desires of individuals are the greatest impediments toward progress[17] and these can be mitigated by the control of the senses.[18]

(c) Control of Anger *(Krodha*)

It is common knowledge that anger causes emotional disturbances in individuals. The Bhagavad Gita states that anger leads to the ruin of individuals through lack of discriminative power.[19] The real cause for anger is due to unfulfilled desires.[20] Therefore, with the control of desires, anger is automatically controlled in individuals.

(d) Control of Mind (*Manas*)

Mind is an important component of individuals. According to the Bhagavad Gita, mind is very unstable and is constantly acted on by two powerful forces, namely, attachment (*raga*) and aversion (*dvesa*), thereby hampering individuals to realize peace and tranquility.[21]

The Bhagavad Gita proclaims that the restless mind of individuals may be controlled through a spirit of discrimination by renouncing (*vairagya*) the unwanted and holding on to the important factors as well as the constant practice (*abhyasa*) of the same.[22]

TO SUM UP

The Bhagavad Gita clearly deliberates on the state of emotional stability and its resultant benefits. Further, it also clearly

presents the conditions and the factors to be controlled to achieve the state of emotional stability.

CONCLUSION

A discussion on stress management in the light of the Bhagavad Gita brings out the following important perspectives: (a) Emotional stability is a state of existence/experience, (b) emotional stability is involved in controlling different facets such as senses, desire, anger, and mind. It is more specific as well as more comprehensive and (c) emotional stability is not merely for interpersonal requirement but is predominantly an intrapersonal necessity stress management and for the personal development of individuals.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Selecting a right music to induce required mood states

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ABSTRACT

Many of our daily activities are accompanied by music in both social and work settings. In fact, most of the time music is listened to, it is heard as background during other activities. Many of us listen to music to help improve focus, to block out distractions, or to make a tedious task more enjoyable. This article elaborates that music has ability to relax, calm, and stimulate mood. Different types of music induce different moods. Major mode produced excitement with loud volume, medium pitch, fast tempo, and high pitch with major mode induce happiness. Similarly, minor mode with slow tempo induces sadness. The following section of this article expands that interaction between mood and culture, moods are culturally bound, two individual from different culture cannot transmit same feelings. Mood affects individual religious and spiritual feelings. Feelings associate with religion, some emotional and some enduring moods that last with one's life. Music has the power to influence mood in both ways positively as well as negatively. Antisocial lyrics and annoying music can cause negative effect on mood whereas uplifting music and pro-social lyrics can bring positive effects in mood. The two new composed music and obtained the intellectual property (IP) under copyright (Optimizing Your Cognitive Arousal Level Prior to Competition) and the 2nd IP (Tranquility Your Mind for Execution) were interpreted. An athlete searching for music to incorporate in training and competition should start by considering the context in which he or she will operate. The most important is selected a right music to induce the required mood states to facilitate performance.

Keywords: A new composed music, Mood states

INTRODUCTION

Music

Music plays an important part in many our daily lives. This is the case for all of the world's cultures and has been so since the early development of humankind as a social species (Dissanayake, 2008). Many of our daily activities are accompanied by music in both social and work settings. In fact, most of the time music is listened to, it is heard as background during other activities (Juslin and Laukka, 2004). Many of us listen to music to help improve focus, to block out distractions, or to make a tedious task more enjoyable.

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Music varies from culture to culture, it is manifestation of soul, it conveys our emotions, feelings and the distinction between noise and music is culturally bound. It works like a stimulant which transforms psychological and psychic phenomena like "hypnosis ball." It is manifestation of grief, happiness, and affection. "It is gratuitous play of a child. Consequently, expression of sadness, joy, love, and dramatic situations is only very limited particular instances" (Dissanayake, 2008).

Music has ability to relax, calm, and stimulate mood. Different types of music induce different moods. Major mode produced

excitement with loud volume, medium pitch, fast tempo, and high pitch with major mode induce happiness. similarly, minor mode with slow tempo induces sadness (Bruner, 1990).

Music induces different moods and influences "social relations, anxiety" (Bruner, 1990) and "performance"(Lesiuk, 2005). Furthermore, music alters emotional and physiological arousal and can, therefore, be used before competition or training as a stimulant, or as a sedative to calm "up" or anxious feelings (Bishop *et al*., 2007).

Music, thus, provides arousal regulation fostering an optimal mindset. Most athletes use loud, upbeat music to "psych up," but softer selections can help to "psych down," as well. An example of the latter is 2 times Olympic Gold Medallist Dame Kelly Holmes's use of soulful ballads by Alicia Keys. In her pre-event routine at the Athens Games of 2004. While the physiological processes tend to react sympathetically to music's rhythmical components, it is often lyrics or extramusical associations that make an impact on the emotions. Ostensibly, fast tempi are associated with higher arousal levels than slow tempi (Bishop *et al*., 2007).

Mood

Music is one of the few aspects of human culture which is thought to be universal. Since we are all human beings we all experience joy, anger, sadness, and other feelings like those. We all have a ton of emotions that control how we act and what we say. Our emotions are triggered by many things. One of those things is music. Music has the potential to influence mood, feelings, and thoughts; it has the ability to change the emotional and physical status of people, whether they are in bad, good, or sad moods (Dingman, 2008).

Moods are classified with names "good or bad, black or blue." The major confusion is to differentiate mood and emotions, as emotional term used are words who define feelings such as "happy, sad, envy, guilty, and angry" (Dingman, 2008). Mood is the product of energy and tension (McClellan *et al*., 2001).

Music and Mood

Mood regulation refers to processes directed toward modifying or maintaining the occurrence, duration, and intensity of both negative and positive moods (Eisenberg *et al*., 2010). Music has been acknowledged to be a mood regulatory behavior. Some studies on general mood regulation have identified listening to music as a regulatory strategy (Thayer, *et al*., 1994), and many studies on music have reported mood regulation to be among the most important reasons for music consumption (Saarikallio and Erkkilä, 2007).

The potential of music to influence mood is described as one of the most important functions of music (Van Der Zwaag *et al*., 2011). Fast tempo music has consistently shown to increase arousal levels compared to slow tempo music (Van Der Zwaag *et al*., 2011). It has been established that music can have substantial effects on mood and behavior (Saarikallio, 2010).

Music has the power to influence mood in both ways positively and negatively. Antisocial lyrics and annoying music can cause negative effect on mood, whereas uplifting music and pro-social lyrics can bring positive effects in mood (Ahmad and Rana, 2015). The previous study reported that the violent music brings aggression in human behavior, it is considered to be a severe problem in society. The mood changes as the music like non-violent music results in completely different behavior. Listening to violent music has a strong effect on violent tendencies (Tropeano, 2006).

Another study was conducted on three subjects, they were given a task to listen to music for 10 min and the categories of music were pop, heavy metal, and classical. Moreover, it was concluded that who listened to classical and pop music reported in more positive way and who listened to heavy metal music reported in more negative way. Hence, their hypothesis that was music would affect mood was supported (Ahmad and Rana, 2015).

Music in major keys was rated happier than music in minor keys. Non-harmonized, simple melodies were rated happier than more complex harmonized music. As the tempo of music increased, ratings of happiness also increased (Webster and Weir, 2005). People associate descending melodies with sadness whereas ascending melodies with happiness, but kids do not make it reliable, their level of association is different they do not respond in the same way but youngsters do (Webster and Weir, 2005).

Results from another study reported that people perform special activities better after listening to music composed by Mozart than those who are sitting in silence. In their research task, the music Mozart sonata was appeared to be very pleasant to participant, whereas the other participants were given a very slow and sad music but the results of Mozart were better and those participants scored higher on mood arousal and significantly lower on negative mood as Mozart effect itself is an artifact arousal of mood (Thompson *et al*., 2002).

Furthermore, another study found that people induced to a happy mood by inducing music scene with a piece composed in the major mode showed a significant increase in memory compared with people who had not been led to an experimental mood (L'Etoile, 2002).

POMS-based Iceberg Profile in Sport

The term "Iceberg Profile" as a metaphor was introduced in sport by William Morgan in the late 1970s based on his systematic research and monitoring of overtraining and

staleness in competitive and elite athletes across different sports (Prapavessis, 2000). In his assessments, Morgan used the 65 items POMS and noticed that elite athletes and active individuals in general tend to score below the population average on the tension, depression, anger, fatigue, and confusion scales. Moreover, these individuals usually scored about one standard deviation above the population average on *vigor*. This profile has been called the "iceberg" profile because the resulting configuration resembled an iceberg. All five negative mood states fell below the population average (T score of 50), and one positive mood state was one standard deviation above the population mean [Figure 1]. However, "it was good luck that the POMS' developers placed the vigor subscale *fortuitously* in the middle, otherwise there would be no iceberg profile at all!"

The POMS yields five negative mood states measures, one positive mood state, and a global measure of mood. A global score is computed by adding five negative mood states (tension, depression, anger, fatigue, and confusion) and subtracting the one positive mood state (vigor). Since this computational procedure sometimes yields negative values, a constant of 100 is added (*Ten*+*Dep*+*Ang*+*Fat* +*Con*+100 – *Vig*). These values are employed as a baseline for individual athletes (and in groups) to estimate the dynamics of staleness during the season. If the athlete suffers from chronic fatigue and is unable complete a work-out session, his POMS profile can become "inverted." The inverse iceberg profile is characterized by a lower level of vigor, and higher levels of tension, depression, anger, fatigue, and confusion than the average individual. This type of mood profile is associated with a poor state of physical and mental functioning.

The POMS has several response sets depending on the focus in the assessment of mood states. These sets include state-like ("right now," "today," or "prior to your last competition") and trait-like ("generally," "usually," "typically" during a week or a month) foci. For instance, if the athlete is asked to respond

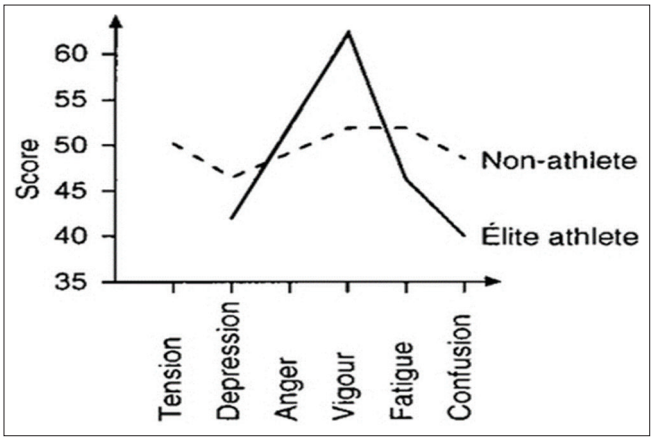

Figure 1

"how she has been feeling during the past week including today" rather than "today," then both trait-like and state-like aspects of emotional state are assessed.

New Composed Music to Induce Right Mood

The term "designer music" was introduced by the music industry to describe a new genre of music designed to affect the listener in specific ways. The term has been used in scientific literature to specific this type of Music (Arguelles *et al*., 2003). Research and clinical studies have shown that designer music produces significant effects in listeners' physiological and psychological status.

Based on this statement, the following section described the process of filing two intellectual properties under copyright of our music. We composed two types of music, these two music may induce the mood of the athletes during training and competition.

INTELLECTUAL PROPERTY – COPYRIGHT 1

Optimizing Your Cognitive Arousal Level Before Competition

The effects of music before sport performance have been examined by a relatively small number of researchers (Terry and Karageorghis, 2011). Pre-competition music has been shown to act as an effective stimulant that can optimize arousal and psychological states. Many athletes harness the cognitive arousal regulatory qualities of music to help get them "in the zone" before competition (Terry and Karageorghis, 2011).

Several theories propose explanations for arousal or excitement caused by music. One theory is based on the Yerkes-Dobson law, which states that "the arousal level of the individual increases performance up to an optimal level (Cohen, 2011). Athletic performance can be increased with physiological and or mental arousal. This relationship holds true up to a certain point when according to the law the response of arousal becomes too high and an individual will see a decrease in their performance. This law is graphed out on an Inverted-U diagram showing the direct relationship between levels of arousal and how it affects athletic performance (Cohen, 2011).

If the arousal response has not yet been initiated, performance outcome will remain low. At the peak of the Inverted-U [Figure 2], when both arousal and performance meet at their highest point, an individual will notice their athletic ability being used to its fullest potential. Many athletes who have commented on their play have referred to this point as being "in the zone," and this is described as the point where they were maximizing their physical abilities while not using much cognitive strength to support it, meaning that their play was a

result of reaction not thinking. This is the point that all athletes strive for when they are involved in competition because this is the point where they can achieve the highest point of personal performance.

Advantages of this New Invention

The name of this New Invention is Optimizing Your Cognitive Arousal Level Prior to Competition, it is a new fast tempo music (>128 beats/min – bpm), a tempo of 60 beats/min signifies 1 beat/s, while a tempo of 120 beats/min is twice as rapid, signifying 1 beat every 0.5 s composed to induced cognitive arousal before competition. As an athlete begins the process of preparing to compete, they usually display behavior associated with getting "psyched up," which basically means that they are beginning at the bottom of their arousal level. The whole process of getting "psyched up" mentally is designed to reach the peak of arousal shortly before the competition starts. For an athlete, it is important to reach this peak at the time of competition to be able to compete at the highest level and in turn be successful. Fast tempo music is used in this task of reaching the peak of the Inverted-U because it is used to perform better at the task at hand such as the upcoming competition. Ultimately, it will help the athletes to perform at their optimal level.

INTELLECTUAL PROPERTY – COPYRIGHT 2

Tranquility Your Mind for Execution

Stress and anxiety, as negative emotion, affect perceptions in sports competitions, where a large majority of athletes consider stress and anxiety to be debilitative toward performance, which may result in decreases in performance. There are many researches indicating that relaxation technique benefits athletes by enhancing self-confidence, concentration, performance, reducing anxiety and stress, blood pressure, as well as muscle tense.

Within sport, music as a means of controlling stress and anxiety has received more attention recently, the music utilized for stress and anxiety control research has often been selected on limited criteria with little acknowledgment of the music characteristics that might influence relaxation. Therefore, developed comprehensive for the selection of relaxing music for stress and anxiety control is a basis which will provide stronger and more consistent outcomes.

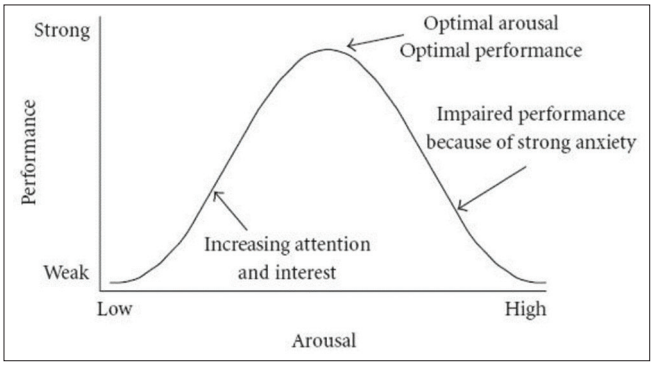

Figure 2

An electroencephalogram (EEG; Figure 3) is a test used to evaluate the electrical activity in the brain. Brain cells communicate with each other through electrical impulses. An EEG tracks and records brain wave patterns. Small flat metal discs called electrodes are attached to the scalp with wires. The electrodes analyze the electrical impulses in the brain and send signals to a computer that records the results. The electrical impulses in an EEG recording look like wavy lines with peaks and valleys. EEG spectrum can be divided roughly into five basic EEG frequency bands: Delta (d)-band (1–4 Hz), theta (h)-band (4–8 Hz), alpha (a) band (8–16 Hz), beta (b) band (16–32 Hz), and gamma (c) band (32–64 Hz) (Göksu, 2018). Alpha waves reflect the relaxation level, perceptual processing, memory tasks, and emotions.

Advantages of this New Invention

The name of this New Invention is Tranquility Your Mind for Execution is a new relaxation music composed to induced relaxation. This new composed relaxation music embedded with the alpha waves (alpha [a]-band [8–16 Hz]) definitely will induce the relaxation stage of athletes before competition and after each training sessions. Relaxed minds will be enhancing self-confidence, concentration, performance, reducing stress and anxiety, blood pressure, as well as muscle tense. Ultimately, it will help the athletes to perform at their optimal level.

Main Implication of These New Composed Music

An athlete searching for music to incorporate in training and competition should start by considering the context in which he or she will operate (Karageorghis *et al*., 2006). What type of activity is being undertaken? How does that activity affect

Figure 3: EEG test

other athletes or exercisers? What is the desired outcome of the session? What music-playing facilities are available? Some activities lend themselves particularly well to musical accompaniment, for example, those that are repetitive in nature: Warm-ups, weight training, circuit training, stretching, and the like. In each case, the athlete should make selections (from a list of preferred tracks) that have a rhythm and tempo that match the type of activity to be undertaken. To assess the motivational qualities of particular music, the Brunel Music Rating Inventory (BMRI) may be used as may its derivative, the BMRI-2 (Karageorghis *et al*., 2006).

Intensity of Activity

An athlete or exerciser whose goal during warm-up is elevating the heart rate to 120 beats/min should select accompanying music that has a tempo in the range of 80–130 beats/min. Successive tracks should create a gradual rise in music tempo to match the intended gradual increase in heart rate. Moreover, segments of music can be tailored to various components of training, so that, for example, work time and recovery time are punctuated by music that is alternately fast and loud or slow and soft. This approach is especially well suited to highly structured sessions such as circuit or interval training. Athletes engaged in a tough weekly circuit training session, and the upshot has been 20% improvement in attendance.

Delivery of Music

Coaches and athletes must choose how selected tracks will be delivered before or during training or competition. If others are training nearby and might be disturbed by one's music, it should be delivered via an MP3 player. Music intended to enhance group cohesion or inspire a group of athletes is best delivered with a portable hi-fi system or stadium public address system. If distraction is an important consideration, the volume at which music is played should be set quite high, but not high enough to cause discomfort or leave a ringing in the ears. Indeed, sound at a volume above 75 dB delivered during exercise – when blood pressure in the ear canal is elevated – can cause minor temporary hearing loss (Alessio and Hutchinson, 1992).

Selection Procedure

It is the best accompanying training activities with music, to enable athletes to tap into the power of sound. To start, assemble a wide selection of familiar tracks that meet the following six criteria: (a) Strong, energizing rhythm; (b) positive lyrics having associations with movement (e.g., "Body Groove" by the Architects Ft. Nana); (c) rhythmic pattern well matched to movement patterns of the athletic activity; (d) uplifting melodies and harmonies (combinations of notes); (e) associations with sport, exercise, triumph, or overcoming adversity; and (f) a musical style or idiom suited to an athlete's taste and cultural upbringing. Choose tracks with different tempi, to coincide with alternate low-, medium-, and high-intensity training.

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Volume 39 • Issue 1 ISSN 2231-3265

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A Peer Reviewed (Refereed) International Research Journal - ISRA Journal Impact Factor 7.217

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Research Article

A comparative study of personality profiles of male and female collegiate students

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ABSTRACT

The purpose of the study is to compare the personality profiles of male and female collegiate students. The researcher followed the survey method of descriptive research. In this study, 50 college male and female students were randomly selected from various colleges and department affiliated to University of Mumbai as the subject for this study. Out of which 50 students were 25 male and 25 female collegiate students. The subject's age was ranged between 18 and 25 years. Personality was measured by Eysenck's Personality Questionnaire of the revised short scale of version (EPQ-R): (EPQ-R) developed by Eysenck (1985)**.** The EPQ measures the traits of personality: Psychoticism (P), extraversion (E), neuroticism (N), and lie (L). EPQ-R contains 48 items and covers all the four categories above mentioned. A questionnaire was distributed among the students and was asked to fill the correct answers. No significant differences in personality profiles were observed between male and female collegiate students.

INTRODUCTION

The study of personality is concerned with the description, analysis, and prediction of individual uniqueness in organized patterns of behavioral and mental functioning. Personality study consists of assessment, theory, research, and applications. Although attempts to understand human personality are as old as humankind, efforts to apply scientific methods to the study of personality did not begin until the late 19th century. These efforts have assisted greatly but the construction of personality assessment procedures and devices and the development of various personality theories and research methods for studying human behavior.

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PERSONALITY

Personality is a total of all the qualities, traits, and behaviors that characterize person's individually and by which, together with his or her physical attributes, the person is recognized as unique.

PERSONALITY PROFILE

Graph of scores on a battery or set of scales of a personality inventory or rating scale. The elevation and scatter of the profile assists in the assessment of personality and mental disorders. A traditional assumptio of trait theories of personality is that behavior is influenced to a great extent by traits that manifest themselves in a consistent way across different situations.

OBJECTIVES OF THE STUDY

- The purpose of the study was to assess the personality profile of collegiate students and to compare the traits of personality between male and female collegiate students.

HYPOTHESIS OF THE STUDY

HO_1: There will be no significant difference between the traits of personality of the male and female collegiate students.

METHODOLOGY AND PLAN OF WORK

Design of the Study

The basic information collected by any science is referred to as data, and the procedures by which data are obtained are known as methods, whatever the method may be, data are obtained for a purpose. In some instances, the purpose is spelt out in terms of a hypothesis. The psychological researcher then collects data to determine whether the hypothesis is correct or incorrect.

For the descriptive research, investigator followed the survey method. In this study, 50 college male and female students were randomly selected from various colleges and department affiliated to University of Mumbai as the subject for this study. Out of which 50 collegiate students were 25 male and 25 female. The subject's age was ranged between 18 and 25 years. Personality was measured by Eysenck's Personality Questionnaire of the revised short scale of version (EPQ-R): (EPQ-R) developed by Eysenck (1985)**.** The EPQ measures the traits of personality: Psychoticism (P), extraversion (E), neuroticism (N), and lie (L). Reliability ranges are 0.80–0.90 and the validity of the test is satisfactory.

EPQ-R contains 48 items and covers all the four categories above mentioned. Scoring of EPQ-R was done by manually with the help of stencils. One mark for each response corrects response according to the scoring key of EPQ-R.

Administration

Questionnaire was distributed among the students and was asked to fill the correct answers. They were asked to take minimum time to fill the questionnaire.

Scoring

The researcher scrutinized the complete questionnaire to ensure that the subjects respond to every item and there was no question left unanswered. It has 48 items, 12 for each of the traits of psychoticism, neuroticism, and extraversion and 12 for the lie scale. Each question has a two response, "yes" or "no." Each item has scored 1 or 0, and each scale had a maximum possible score of 12 and a minimum of zero.

ANALYSIS AND INTERPRETATION OF DATA

Table 1 indicates all the mean, SD, and "*t"* value of the male and female collegiate students.

Personality trait "Psychoticism"

The mean score of the total male and female collegiate students is 4.72 and 4.12, respectively. The SD score of the total male and female collegiate students is 2.19 and 1.69, respectively. The mean and SD difference between two groups is 0.60 and 0.50, respectively. The obtained "*t*" value is 1.084 which is not significant at the 0.05 level. This indicates that male and female collegiate students do not differ the personality traits on factor "Psychoticism."

Personality trait "Neuroticism"

The mean score of the total male and female collegiate students is 5.16 and 7.76, respectively. The SD score of the total male and female is 1.93 and 2.28, respectively. The mean and SD difference between two groups is 2.60 and 0.35, respectively. The obtained "*t*" value is 4.354 which is significant at the 0.05 level. This indicates that male and female collegiate students do also differ the personality traits on factor "Neuroticism."

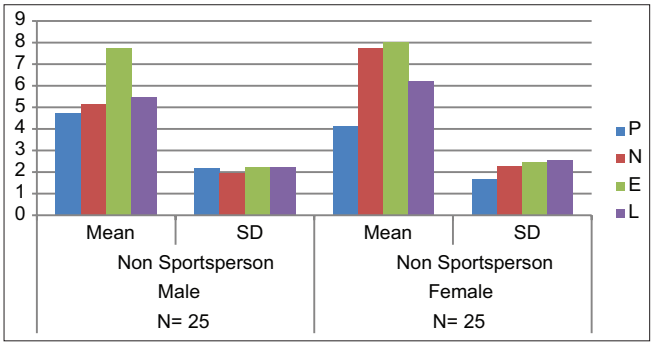
Personality trait "Extraversion"

The mean score of the total male and female collegiate students is 7.72 and 8.00, respectively. The SD score of the total male and female collegiate students is 2.23 and 2.47, respectively. The mean and SD difference between two groups is 0.28 and 0.24, respectively. The obtained "*t*' value is 0.421 which is not significant at the 0.05 level. This indicates that male and

Table 1: Descriptive statistics of the different personality traits of male and female college students

	n=25 Male			*n*=25 Female			"*t*" value	Level of significance
	Mean	SD	SEM	Mean	SD	SEM		
P	4.72	2.19	0.44	4.12	1.69	0.34	1.08	NS
N	5.16	1.93	0.39	7.76	2.28	0.46	4.35	0.05
E	7.72	2.23	0.45	8.00	2.47	0.49	0.42	NS
L	5.48	2.24	0.45	6.20	2.55	0.51	1.06	NS

Two-tailed *P* value at 0.05 level of significance is 2.011, df=48



Graph: Descriptive statistics of the different personality traits of male and female collegiate students

female collegiate students do not differ the personality traits on factor "Extraversion."

Personality trait "Lie Scale"

The mean score of the total male and female collegiate students is 5.48 and 6.20, respectively. The SD score of the total male and female is 2.24 and 2.55, respectively. The mean and SD difference between two groups is 0.72 and 0.31, respectively. The obtained "*t*" value is 1.06 which is not significant at the 0.05 level. This indicates that male and female collegiate students do not differ the personality traits on factor" "Lie Scale."

RESULTS

As Table 1 shows that no significant differences were observed between the male and female collegiate students on almost all personality traits; as *t* values were not found to be significant; except in the case of neuroticism trait where *t* value of 4.35 is significant at 0.05 level. Three out of four traits of personality not found significant difference male and female collegiate students. Here, the results have failed to reject the null hypothesis. Henceforth, the hypothesis of "There will be no significant difference between the traits of personality of male and female of collegiate students" has been accepted.

CONCLUSIONS

Based on statistical findings and within the limitations of the study, the following conclusions are drawn. There was no significant difference found between the traits of personality of the male and female of collegiate students.

RECOMMENDATIONS

A similar study may be repeated by selecting the different important variables other than those selected for this study such as self-awareness counseling rewards and incentives, motivation, behavior pattern, diet and nutrition, and consumption of alcohol.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Effect of selected asana and combined asana and pranayama practices on abdominal strength of college women students

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ABSTRACT

The aim of this study was to analyze the effect of asana and combined asana and pranayama practices on abdominal strength of college women students. For the study, 60 college women students were selected from the Alagappa University College of Physical Education, Alagappa University, Karaikudi, Sivagangai district, Tamil Nadu, India. Age = 18 and 22 was randomly selected as subjects. They were divided into three equal groups, asana training group (n = 20) combined practices of asana and pranayama group (n = 20) and control group (n = 20). The bent leg curl up test was used to analyze the abdominal strength. It was recorded as a pre-test and post-test. The training consists of 6 weeks for both groups, selected asana was practice by the asana group and asana and pranayama were practiced by the combined training group for 5 days in a week and 45 min/day, and the training program was modified once in every 2 weeks, control group has not involved any specific training. The data were collected and analyzed using ANCOVA. Further, Scheffe's *post hoc* test was applied to know the paired mean difference if the optioned "f" ration was significant. Level of confidence was fixed at 0.05. The resulted study shows that subjects performing combined practices of asana and pranayama group were found to be significant in abdominal strength than the other two groups.

Keywords: Abdominal strength, Asanas, Pranayama

INTRODUCTION

Yoga is a way of life, a conscious act, not a set or series of learning principles. Derived from the Sanskrit root "Yujir Yogey" meaning to unite, to yoke, to join, to put together, yoga is not about mind over body. On the other hand, yoga is about developing harmony between them. Yoga is a 5000 years old science whose teachings were first imparted not in a classroom or Gurukul, but on the battle field in the epic Mahabharata, the sage, Lord Krishna is first said to have imparted the teachings of yoga to his despondent student Arjuna. Around 1500 years later, another sage, Patanjali, went on to enunciate, for the benefit of humankind and eternity, the way to reach the summum bonum of life through a series of 195 aphorisms (sutras) in his epic treatise the Yoga Sutras of Patanjali.

Asana is stability and comfort experienced in the position. After attaining the position, one needs to relax all the muscles and try to maintain the positions for long. Due to various twists, stretches, and strains in the body, the internal organs are stretched and subjected to strain. This increases the blood supply, oxygen supply to the organs increasing the

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efficiency and functioning of the organ. There are eight types of Pranayama mentioned in Hatha Yoga. One of the basic preparations for Pranayama is Nadi Shodhan Pranayama or alternate nostril breathing, alternate nostril breathing has calming effect on nervous system, and also in muscular system. Furthermore, research has shown that Bhramari and Bhastrika Pranayama help in abdominal strength. In Bhastrika Pranayama, the abdominal muscles are used which puts pressure on the internal organs.

METHODOLOGY

The purpose of this study was to find out the effect of selected asana practices and combined practices of asana and pranayama on abdominal strength of college women students. For this purpose, 60 college women students were selected from the Alagappa University College of Physical Education, Alagappa University, Karaikudi, Sivagangai district, Tamil Nadu, India (Age = 18 and 22), The random group design was used as experimental design. The subjects were divided into three equal groups that consist of 20 each. The age group of 18–20. Asana practice group (n = 20) combined practices of asana and pranayama group (n = 20) and control group (n = 20). After dividing three groups, namely, experimental Group-I, experimental Group-II, and control group. Experimental Group-I underwent asana practice group, experimental Group-II underwent combined practices of asana and pranayama group. Control group has not involved any specific training. The bent leg curl up test was used to analyze the abdominal strength. It was recorded as a pre-test and post-test. The training consists of 6 weeks for both groups, selected asana was practice by the asana group (Salabasana, Halasana, Virkasna, Sarvangasana, Shavasana, Viparita karani, Mayurasana, Bhujangasana, Makrasana, Dhanurasana, Ardhamatsyendrasana Vajrasana, Yoga Mudra, and Pavan Muktasana) and asana and pranayama were practiced by the combined practices group (alabasana, Halasana, Virkasna, Sarvangasana, Shavasana, Viparita karani, Mayurasana, Bhujangasana, Makrasana, Dhanurasana, Ardhamatsyendrasana Vajrasana, Yoga Mudra, Pavan Muktasana and Nadi Sudhi, Nadi Shodhana Pranayama, Bhramari, and Bhastrika Pranayama) for 5 days in a week and 45 min/day, and the training program was modified once in every 2 weeks.

STATISTICAL TECHNIQUE

Analysis of data using ANACOVA showed that there were significant difference between experimental groups and control group**.** The level of significance was fixed at 0.05 level ($P < 0.05$) of confidence. The F ratio was significant then the Scheffe's test for the differences of the adjusted post-test paired means of bent leg curl up was conducted and presented in this study.

From Table 1, the mean and standard deviations of the pre-test for asana practice group were 27.9 and 2.55 for combined asana and pranayama practices group 27.45 and 1.50 and for control group 27.6 and 2.84, respectively. The mean and standard deviations of the post-test for asana practice group were 32.45 and 2.42 for combined asana and pranayama practices group 33.6 and 2.41 and for control group 26.75 and 2.17, respectively. The analysis of covariance was calculated and presented in Table 2.

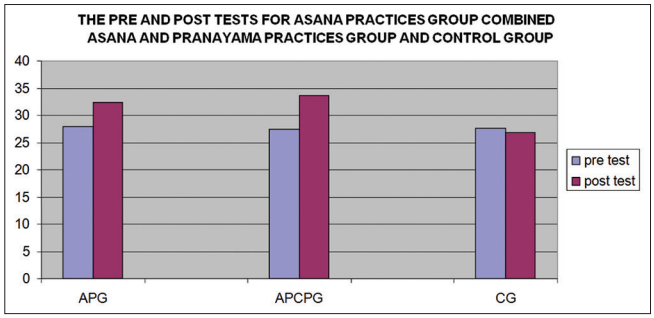

Table 2 shows that the adjusted post-test mean for asana practice group is 32.26 and the adjusted post-test mean for combined asana and pranayama practices group is 33.75 and the adjusted post-test mean for control group is 26.79. The obtained F ratio was 116.74 and this value was greater than the table value of 3.16 at 0.05 level of confidence. Since the F ratio was significant, then the Scheffe's test for the differences of the adjusted post-test paired means of bent leg curl up was conducted and presented in Table 3.

Table 3 shows that the mean difference in bent leg curl up between asana practice group and combined asana and

Table 1: The summary of mean and standard deviation for the pre- and post-tests on bent leg curl up of asana practices group combined asana and pranayama practices group and control group

Groups	Pre-test		Post-test	
	Mean	SD	Mean	SD
APG	27.9	2.55	32.45	2.42
APCPG	27.45	1.50	33.6	2.41
CG	27.6	2.84	26.75	2.17

Table 2: Analysis of covariance on bent leg curl up of asana practices group, combined asana and pranayama practices group, and control group

Adjusted post-test mean			Source	SS	df	MS	F
APG	APCPG	CG					
32.26	33.75	26.79	Between	537.77	2	268.88	116.74
			within	128.99	56	2.3	

Significant at 0.05 level of confidence. The table value is 3.16

Table 3: Scheffe's test for the differences of the adjusted post-test paired means of bent leg curl up

Adjusted post-test means			Mean differences	Confidence interval value
APG	APCPG	CG		
32.26	33.75		1.49	1.21
32.26		26.79	5.47	
	33.75	26.79	6.96	

pranayama practices group was 1.49, the mean difference between combined asana and pranayama practices group and control group was 5.47 and the mean difference between asana practice group and control group was 6.96 and the confidence interval value was 1.21. Mean difference value was greater than the confidence interval value so the asana practice group was better when compare with combined asana and pranayama practices group and both asana practice group and combined asana and pranayama practices groups were higher value than the control group and both the groups were better when compare with the control group.

CONCLUSIONS

Analysis of data using ANACOVA showed that there was significant difference between experimental groups and control group on the abdominal strength. The significant improvement in the abdominal strength highlights the effect of asana practice and combined asana and pranayama practice group, the control group did not participate any kind of program specifically for improving the selected variable level. Regarding the improvement among the two practice groups, the combined asana and pranayama practice group showed better in the abdominal strength.

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Volume 39 • Issue 1 ISSN 2231-3265

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Fitness and Sports Science Association

International Journal of Health, Physical Education and Computer Science in Sports
A Peer Reviewed (Refereed) International Research Journal - ISRA Journal Impact Factor 7.217

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Research Article

The pandemic COVID-19 and its impact on the sports world and economy

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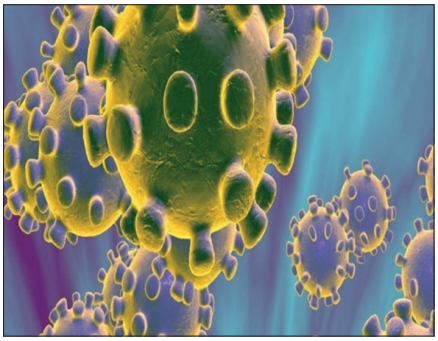
ABSTRACT

The corona virus covid-19 pandemic is the defining global health crisis of our time and the greatest challenge we have faced since world war two. Since it has emerged in Asia late last year, the virus has spread to every continent except Antarctica. But the pandemic is much more than a health crisis; it's also an unprecedented socio economic crisis. Every day, people are losing jobs and income, with no way of knowing when normality will return. The international labor organization estimates that 195 million jobs could be lost. The World Bank projects as slow billion decline in remittance this year, which could mean 800 million people will not be able to meet their basics needs. The pandemic has hit the economy of the world very hard and sports are no exception. The economic structure of sports is likely to change, with lower ranked nations facing a crunch in funds. Less popular sports & indigenous sports are staring at an uncertain future. The global economic slump triggered by the covid-19 pandemic could change the entire sports industry in ways thought unthinkable till now. Some sports will be hit harder than others. The economic structure of sports is likely to change and lower ranked nations will face a crunch in funds. The study not only throws light on the impact of pandemic covid-19 on the sports world but also narrates the management & remedial measures to overcome the situation.

Keywords: Pandemic, Covid-19, Sports Economy, Measures

COVID-19

COVID-19 is a disease caused by a new strain of coronavirus. "CO" stands for corona, "VI" for virus, and "D" for disease. Formerly, this disease was referred to as "2019 novel coronavirus" or "2019-nCoV." The COVID-19 virus is a new virus linked to the same family of viruses as severe acute respiratory syndrome and some types of common cold.



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Pandemic

Occurring over a wide geographic area and affecting an exceptionally high proportion of the population. An outbreak of a disease that occurs over a wide geographic area and affects an exceptionally high proportion of the population a pandemic outbreak of a disease. Coronavirus disease 2019 is potentially a severe respiratory illness caused by a virus and characterized by fever, coughing, and shortness of breath.

SPORTS AND COVID-19

The coronavirus COVID-19 pandemic is the defining global health crisis of our time and the greatest challenge we have faced since world war two. Since it has emerged in Asia late last year, the virus has spread to every continent except Antarctica. However, the pandemic is much more than a health crisis; it is also an unprecedented socioeconomic crisis. Every day, people are losing jobs and income, with no way of knowing when normality will return. The international labor organization estimates that 195 million jobs could be lost. The World Bank projects as slow billion decline in remittance this year, which could mean 800 million people will not be able to meet their basics needs. The pandemic has hit the economy of the world very hard and sports are no exception. The economic structure of sports is likely to change, with lower ranked nations facing a crunch in funds. Less popular sports and indigenous sports are staring at an uncertain future. Sportsperson, trainers, and coaches are having the toughest time of their careers. The global economic slump triggered by the COVID-19 pandemic could change the entire sports industry in ways thought unthinkable till now. Some sports will be hit harder than others. The economic structure of sports is likely to change and lower ranked nations will face a crunch in funds.

IMPACT OF COVID-19 ON SPORTS ECONOMY

Impact on the Sports Industry

The world is witnessing the advance of coronavirus (COVID-19) and its impacts on a global scale. The effects of COVID-19, which is already considered a global pandemic by the World Health Organization, are bringing thousands of cases in every part of the world and will cause brutal economic damage. The negative economic impact of the pandemic and its recessive reflexes scared the financial market.

The economic losses will be gigantic, and the stock markets melt daily around the world because of it. We also have the Tokyo Olympic Games, the biggest event on the planet, which at this time has not the slightest condition to be held. The UEFA EURO Championship has already been postponed from 2020 until 2021. Moreover, sports, as an important economic sector, are also suffering strongly as well. We are watching competitions being cancelled or extended. Matches with closed gates and leagues deciding to simply paralyze their activities.

Impact on Sports Organizations

The impact of the coronavirus crisis is diverse depending on the area that we analyze in the sports world. In professional sports, where we talk about large stadiums, television rights, sponsors, etc., where there really is a significant volume of business in terms of income and a diversification of this income by different agents, the impact is going to be important, but it may be bearable up to a certain point. The main source of income for professional sports is usually from television rights, which are based on a contract with strong legal conditions carefully reviewed by specialists. Therefore, an insurance clause covering coronavirus is included in this contract and may possibly safeguard a good part of the forecast or estimate of income that the clubs have had, in this case. Surely, the final impact cannot be foreseen right now because, logically, it is still unsure if sports competitions are going to take place with the structure and forecast that existed when the calendar was prepared at the beginning of the season. However, if they can be carried out, the impact is obviously going to be, from the point of view of professional sport and in this economic aspect, the impact would be almost zero. In the end, the preparation, execution, and broadcasting of these matches will end up happening. Therefore, in professional sports, the economic impact, for the moment, is expected to be limited. We will see for how long these strict measures we have today that prohibit any type of event or sporting event will be prolonged.

Impact on Schools and Colleges

Sports colleges are senior secondary school which promotes sports alongside secondary education. College sports make roughly 1 billion annually in ticket sales and promotions for universities, according to the National Collegiate Athletic Association (NCAA). Athletic dollars from basketball, football, and baseball can contribute more than half to a school's operating budget. "There's never a good time for a pandemic but for college sports, I think this was particularly bad, because it happened right at the beginning of the men's basketball tournament, and the men's basketball tournament is the largest source of revenue for the NCAA," Kristi Dosh, a college sportswriter and analyst, told VOA.

Impact on Fitness Industries

The threat of corona virus has left the fitness industry such as gym, yoga, and aerobic center sailing and barely able to stand with smaller gyms on the verge of shutting down, larger chains contemplating huge losses, and unemployment becoming a very real prospect for many thousands of trainers and support staff. It has been barely a week since gyms across the country shut shop and the industry is already crumbling under the pressure of the COVID-19 outbreak, said insiders. The pandemic that has led to a lockdown in many parts of

the country has hit fitness center's big and small – whether neighborhood gyms, with maybe a couple of treadmills and a cross trainer or two, or nationwide chains such as Gold Gym and Cult fit that have at least 20 centers in one city alone. Gym owners said that their businesses are suffering losses, compelling them to lay off staff temporarily.

Impact on the Sportsman

Teachers and coaches across the world have been sharing ideas and innovative ways to stay home and stay active. At the Youth Sport Trust, free-to-access "Home Learning" activities have been added daily – attracting over 48,000 webpage visits in the 1st week of lockdown. For most athletes, though, the biggest risks to performance will have little to do with the virus itself. Lindley, of Northwestern, estimates that about 40% of players on most rosters are coping with an injury at any given time. Now, athletic trainers accustomed to daily interactions with those in their care are forced to hold videoconferences with athletes to, say, demonstrate complex rehab exercises.

Impact on the Sports Ecosystem

The sport ecosystem, comprising producers, broadcasters, fans, businesses, owners, and players among others, needs to find new and innovative solutions to mitigate the negative effects of COVID-19 on the world of sport. This includes finding ways to engage with fans to ensure safe sport events in the future while maintaining the workforce, creating new operating models, and venue strategies.

The global economic slump triggered by the COVID-19 pandemic could change the entire sports industry in ways thought unthinkable till now. The key revenue generation for sports bodies is through licensing of television broadcast rights. With the stoppage in sporting events, it is likely that most sporting bodies will face financial hits. Indian cricket could be relatively better placed. Smaller countries such as West Indies, Bangladesh, and Sri Lanka could face challenges if their respective media contracts are not renewed, said Manish Desai, partner in Deloitte India. Desai said sports other than cricket might find it harder to return to normal in India, because they do not have as deep financial pockets.

Impact on Sports Manufacturers and Suppliers

A complete shutdown is the last thing a business or industry would ever expect to deal with. Situation becomes grim when operations are stalled at the peak of business season. While all business enterprises are reeling under the loss of opportunities and financial impact as the world has come to a standstill, sports goods industry in India is among the worst hit. The business is shut at a time when sports activities and the business volume hit the peak. Sports lover's sentiments hit the peak in India with the Indian Premier League. The fact time and again is ascertained by broadcast audience ratings and sports business reports by top evaluators. On ground March-April is the time when a new crop of aspiring sportspersons joins sports academies. This is the new consumer base that adds to the year on year business growth of sports business industry. India's leading sportswear manufacturer and top supplier to the Sports Authority of India and national sports federations Shiv Naresh Sports is dealing with a duel blow. Production and orders are halted and expected payments from the government sector are deferred indefinitely, severely hurting the company's fund flows.

COVID-19 PANDEMIC AND ITS IMPACT ON VARIOUS COMPETITIONS

Major events in the sports world have been hit very hard hampering the sports economy to the maximum. As a result of which the major sports competitions are postponed. Few major competitions postponed are listed below:

- The postponed Tokyo Olympic Games will now begin on July 23, 2021, and run until August 8.
- World athletics has suspended Olympic qualification until December.
- The postponed Paralympics Games will run from August 24–September 5, 2021.
- Major League Soccer will restart the season on July 8 by staging a tournament without fans at Disney World in Orlando, Florida.
- Euro 2020 and Copa America were postponed. The two tournaments will now be staged from June 11 to July 11, 2021.
- The Euro 2021 Women's Championship has been pushed back to July 6–31, 2022.
- The women's Under-20 World Cup in Costa Rica and Panama, postponed from August–September, has been rescheduled for January 20–February 6, 2021.
- The World Athletics Indoor Championships (Nanjing, March 13–15) were postponed to March 19–21, 2021.
- The Thomas and Uber Cup will be held from October 3–11.
- World T-20 Cricket Competition
- This year's Multisport World Championships, due to take place in Almere from September 4–13, have been pushed back to 2021. The 2021 event in Townsville will move to 2022, while Ibiza will host the competition in 2023.
- The 2021 World Championships will begin in late November instead of August to avoid clashing with the rescheduled Tokyo Olympics.
- The Tour de France (Cycling) that was due to be held from June 27–July 19 has been postponed to August 29–September 20.

REMEDIES TO OVERCOME THE COVID SITUATION IN SPORTS ARENA

You can reduce your chances of being infected or spreading COVID-19 by taking some simple precautions:

Supporting Physical Activity

Governments should work collaboratively with health and care services, schools, and civil society organizations representing various social groups to support physical activity at home. Enhancing access to online resources to facilitate sport activities where available should be a key goal to maintain social distancing. However, low-tech and no-tech solutions must also be sought for those who currently lack access to the internet. Creating a flexible but consistent daily routine including physical exercise every day to help with stress and restlessness is advisable.

Research and Policy Guidance

The United Nations system, through its sports, policy instruments and mechanisms such as the Intergovernmental Committee for Physical Education and Sports as well as through its research and policy guidance should support governments and other stakeholders to ensure effective recovery and reorientation of the sports sector and, at the same time, strengthen the use of sports to achieve sustainable development and peace. Scientific research and higher education will also be indispensable pillars to inform and orient future policies.

Technical Cooperation and Capacity Development

Governments, UN entities, and other key stakeholders should ensure the provision of capacity development and technical cooperation services to support the development and implementation of national policies and approaches for the best use of sport to advance health and well-being, particularly in the age of COVID-19.

Promoting Positive Social Attitudes and Behavior

Sport education is a powerful means to foster physical fitness, mental well-being, as well as social attitudes and behavior while populations are locked down. International rights and values based sport education instruments and tools, such as the International Charter of Physical Education, Physical Activity and Sport, the Quality Physical Education Policy Package, and the Values Education through Sport toolkit remain highly relevant references to ensure that the many online physical activity modules that are being currently deployed comply with gender equality, non-discrimination, safety, and quality standards.

Outreach and Awareness

Governments, the United Nations, and the sporting community, including the sporting education community, should disseminate WHO and other guidance on individual and collective measures to counter the pandemic. Measures must be taken to reach communities that have limited access to the internet and social media and that can be reached through cascading the sport education pyramid from the national/ministerial level down to the provincial/municipal level, from the national physical education inspector down to the teacher, from the national four United Nations Department of Economic and Social Affairs May 2020 sport federation down to the clubs. In turn, escalating the pyramid provides for important feedback to identify needs and share specific solutions. Athletes, while deeply affected by the pandemic, remain key influencers to ensure that – especially young – audiences understand risks and respect guidance.

Precautionary Measures

a. Regularly and thoroughly clean your hands with an alcohol-based hand rub or wash them with soap and water. Why? Washing your hands with soap and water or using alcohol-based hand rub kills viruses that may be on your hands.
b. Maintain at least 1 m distance between yourself and others. Why? When someone coughs, sneezes, or speaks they spray small liquid droplets from their nose or mouth which may contain virus. If you are too close, you can breathe in the droplets, including the COVID-19 virus if the person has the disease.
c. Avoid going to crowded places. Why? Where people come together in crowds, you are more likely to come into close contact with someone that has COVID-19 and it is more difficult to maintain physical distance of 1 m.
d. Avoid touching eyes, nose, and mouth. Why? Hands touch many surfaces and can pick up viruses. Once contaminated, hands can transfer the virus to your eyes, nose, or mouth. From there, the virus can enter your body and infect you.
e. Make sure you, and the people around you, follow good respiratory hygiene. This means covering your mouth and nose with your bent elbow or tissue when you cough or sneeze. Then dispose of the used tissue immediately and wash your hands. Why? Droplets spread virus. By following good respiratory hygiene, you protect the people around you from viruses such as cold, flu, and COVID-19.
f. If you have a fever, cough, and difficulty breathing, seek medical attention, but call by telephone in advance if possible and follow the directions of your local health authority. Why? National and local authorities will have the most up to date information on the situation in your area. Calling in advance will allow your health care provider to quickly direct you to the right health facility. This will also protect you and help prevent spread of viruses and other infections.
g. Stay home and self-isolate even with minor symptoms such as cough, headache, mild fever, until you recover. Have someone bring you supplies. If you need to leave your house, wear a mask to avoid infecting others. Why? Avoiding contact with others will protect them from possible COVID-19 and other viruses.
h. Keep up to date on the latest information from trusted sources, such as WHO or your local and national health authorities. Why? Local and national authorities are best

placed to advise on what people in your area should be doing to protect themselves.

CONCLUSION

The COVID-19 pandemic has had and will continue to have very considerable effects not only on the sporting but also on the physical and mental well-being of people around the world. It is highly suggested that the sporting activities are reopened with utmost care as recommended by the world bodies to maximize the benefits that sport and physical activity can bring in the age of COVID-19 and beyond.

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Volume 39 • Issue 1 ISSN 2231-3265

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International Journal of Health, Physical Education and Computer Science in Sports
A Peer Reviewed (Refereed) International Research Journal - ISRA Journal Impact Factor 7.217

Research Article

Effect of practicing indigenous game on muscular endurance cardiovascular endurance and flexibility of schoolchildren

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ABSTRACT

A research project financed by ICSSR on Kho-Kho as an Indian indigenous game was untaken to evaluate its impact on health and fitness of the children. The objective of the present study was to examine the effect of long-term practicing of indigenous game Kho-Kho on muscular endurance, cardiovascular endurance, and flexibility of schoolchildren. A total of 40 (n = 40) schoolchildren were randomly chosen for this study. Out of 40 schoolchildren, 20 children were boys and 20 were girls. The age of the subjects ranged from 6 to 12 years. All the subjects were involved in various physical training program related to Kho-Kho and participated in Kho-Kho game 5 days in a week for a period of 44 weeks. Three important fitness variables were considered for this study, namely, muscular endurance, cardiovascular endurance, and flexibility. All the three dependent variables were measured by standard tools and techniques. To draw the inferences, t-test was used between the pre- and post-treatment data and it was tested at $P < 0.05$ level of significance. For the statistical calculations, social science research software package was used. The significant difference was observed in all the three fitness variables, that is, muscular endurance, cardiovascular endurance, and flexibility both for boys and girls. Practicing indigenous game Kho-Kho had significant impact on muscular endurance, cardiovascular endurance, and flexibility of schoolchildren.

Key words: Indigenous Game, Kho-Kho, Physical Fitness, Muscular Endurance, Cardiovascular Endurance and Flexibility

INTRODUCTION

Indigenous games are the informal games played by the children from their very instinct that leads them to involve in various movement. All over the world there are so many indigenous games that played according to their conventionally implemented local rules. The indigenous games are different from country to country or even place to place in the same country. In India, Kho-Kho is a very popular indigenous game played in almost all the states (Kant, 2017). It needs only two wooden poles and a small ground, thus, easy to organize in the remote villages of the country thus become so popular. From the perspective of fitness, Kho-Kho needs high speed, agility, muscular endurance, cardiovascular endurance, and flexibility. Possibly, this indigenous game has the potentiality for the development of these fitness components. Therefore, the present study was planned by the researchers to initiate an attempt to find out the effect of practicing indigenous game Kho-Kho on muscular endurance, cardiovascular endurance, and flexibility of schoolchildren.

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MATERIALS AND METHODS

Subjects

Sl. No.	Name of the Training	Time (min)	Remark
1.	Warm-up	15	Every day
2.	a) Developmental Exercises related to Kho-Kho	15 - 25	2 days in a week
	b) Shadow skill practice of Kho-Kho		3 days in a week
3.	Game Practice	45 - 60	4days in a Week
	Kho-Kho related recreational games / informal games		1 day in a week
4.	Cooling Down	15	Every day

A total of 40 ($n = 40$) schoolchildren, 20 boys and 20 girls aged between 6 and 12 years, were randomly chosen for the study.

Experimental Protocol

All the subjects were involved in following schedule for 1.45–2 h in a day and 5 days in a week for a period of 44 weeks including national holidays. Every day subjects were involved in warm-up at starting time for 15 min. After warm-up, they became engaged in various developmental exercises related to Kho-Kho for a period of 15–25 min in 2 days in every week and rest 3 days they become engaged in shadow skill practice of Kho-Kho. After that, they become engaged in game practice for 45–60 min for 4 days in each week, however, only 1 day (Wednesday), they were free from compulsory game practice and became engaged in Kho-Kho-related recreational games/ informal games for 45–60 min. After that, they became engaged in compulsory cooling down exercises for 15 min daily.

Variable Studied

Muscular endurance, cardiovascular endurance, and flexibility were considered as the dependent variables. Muscular endurance was measured by 1 min bent knee sit ups, cardiovascular endurance was measured by 1 mile run-walk test, and flexibility were measured by sit and reach test.

Procedure of Data Collection

The data were collected in pre as well as in post-treatment condition by the help of the above test for all the subjects.

Statistical Analysis

To draw the inferences, *t*-test was used between the pre- and post-treatment data of all three dependent variables, that is, muscular endurance, cardiovascular endurance, and flexibility of schoolchildren and it was tested at $P < 0.05$ level of significance. For the statistical calculations, social science research software package was used.

RESULTS

From Table 1, it was found that *t*-value and *P*-value of muscular endurance were 7.50 and 0.0001, respectively, which was significant at $P < 0.05$ level. Again, *t*-value and *P*-value of cardiovascular endurance were 6.03 and 0.0001, respectively, which was also significant at $P < 0.05$ level. *t*-value and *P*-value of flexibility were 7.74 and 0.0001, respectively, which was significant at $P < 0.05$ level. It indicated that there was a significant improvement of muscular endurance, cardiovascular endurance, and flexibility of the boys group due to practicing indigenous game Kho-Kho.

From Table 2, it was found that *t*-value and *P*-value of muscular endurance were 3.15 and 0.003, respectively, which was significant at $P < 0.05$ level. Again, *t*-value and *P*-value of cardiovascular endurance were 5.06 and 0.0001, respectively, which was also significant at $P < 0.05$ level. *t*-value and *P*-value of flexibility were 7.97 and 0.0001, respectively, which was significant at $P < 0.05$ level. It indicated that there was a significant improvement of muscular endurance, cardiovascular endurance, and flexibility of the boys group due to practicing indigenous game Kho-Kho.

DISCUSSION

The result of the study showed that there was a significant improvement of muscular endurance, cardiovascular endurance, and flexibility both for boys and girls group due to practicing indigenous game Kho-Kho. This result is similar with few studies (Meeravali *et al*., 2015; Singh *et al*., 2017). This result can be explained by the fact that due to long-term effect of training, the factors that determine the above fitness components such as lactic acid tolerance of the muscle, aerobic respiration ability of the muscle, pulmonary ventilation, and

Table 1: Mean, SD, mean diff, % of improvement, *t*-value, and *P*-value of muscular, cardiovascular endurance, and flexibility for boys group in pre-treatment and post-treatment

Name of the variables	Measured by	Unit	Pre-treatment		Post-treatment		Mean Diff.	% of improvement	*t*-value	*P*-value
			Mean	SD	Mean	SD		Mean		
Muscular endurance	One minute bent knee sit up	No. of sit up	22.20	2.14	27.45	2.28	5.25	23.92	7.50*	0.0001*
Cardiovascular endurance	1 mile run-walk	minutes	15.71	1.14	13.66	1.01	2.05	13.04	6.03*	0.0001*
Flexibility	Modified sit and reach test	cm	18.70	1.75	22.90	1.68	4.20	22.82	7.74*	0.0001*

Table value of "*t*" at $P<0.05$ level for df (39)=2.02, *sign indicates significant difference.

Table 2: Mean, SD, mean diff, % of improvement, *t*-value, and *P*-value of muscular, cardiovascular endurance, and flexibility for boys group in pre-treatment and post-treatment

Name of the variables	Measured by	Unit	Pre-treatment		Post-treatment		Mean diff.	% of improvement	*t*-value	*P*-value
			Mean	SD	Mean	SD		Mean		
Muscular Endurance	One minute bent knee sit up	No. of sit up	18.85	1.53	22.60	5.09	3.75	20.22	3.15*	0.003*
Cardiovascular Endurance	1 mile run-walk	minutes	16.42	1.23	14.57	1.08	1.85	11.26	5.06*	0.0001*
Flexibility	Modified sit and reach test	cm	22.05	1.73	27.10	2.25	5.05	23.03	7.97*	0.0001*

Table value of "*t*" at $P<0.05$ level for df (39)=2.02, *sign indicates significant difference.

joint mobility may improve, possibly, these improved functions of the body may result the improvement of the above variables.

CONCLUSION

From the above result and discussions of the present study, it can be concluded that practicing indigenous game Kho-Kho for a long period of time improves muscular endurance, cardiovascular endurance, and flexibility. Thus, it is recommended to adopt Kho-Kho as a training means and as a means of recreation for the children that develop the fitness and performance factors at the same time. This research work unfolds the hidden quality of Kho-Kho that can also be implemented for the advance athletes with an aim to develop the fitness quality and to refresh them from the year long monotonous training schedule adopted by their coaches.

ACKNOWLEDGMENT

The authors thank all the students of the Kho-Kho extension center of University of Kalyani for their enthusiastic participation as subjects of the present project. Authors also extend their heartiest thanks to ICSSR for providing the financial support for the research project. The present research paper is a small part of the ICSSR sponsored research project entitled "IMPACT OF PRACTICING INDIGENOUS GAME KHO-KHO ON HEALTH AND WELLNESS OF SCHOOLCHILDREN" in the domain of health and environment.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Stress management and working women with a yogic spectacle

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ABSTRACT

Stress is viewed as resulting from the combination of high role demands and low coping resources. If physical activity is important for good health, then mental relaxation is essential. Mental tension and stress cause a whole range of psychosomatic ailments including headache, insomnia, asthma, ulcers, blood pressure, and sexual dysfunction. Stress is caused due to problems related to work, home, daily routine, crisis, and even personality. Women in paid employment worldwide are still expected to assume primary responsibility for home and family and are subjected to a double burden of work, especially when the children are young. That is why their health and work performance can be negatively affected because a higher degree of stress. Yogic practices are a way of life an integrated system of education for the body, mind, and inner spirit; it can provide the benefits of increasing general health, stamina, and reducing stress and improving personal fitness of lifestyle.

Keywords: Stress, Yoga, Work, Health

INTRODUCTION

Right from the time of birth till the end of life, each individual is invariably exposed to various stressful situations. There are two kinds of stress that were distinguished by Selye and Levi. Eustress is synonymous with healthy essential stress produced, for example, by joy, any kind of positive impulse, sensible reactional activities, sports practices as a hobby, etc. Whereas distress is synonymous with morbigenous stress that has to be controlled, for example, continuous mental or physical strain of any kind anger, frustration, and states of tension without hope. Human has the ability to react to immediate danger or to enjoy thrilling experience because of nervous system that is well equipped to handle acute stress. When expose to long term, however, the mind and body can be overwhelmed. Chronic stress is a result of unrelenting circumstances and internal perception.

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Working Women and Stress

Women in paid employment worldwide are still expected to assume primary responsibility for home and family and are subject to a double burden of work, especially when the children are young. Women are also subject to considerable conflict between marital/parental and occupational demands. They occupy different jobs than men, usually hierarchically inferior and entailing fewer benefits and opportunities for growth. When left unchecked, occupational stress can lead to emotional and physical disorders that began to impact personal as well as professional lives. The individual may develop a level of tension that interferes with sleep, making relaxing outside the workplace impossible. Overtime, the stress can trigger emotional disorders such as anxiety, depression, and

some cases various phobias that further inhibit the ability to enjoy any aspect of living.

Major Causes of Stress for Working Women

There are some types of stress that are particular to women who work, and they are affecting a huge portion of the population.

- More household responsibilities and work/ life balance.
- Friendships/ family life. Family issue as a major area of ongoing stress.
- Concern over remuneration and the gender pay gap.
- Stress over finances and lack of job satisfaction.
- Having a heavy workload at home as well as workplace and working long hours.
- Having poor management, unclear expectation of work.
- Facing discrimination or harassment at work, especially if your company is not supportive and career stress.
- Weak superannuation fund and competitive stress at work, etc.

Effects of Stress on Body

- Physical, psychological, and emotional disturbances.
- Inability to work well and dissatisfaction in life.
- Loss of productive work force for nation and burn out.
- Breakup of human relationships.
- Unhappiness discontentment.
- Habits and addictions and
- Loss of "Zest" for life.

Health Problems Due to Stress

- Impaired immunity predisposing to infections.
- Anxiety neurosis, restlessness, fatigue, sleeplessness, migraine.
- Muscle spasm leading to tension headaches, backaches, etc.
- Palpitations, hypertension, ischemic heart disease, arrhythmias.
- Breathlessness, bronchial asthma, allergies.
- Peptic ulcers, dyspepsia, irritable bowel syndrome.
- Sexual problems.
- Diabetes mellitus and autoimmune diseases like rheumatoid arthritis.
- Addiction to tea, coffee, drugs, etc., and eating disorders, obesity.
- Autonomic neuropathy.

Role of Yoga in Preventing and Managing Stress

It is known that stress is ever present, a universal feature of life. Arousal is an inevitable part of living. We constantly think, feel, and act with some degree of arousal. Stress cannot be and should not be avoided. Rather, it is to be contained, managed, or directed.

When stress on the job is interfering with women ability to work, she should take care for herself, or manage her personal life. It's time to take action. Start by paying attention to her own needs are taken care of, she is stronger and more resilient to stress. The better she feel, the better equipped she will be to manage work stress without becoming overwhelmed. Yoga is the science of right living, it balances, harmonizes the body, mind, emotions, and spiritual health. Various aspects of yoga such as asana, pranayama, mudra, bandha, shatkarma, relaxation, and meditation help in the prevention and management of stress.

Asana

Asana as a physical technique of yoga is helpful for managing stress and strain disorders. When women do asana and stretch her muscles, muscular tension is relaxed and thereby she feels relieved of physical pain. In the same way, when she keeps her mind relaxed through the practice of yogic techniques such as santosh (contentment) and pratyahara (detachment of mind and sense organs from various unnecessary sensual objects), she can release her suppressed emotions. As a result, she trend to become less tense on mental level also. Every elements of yogic therapy can bring benefits to physical and mental health. An individual woman may be the victim of stress and strain disorders when total balance of positive health is disturbed. For example, a bad day at work may make person irritable and it also increases stress reactions, makes muscles tense leading to chronic fatigue, in this physical problem yoga helps a lot reducing physical strain.

Pranayama

Pranayama is defined as breath control or mastery over breathing. Breath control done in proper manner eradicates all diseases, regulate emotions, and stabilize the mind. The constant awareness of mind on the breath and its rhythm quietness the entire body, the mind becomes tranquil. Various pranayama techniques such as Nadisodhan, Chandra anuloma viloma, Chandra bhedan, Bhramari, and cooling pranayama endows mental peace. This means improved ability to withstand stress.

Mudra

Mudras are the psychic, emotional, devotional, and esthetic gestures or attitudes. These are the attitudes of energy flow, intended to link individual pranic force with universal or cosmic force. A mudra may involve the whole body in a combination of asana, pranayama, and bandha; or it may a simple hand position. Mudras are the combination of subtle physical movement which alter mood, attitude, and perception and which deepen awareness and concentration thus balance the tension and stress.

Bandha

The Sanskrit word bandha means to hold; tighten or "lock." The practices of bandha aim to lock the prans in particular areas redirect their flow into sushumna nadi for the purpose of spiritual awakening. According to yogic scripture, control of muscles and nerves regulate breath, control of breath controls

consciousness. Bandhas are a means of extending control over breathing and are thus a mean to extend the knowledge and control over consciousness.

Practice of uddiyana, Jalandhar, and moolabandha directly manipulates and influences the brain and it's neurological and endocrinological function and thus influences behavior, personality, and mental state by exerting a positive and coordinating effect on the whole physical body through the brain. This regulates all automatic body functions including heart rate, blood pressure, and so on. Bandhas are strong medium of bringing about a relaxation of the mind and body. They relax the mental stresses which are observed in women, which include factors such as mania, depression, hysteria, phobia, and anxiety. Bandhas are the mental purgatives releasing the subconscious and unconscious mind of suppressed anxieties and hidden mental block, beyond consciousness which cause difficulties in women life. So thus, women feel cleaned, freed, and revitalized.

Meditation

Meditation has been described as no mind or not thinking. It is a stilling of the mind for a sustained period. It is achieved initially by concentrating on one thing – a word, a symbol, an action such as breathing – so that everything else falls away. This is called the one pointed mind. When the mind becomes one pointed and steady, it goes beyond the normal awareness into the state referred to as meditation.

There is an intimate connection between the mind and the body. All diseases take origin in mind. Whatever you hold in mind will be produced in the physical body. Regular meditation helps to reduce hypertension, insomnia, migraine, depression, anxiety, and other psychosomatic illnesses, which are caused due to stress. It also improves brain function by enhancing a balance between the two hemispheres of the brain, promoting creativity, love, compassion, and thus helps in prevention and management of stress.

Yogic Relaxation

Yogic relaxation is not a superficial resting of the body alone. It is deeper relaxation reacting at the level of chitta. Hence, practice of relaxation technique removes physical exertion and provides mental calmness. Through relaxation, one can observe these: Gives total relaxation to body and mind; normalizes hormonal imbalance; heart rate, respiratory rate, blood pressure; reduces physical, mental stress, and fatigue of all kinds so indicated in insomnia, anxiety, and phobia, stress-related disorders.

CONCLUSION

Practice of yogic technique provides holistic health – physical, mental, emotional, and spiritual health. It can be said in conclusion that if women who practice yogic techniques can be able to handle stress in any form, and she feel more energetic and enthusiastic about her life and work, she can think more clearly and logically, less likely to get exhausted or upset, and is more productive and often more creative.

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Research Article

Effect of yogic practice on cognitive variables of sportsmen in Mysore University

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ABSTRACT

Yoga is an ancient system of exercise from India. Yoga comes from the Indian word yuj, which means to bind together, to join, or to unite. It is the union of the mind, body, and spirit a holistic approach to your physical and mental well-being. It is a system of exercise that combines stretching and breathing with a relaxed awareness, resulting in beautiful, toned body, complexion, and positive attitude toward life. The purpose of the study was to find out effect of yogic practice on cognitive variable of sportsmen. To achieve this purpose, 80 male students studying in University College, Tumkur, sportsmen Tumkur were selected as subjects. The following yogic Practice were selected for giving 8 weeks training for 80 subjects. Criterion variables cognitive was selected and measured using long-term memory. It was used for pre-test and post-test. The result shows that the 8 weeks of yogasanas training develops long-term memory performance. Yogasana training develops Long-term memory performance.

Keywords: Long-term memory, Yogic practice

INTRODUCTION

Yoga is a tradition method of meditation developed by the saints of ancient India. They practiced yoga as an effective method of controlling their mind and bodily activities. Yoga in daily life is a system of practice consisting of eight levels of development in the areas of physical, mental, social, and spiritual health. When the body is physically healthy, the mind is clear, focused and stress is under control. This gives the space to connect with loved ones and maintain socially healthy relationships. When we are healthy, we are in touch with inner self, with others and surroundings on a much deeper level, which adds to spiritual health. Yoga increases the flexibility of the spine, improves body's physical condition, and heightened awareness to the importance of relaxation. It has been emphasized that each exercise be practiced slowly, coordinating movement with the breath, pausing motionless in each position and always with full concentration.

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THE IMPORTANCE OF YOGIC PRACTICE

Good health is the greatest asset. Without good health, one can hardly expect success in any walk of life. To keep up good health, there are numerous modern physical culture systems designed to develop the muscles. The physical culturist develops them by mechanical movements and exercises. In such physical exercises, there is a fast

movement of the muscles resulting in the rapid functioning of the heart and lungs. The practitioner becomes exhausted very quickly.

In yogic practice, there is harmonious development of all the muscles of the body, internal organs, nerves, and the frame. There are no rapid movements and hence there is no waste of energy. In yoga exercise, movements are gentle and rhythmic and, on the other hand, they conserve energy.

The three important organs, namely, heart, lungs, and brain with its cerebrospinal system, are kept in a healthy condition by regular practice of a few important asanas and breathing exercises. Sound functioning of the organs depends on good healthy nerves. The tripod of life is the brain, heart, and the lungs. The heart and the lungs are under the control of the brain. These three important organs along with the cerebrospinal system are kept in a healthy condition by regular yogic exercises.

If proper practices are not given to muscles, they will tend to contract and there will be stiffness and heaviness in the body also blood circulation and nerve force will consequently be impeded. Their malfunctioning will disturb the organs. Some of the yogic practice concentrate on the development of the muscle also, consistent with the development of other parts as well.

METHODOLOGY

The methodology adopted in the present study related with selection of subjects, selection of variable, and selection of test.

Selection of Subjects

The purpose of the study was to find out "Effect of Yogic Practice on Cognitive variable of Sportsmen." To achieve this purpose, 80 male students in the age group ranging from 18 to 23 years studying in Mysore University College sports, Mysore, Karnataka, were selected as subjects.

Selection of Variables

The following yogasanas were selected for giving 8 weeks training for experiment group.

Padmasan, Vajrasan, Vakrasana, and Paschimottanasana.

Table 1: The pre-test and post-test performance of long-term memory

Group	Test	Mean	Standard deviation	*t* value
Experimental group	Pre-test	38.34	10.94	12.68
	Post-test	75.51	21.26	
Control group	Pre-test	27.82	9.90	.371
	Post-test	27.56	9.91	

Significant level of at 0.05, *t*-value=12.685. ***t***-value of control group is less than that of experimental group, hence, it is significant.

Tadasana, Vrikshasana, Garudasana, and Trikoasana. Shavasana, Naukasana, Halasana, and Sarvangasana.

Makarasana, Bhujanagasana, Dhanurasana, and Shalabhasana.

The training session included 10 min for warm-up 40 min for practicing yoga posture and 10 min for cool down procedure was adapted.

Test and Measurement

S. No.	Variable	Test	Measurement
1	Cognitive variable	Long-term memory	Questionnaire developed by Dr. Srinivasa

ANALYSIS AND INTERPRETATION OF DATA

The purpose of the study was to measure the "Effect of Yogic Exercises on Cognitive variable of sportsmen." To achieve this purpose, the data collected for the study were put into analysis and results of which are presented in the table.

Table 1 indicates the pre-test and post-test scores of the subjects on long-term memory for the experimental and control groups. There was a significant difference between the pre-test and post-test scores of long-term memory among the experimental group. There was no significant difference in the pre-test and post-test scores of long-term memory among control group. Higher number of long-term memory indicates higher cognitive performance. Less number of long-term memory indicates lower cognitive performance.

Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Indian education outlook toward sports

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ABSTRACT

Physical education (PE) and sports are the main parts of our program of study for so many years. In spite of being having its relevant aspect in our life, it was ignored by the each part of the society such as administration, professionals, and students. In PE, we deal with the theoretical and practical aspects as well. General concept of society regarding PE is not so good. People think that playing is just a wasting of time that is ironically wrong. We use our time when we are under game situations and that must be considered fullest utilization of time devoted to that task. Swami Vivekananda once said, "Sound mind in a sound body" which means a lot. It's hard to get optimum result of mind without the collaboration of our body. Awareness about health needs to be spread to get maximum output from PE and sports. Hence, hurdle on the way of sports must be removed so that to enlighten the society with the brightest light of sports. The realization of the negative impact that today's lifestyle brings on their children has made parents become proactive in their search for options for their child's fitness, they now encourage their children to take up some form of sports or physical activity along with their studies.

Keywords: Education, Physical education, Outlook, Sports, Physical training

INTRODUCTION

Conventionally, sports have never been an integrated part of the Indian education system in general. We (sadly) have all faced a scenario when our beloved physical training classes were hijacked by the science teacher under the pretext of "syllabus completion." Not much support was received from the parents as well when it came to playing back at home. In the rigid society, where high percentages are a measure of intellectual capability, one can least blame them.

In fact, most of the state and national boards have sports as a major subject for Class X. However, that is where its importance ends. The inclusion of sports in the syllabus is just for the sake of formality. Moreover, it all comes down to just one word – respect. Sports is, more often than not, viewed as an unworthy past-time activity for the pupils' recreation. Students doing well in a particular sport are still viewed as one of the most "distracted" lost of the class. The current education system focuses on the students' mental development while ignoring the physical growth. One also notices an interesting shift in the mindset of parents they are now aware and understand the importance of a physically fit body.

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Aim and Objectives

- The aim of the society is to create multifaceted educational program in the area of education, sport education, and physical education (PE)
- To train and educate people interested in developing, improving, and maintenance of health and fitness.

- To promote establishment of partnership with industries, NGOs working in the areas of sport, government, national federations, state associations, and educational institutions
- To establish and coordinate different activities with international agencies promoting sport.

IMPORTANCE OF SPORTS EDUCATION

Sports play a key role in making children strong from inside while inculcating the importance of maintaining a fit and sound body. It helps in the development of focus and concentration, in-turn assists during studies. Sports education directly impact on maintaining the children's well-being as well as increasing their physical stamina. It helps in developing muscle memory, strength, and overall bodily coordination.

SOME OF THE POSITIVE EFFECTS OF EDUCATION IN SPORTS ARE

- Children are introduced to the benefits of a healthy lifestyle early in their lives by instilling the habit and culture of taking up outdoor activities
- Introduction of sports curriculum at an early stage can act as building blocks for future sportspersons
- It can develop a strong ecosystem, along with other stakeholders such as authorities, federations, and sports clubs

Slowly, educationalists, and government departments have realized the importance of sports' and are planning for inclusions in the curriculum which is an essential part of the present-day school education. If the government and educationalist initiatives are properly laid down, one can see a different face of the students in the future.

MORE FINDINGS FROM THE STUDY

The study reveals that students who are provided with more than 3 PE sessions in a week are more active and has better body mass indexes (BMI). Where students in the urban and semi-urban areas did not find ideal space to play in their neighborhood, schools can play a pivot role in providing time and space for such students, observed the study. As per the finding, schools that have established sports session, PE, and safety infrastructure have more students with better BMIs.

CONCLUSION

PE and fitness have rather significant impact on children's performances in schools and education. According to the survey, students need more time to play and engage more with outdoor activities as most of the students in today's time have low BMIs. One child in every three was found unable to sprint as they could have at their age and lack physical strength. "When the education sector can have a proper system in place for teaching mathematics to students, why the same system can't be implemented for PE?"

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Importance of language in sports

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ABSTRACT

Language use refers to the communicative meaning of language. It can be compared to usage. Which refers to the rules for making language and the structures we use to make it……For example, the past form of verbs (usage) can express a wish about the present (use). Such as:- I wish I didn't have the boss

INTRODUCTION

Language use refers to the communicative meaning of language. It can be compared to usage. Which refers to the rules for making language and the structures we use to make it…… For example, the past form of verbs (usage) can express a wish about the present (use). Such as: I wish I did not have the boss.

WHY IS USE OF LANGUAGE IMPORTANT IN SPORT?

The reason this is an important question is because in the context of coaching, language is very important. The words you use with your players affect team culture, motivation, and performance. That means that you communicate in a way that empowers your players. You are not the reason they do something, they are.

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IMPORTANCE OF COMMUNICATION IN SPORTS

Being able to communicate effectively is not limited to how your athlete is feeling. Effectively conveying the goals of the team for the season is also a critical aspect of communication. The study by European leaders demonstrated that 68% of those surveyed fail to understand their company's vision. As a result, employees felt less engaged with their company and their performance was not at highest possible level. If your team does not understand the goal for the week, season, or year, they may also feel disengaged with the team and therefore less likely to produce a peak performance.

One of the most worrying findings from the survey was that only 36% of those surveyed believed they were working to their full potential. Although we would hope this number would be much lower, this figure is indicative of the potential lost when communication skill are not utilized.

LANGUAGE AND TEAM CULTURE

How you talk to your team goes a long way toward shaping the team culture and environment, so be international about the language you use. This means knowing what motivates your players and talking about those things in a positive way that makes people feel that their motivations are accepted, valued, and respected. For example, some players might be there because they want to experience the friendship and comradely that comes from playing a team sport. Other players might really value winning, while others might be playing as a recreational escape from something else in life. Creating a positive team culture means using inclusive language so that everyone feels that their motives for playing are equally valid.

SMALL WORDS MATTER

A second key thing to remember when thinking about language and team performance is that even small words can have a big impact. For example, consider the difference between an "expectation" and " challenge." When a team expects a particular result, there are two possible outcomes – either they achieve it and probably feel a sense of relief that they did not fail, or they do not achieve it and feel badly for falling short.

Contrast this with challenging your team to achieve a particular result. If they achieve it, there is a sense that something significant has been accomplished. If they do not achieve it that simply means that the challenges are still ongoing. By talking about challenges instead of expectations, it destigmatizes failure and changes it from something bad ("we failed to meet an expectation") to something simply factual ("we failed to achieve the challenges this time"). The way you talk about failure can make it either a tool for change and improvement or a debilitating state of inaction. Even small words can go a long way toward creating a growth focus or taking away from it.

YOUR THREE WORDS

Do you know what three words you use most when coaching? Are those words creating the team culture you want? Does your team perform the way they want when you use those words? The next time you are coaching at a practice, pay attention to what you are saying. Do you talk about failure as something to be ashamed of, or as an opportunity to identify an area for growth? Do you use language that creates space for everyone? Language is a powerful tool, and how you communicate as a coach sets the tone for your team.

Would you like to learn more about how language affects motivation and team performance ? Here are some really great resources to check out:

1. The John wooden pyramid of success.
2. Positive coaching alliance
3. The TED radio hour (lots of talks about how people communicate and collaborate to achieve goals)
4. A really scientific paper explaining research showing that people perform better at physical strength tasks when they hear affirming words than when they hear the same words in a negative context.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Objective norms of offensive skill rising and covering for male Kho-Kho players

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ABSTRACT

The purpose of the study was to develop objective norms of the rising and covering for Kho-Kho male players. It is an attacking skill, which requires control over running speed, with proper coordination, body balance, and flexibility. This test item was administered to 832 male Kho-Kho players from different zones of India, aged ranged between 16 and 28 years, divided into two groups 16–21 years and 21–28 years. To prepare the norms, percentile scale was prepared based on the performance of the players. Researcher utilizes his experience and experts opinion while formulating the test for the present study. A pilot study conducted with 20 players from West Bengal and established the reliability and validity of the test. Instruction and demonstration about the test item were given to the subjects properly to avoid any difficulties of the test coordination. Data were analyzed with appropriate statistics for the construction of norms.

Keywords: Objective norms, Kho-Kho skill, Rising and covering

INTRODUCTION

Kho-Kho is the game of speed, stamina, endurance, strength, and skill. Although it is a team event, individual fitness plays a key role in the success of the team. Many a times, it is a missing link of the team. During the practice, of course for winning matches, players must plan for individual fitness plays. Rising and covering is a vital offensive skill of Kho-Kho. It should be brought into play for sudden attack and at the time of judgment Kho in 1st rectangle. The attacker observes closely the runners while attacking from any rectangle. It is essential for the attacker to successfully secured score. The investigator was a renowned Kho-Kho player and he has enough experience in the game of Kho-Kho. He utilizes his experience and with consultation with other experts and coaches formulated the test for the present study. He also conducted a pilot study with 20 players in West Bengal and established the reliability and validity of the tests. This is one of the fundamental and important skills of the game. The present study was a sincere attempt on the part of the investigator to prepare an objective norm on the basis of rising and covering skill performance, for selecting good attacker of Kho-Kho.

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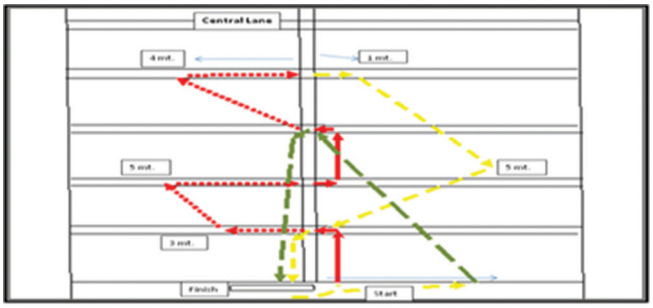
METHODOLOGY

For the purpose of the study, a total of 832 ($n = 832$) boys were selected as subjects from five zones of India. For the complexity and long duration of data collection procedure, only one or two

states were considered for each zone. State level and university level subjects were chosen from five parts of the country. They were from West Bengal, Punjab, Maharashtra, Karnataka, and Madhya Pradesh. Eight hundred thirty-two males, the age of the subjects was ranged between 16–21 years and 21–28 years. In the present study, rising and covering was considered as variable. In the skill executions, that is, rising and covering, the time taken by a subject were measured in second by stop watch. All the measurements were given three chances the best time from the three trials were taken as data.



Field diagram and route map of Rising and Covering

Table: 1 Mean and S.D. of the scores of male subjects

Variables	Age group (16–21 years)	Age group (21–28 years)
R and C	Mean (s)±S.D. (s)	Mean (s)±S.D. (s)
	23.22±2.321	23.56±1.805

Table 2: Percentile score of male subjects in rising and covering at decile points

Percentile	Age group (16–21 years)	Age group (21–28 years)
P100	18.29	19.48
P90	20.2	21.32
P80	21.18	22.08
P70	22.13	22.7
P60	22.68	23.3
P50	23.25	23.67
P40	23.86	24.16
P30	24.55	24.56
P20	25.24	24.8
P10	26.42	25.78
P1	32.01	29.94

Court Arrangement

First spot was marked 3 m away from the 1st rectangle on the cross lane. The 2nd spot was marked 5 m away from the 2nd rectangle on the same cross lane. The 3rd spot was marked 4 m away from the 4th rectangle on the same cross lane. All spots marked on the same side of the court. Now the 4th spot marked 1 m away from the 4th rectangle on the cross lane. The 5th spot marked 5 m away from the center lane in between 1st and 2nd rectangle and 6th spot marked 4 m away from the pole on the pole line. The 4th, 5th, and 6th spot marked opposite side of the first three spots.

Test Administration

The court with spot is marked as shown in figure-06. On the signal to "go" the subject start behind the pole line. First he sit in the 1st square and rise up straight to go the 1st spot and then diagonally attack toward the 2nd spot and come back to sit on the 2nd square. From the 2nd square subject rise to the 3rd square and get up diagonally go up to the 3rd spot and come back to sit 4th square. Then, the subject rise up straight up to the 4th spot and diagonally go up to the 5th spot and come back to sit 1st square. There after subject turn the pole and get up to the 6th spot maintain the contact of pole line and come back to sit 3rd square and again rise to go toward the pole line and finished the task.

Statistical Procedure

Gathered data were processed and percentile scales were prepared for preparing the norms.

RESULTS AND DISCUSSION

From Table 1, it was found that in rising and covering offensive skill, the subjects belonging to 16–21 years age groups fared comparatively better than the subject of 21–28 years age group.

Table 3: Grading of the subjects

Skill	Age group (16–21 years)					Age group (21–28 years)				
	Excellent	Good	Average	Below average	Worse	Excellent	Good	Average	Below average	Worse
R and C	21.1 and below	22.65–21.10	23.82–22.66	25.12–23.83	25.13 and above	21.96 and below	23.26–21.97	24.13–23.27	24.76–24.14	24.77 and above

Table 4: Mean age, height, and weight of the subjects

Variables	Age group (16–21 years)	Age group (21–28 years)
	Mean (s)±S.D.(s)	Mean (s)±S.D.(s)
Age	17.994±1.3497	23.197±2.0137
Height	161.3±6.375	165.21±5.9794
Weight	50.97±5.731	55.472±5.9694

Table 5: Correlation between age, height and weight, and performance

Variables	Age group (16–21 years)	Age group (21–28 years)
	n=523	n=309
Age	0.961*	0.921*
Height	0.832*	0.992*
Weight	0.988*	0.985*

CONCLUSION

Statistical computation of the gathered data revealed that the Kho-Kho players belonging to the age group of 16–21 years showed better performance than the players belonging to the age group 21–28 years in rising and covering. It was also found that age, height, and weight had high positive correlation with skill performance of the players. Irrespective of zone of domicile physical environment, food habits, age, height, weight, maturity of the players, and regular training fitness and concentration of the players have a telling effect on the performance of Kho-Kho players.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Impact of information and communication technologies on physical education

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ABSTRACT

This decade is characterised by rapid technological advances. Being in the digital era, technology has accounted for many changes in the physical educational sector. ICT represents one of the most useful tools to enhance curriculum if used correctly. Teaching and learning with technology has had a significant impact on students' outcomes when compared to traditional instruction. In the future, P.E will need to undergo radical changes. If technology had an impact in learning in general education, could it also enhance teaching and learning in P.E? New developments in the field of technology will positively affect the P.E curriculum. For example, the use of technological advances will prepare physical educators for the future demands and expectations of the society. Furthermore, the Ministry of Education is laying much emphasis on integrating ICT in the teaching and learning process. However, before using ICT in our educational institutes as a teaching tool, these important questions must be addressed. What technological options are available for our PE educators? Do using technological tools in the PE classes motivate the students? What is the role of technology as an assessment tool and how it is linked to performance? According to Green (2002), with the rapid developments in technology, ICT has made a significant impact on a number of P.E departments, and has the potential to enhance teaching and learning in P.E. Cummings (2002) further suggests that the pervasion of ICT in education is now impacting on P.E as much as on any other subjects. Many P.E departments in the U.K are currently using ICT for administration and management tasks. Computers allow us to continuously modify and update our schemes of work and lesson plans. The creation of a database of all students in the schools enable school administrators to maintain detailed records of assessments, key stage grades, sports awards and extra-curricular achievements.

INTRODUCTION

This decade is characterized by rapid technological advances. Being in the digital era, technology has accounted for many changes in the physical educational sector. These changes range from the method instruction is delivered, to the attitudes on how learning occurs to the amount of collaboration and knowledge sharing between not only students but also between teachers, managers, and administrators. Information and communication technologies (ICTs) represent one of the most useful tools to enhance curriculum if used correctly. According to Waxman and Mitchko (2003), teaching and learning with technology has had a significant impact on students' outcomes when compared to traditional instruction.

In the future, physical education (PE) will need to undergo radical changes. If technology had an impact in learning in general education, could it also enhance teaching and learning

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in PE? New developments in the field of technology will positively affect the PE curriculum. For example, the use of technological advances will prepare physical educators for the future demands and expectations of the society. Furthermore, the Ministry of Education is laying much emphasis on integrating ICT in the teaching and learning process. As students perform exercises and skills in their PE classes, PE teachers can use technological tools and systems to quantify processes and results to help them learn more about themselves (Kirkwood and Manon, 2002). However, before using ICT in our educational institutes as a teaching tool, these important questions must be addressed. What technological options are available for our PE educators? Do using technological tools in the PE classes motivate the students? What is the role of technology as an assessment tool and how it is linked to performance?

BENEFITS OF ICT IN PE

The use of ICT in PE makes the science of sport come to life by linking both physical and mental activity. It also helps to create full-fledged students who are able to concentrate better on both practical and theoretical work. Besides, it helps students to develop a better understanding of their own body parts and that of the human body in general. It also raises the profile of PE within the establishment by making the subject not only interesting but also attractive and effective. Furthermore, it brings enthusiasm and motivation for both PE teachers and students.

There are many good options available to physical educators in regard to technology. Many of these technologies are easily accessible and are easily incorporated into the curriculum.

SOME TECHNOLOGICAL TOOLS

Pedometers

Today, it can be said that the pedometer has become a recognized acceptable tool for measuring physical activity. Students can wear a pedometer and receive immediate and continuous feedback regarding their activity level (Beighle *et al*., 2001). Using pedometers at school can also demonstrate to parents that students are achieving a certain level of physical activity. Using the pedometers, students will be able to see progress toward set goal and consequently will be more motivated in the classes.

Heart Rate Monitors

The heart rate monitor will also provide real-time data that will allow students to see how different exercises and activities affect the heart rate. Hence, the heart rate monitor is a convenient apparatus that allows students to use up to date technology (Kirkwood and Manon, 2002). Charts of maximum heart rate can be made for each student and track increase or decrease in their heart rate.

Digital Video Camera and Visual Analysis Software

Using digital video camera to record pupils' performance can be a useful tool to help students improve their techniques. With the addition of motion analysis software, pupils have a professional supportive tool. The PE teacher can then use the digital video camera to analyze the actions more closely. This is done with a view to improve the teaching and learning of table tennis. Digital video clips were used weekly to stress on proper and improper techniques and then the pupils were given the opportunity to evaluate their own techniques and the technique of others through the "déjà vu" resource. In the Mauritian context, some state colleges which are actually working on a pilot project set up by the ministry of education are presenting candidates for the Cambridge O level Examination. Teachers involved in this project will have to make use of video cameras during the practical examination to record students' performance and then send them to Cambridge University. Each college involved in the pilot project has already received a laptop, an overhead projector, and its respective screen. Digital video cameras and internet connection facilities will soon be available in these schools.

Simulation and Games

Games such as Dance, Dance revolution, Fx cycles, and Nintendo Wii Fit provide opportunities for students to be physically active and simultaneously enjoying themselves. These games can also be combined to other technologies to enhance the experience (Di Giorgio, 2004). Concerning the Nintendo Wii Fit, work outs are done on a small balanced board that gamers stand on. The players receive instructions from screen and mimic the stretching and muscle building exercises. The Wii Fit tracking feature shows progress using the system. Therefore, it can be a valuable PE tool. However, teachers should not consider gaming system equivalent to traditional exercises. It should be considered as a supplement and a not a replacement of traditional exercises.

PERCEPTIONS TOWARD ICT TOOLS TO INCREASE PERFORMANCE

In developing an ICT culture in PE, students and primarily teachers need to keep up with understanding "what learning means and what approaches are conducive to effective learning in PE" (Elbourn and Cale, 2001). Literature has also shown how ICT tools can be used to enhance learning in PE and especially in increasing performance of students. Moreover, the primary reason for using these kinds of ICT tools is to increase improvement in the performance level of student as they try to look impressive, especially if their performances are recorded through the different technological tools.

CONCLUSION

According to Green (2002), with the rapid developments in technology, ICT has made a significant impact on a number of PE departments and has the potential to enhance teaching and learning in PE. Cummings (2002) further suggests that the pervasion of ICT in education is now impacting on PE as much as on any other subjects. Many PE departments in the U.K are currently using ICT for administration and management tasks. Computers allow us to continuously modify and update our schemes of work and lesson plans. The creation of a database of all students in the schools enable school administrators to maintain detailed records of assessments, key stage grades, sports awards, and extracurricular achievements.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Relevance of digital learning in the present scenario

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ABSTRACT

Digital learning has become inevitable way of learning in schools, colleges, universities, and other academic institutions because of outbreak of coronavirus disease-19. Predominantly, India is known for rural communities and digital illiteracy; still, young people are doing well in their digital learning. The present paper has made an endeavor to understand the meaning and advantages of digital learning.

Keywords: Digital, Evolving, Information, Online learning, Research

INTRODUCTION

Educators, policy-makers, and parents alike are focused on ensuring the academic success of our nation's students. These efforts interact with the expanding use of technology, which affects the lives of students both inside and outside of the classroom. Thus, the role that technology plays in education is an evolving area of research that continues to grow in importance. While access to technology can provide valuable learning opportunities to students, it does not guarantee successful outcomes. Designing successful practices for student use of technology is but one piece of the puzzle in the continued effort to elevate the educational experiences of all students. Schools, teachers, communities, and families play a critical role in successfully integrating technology into teaching, learning, and assessment.

Digital Learning; the Meaning in a Nutshell

Digital learning means learning using electronic media. Modern-day computers and electronics all use binary digits (1 s and 0 s) to construct data. Information and instructions created with these digits are, therefore, called digital information. Learning that uses this digital information is called digital learning. Consequently, digital learning means learning using electronic devices. Traditional teaching methods involve a teacher imparting information to students and everyone has direct contact with each other. This is useful for traditional schools where pupils are in the same place at the same time and are seeking to be taught the same thing. As such it can be very efficient for a teacher to transfer knowledge to an entire class at once. However, things get trickier when, say, a business is trying to train a workforce and that workforce is located in many different locations. It's not just very difficult to get them all in one place at 1 time, it's very expensive and removing them from their day-to-day duties is rarely practical.

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Objectives

The objectives of the study were as follows:

1. To understand the meaning of digital learning
2. To realize the significance and advantages of digital learning.

RESEARCH METHODOLOGY

Data and relevant literature for the present paper collected from secondary sources with the help of books, magazines, newspapers, research articles, research journals, and e-journals.

The Importance of Increasing Access to Digital Learning Tools

As technology becomes increasingly essential in our daily lives, students need to develop new skills to succeed. Within the classroom, students may be required to use tablets, complete online research, and take digitized assessments. In day-to-day life outside the classroom, students are inundated with information and opportunities available online – but many lack the access or skills to use these resources. Experts have coined a term for this tech-savvy knowledge: Digital literacy. Digital literacy may become the new buzzword in education as parents and educators alike work to help students prepare for a world that is increasingly online.

For educators seeking to define the importance of technology in the classroom, the library at the University of Illinois at Urbana-Champaign is a resource that works closely with librarians and faculty. The University Library notes that digital literacy involves a plethora of skills: "Literacy includes the ability to read and interpret media, to reproduce data and images through digital manipulation, and to evaluate and apply new knowledge gained from digital environments." In short, digital literacy is defined not only by the ability to use technology to read and write, but by the ability to use it effectively. Although digital literacy is clearly important in many aspects of modern life, not all students have equal access to technology. As educators make strides in bringing online reading resources into their classrooms, it has become clear that some students have a steeper learning curve in achieving digital literacy.

Advantages of Digital Learning

We are living in an era where it's difficult to remember how life was before technology. It has taken over every facet of our daily life. The tremendous shifts have forced us to leave our known, comfortable way of doing things, and venture into the unknown. The education industry also is undergoing a major shift in recent times; the transition from print to digital. It is not an easy ride for the stakeholders in the industry, but to stand the test of time, the shift must happen. The e-learning industry in India is growing at a rate of 25% year-on-year and is expected to become a $1.25 billion industry by 2021. With a network of more than 1.5 million schools and almost 18,000 higher educational institutes, the potential for digital education in India is boundless

Personalized Learning

The most important benefit of digital learning over traditional learning methods is the opportunity that digital learning provides to educators to design the courses, curriculum based on the pace, and ability of each individual student. In the conventional model of teaching, one-on-one tutoring is not only tedious and inefficient, it becomes almost impossible to implement in a classroom of 50 students. The teacher has an obligation to complete the course within a stipulated time, under this circumstance, catering to individual needs of the students is often not humanly possible for the teacher. This creates a gap in overall learning and often leads to a lack of interest among the students when they are unable to catch up with the rest of the class. However, in digital format, the teachers can customize the curriculum based on individual learning speed and capability. Ease of providing feedback helps the student and teacher to communicate clearly about learning difficulties and come up with a solution together. Thus, the whole system becomes more holistic and productive leading to better performance of students overtime.

Abundance of Information

At this time and age, the world of internet is exploding with information, most of which are freely available to anyone with an internet connection. (Google receives over 63,000 searches/s, that's about 3.8 million searches/min and 2 trillion searches/year). Moreover, digital learning model gives us the ability to access and make use of this treasure of information and learn from it at our convenience. In the traditional model of learning, students had to rely on the limited availability of books in the library, which curbed their ability to learn better and learn more. Now, thanks to the internet, unavailability of relevant information is no longer an excuse to not learn. Furthermore, it is much easier to update the content online, ensuring the relevance of the material.

Ease of Sharing

Today, we are living in a sharing economy, where various platforms have made online content sharing just a click away. Research and sharing information, which used to take up a lot of learner's energy and time, now takes up only a few seconds. With Google Docs and other cloud based learning tools working on a group project while being miles apart physically has become easier than ever before. This type of connected learning creates an ecosystem of coordination which if used efficiently, will lead to better learning outcomes as well as enhanced collaboration skills.

More Engaging than Traditional Learning Methods

The traditional way of learning gives us little scope for engagement as the dynamics of a conventional classroom constitutes of students, textbooks, and one instructor for learning. On the contrary, digital mode of learning gives a wider range of choices to the students to learn from. The unlimited availability of image and video content, interactive sessions, virtual reality, etc., makes the learning process more interesting and playful.

Develops Accountability in Students

With real-time analysis of performance and auto-generated reports, digital learning makes the assessment of each student much more transparent and informative. It gives the students the ability to measure their performances in detail and come up with appropriate solutions on their part. Whereas in traditional mode of learning students usually had one marker of their performance: The scores obtained, which hardly tells anything about the HOW of improvement. Online learning can be self-directed; when students learn online, they eventually get better in researching a topic and develop an eye for funneling useful information by browsing through tons of information online and coming up with solutions that are relevant to their unique problems. Resulting in increasing capacity to think critically.

Learning Opportunity for Educators

Digital learning not only benefits the students but also gives educators an opportunity to enhance their teaching skills based on the wants and needs of the modern age. By learning to use technology alongside books and pencils in the classroom, they raise their abilities to create leaders of tomorrow. Educators can also map their performance as a teacher and get feedback from students, which oftentimes is difficult in brick-and-mortar only classrooms. We must remember that technology is just a tool to enhance performance and optimize outcome. However, the role of teacher in a person's life is not limited to teaching math, literature, and history. A teacher plays an integral part in the growth of a child by helping in building his character and motivating them. As artificial intelligence takes up more and more jobs in the future, we will need more people who can form meaningful human connection and can lead people. These are skills that cannot be learned online. With the right use of technology, teachers can streamline their processes to a large extent and may use classrooms for building social/interpersonal skills through various application oriented projects. Thus, blended learning creates an ecosystem for learning which provides advanced solution to the problems faced by both teachers and students. It is up to us to make use of the tools of science and choose a smarter life.

CONCLUSION

Technology can be a powerful tool for transforming learning. It can help affirm and advance relationships between educators and students, reinvent our approaches to learning and collaboration, shrink long-standing equity and accessibility gaps, and adapt learning experiences to meet the needs of all learners. Our schools, community colleges, and universities should be incubators of exploration and invention. Educators should be collaborators in learning, seeking new knowledge, and constantly acquiring new skills alongside their students. Education leaders should set a vision for creating learning experiences that provide the right tools and supports for all learners to thrive. However, to realize fully the benefits of technology in our education system and provide authentic learning experiences, educators need to use technology effectively in their practice. Furthermore, education stakeholders should commit to working together to use technology to improve American education. These stakeholders include leaders; teachers, faculty, and other educators; researchers; policymakers; funders; technology developers; community members and organizations; and learners and their families.

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Volume 39 • Issue 1 ISSN 2231-3265

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22nd and 23rd August 2020

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Government First Grade College, K G F - Kolar - Karnataka. &
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Collaboration with
International Federation of Physical Education,
Fitness and Sports Science Association

International Journal of Health, Physical Education and Computer Science in Sports
A Peer Reviewed (Refereed) International Research Journal - ISRA Journal Impact Factor 7.217

Research Article

A study of anxiety among the women hockey players

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ABSTRACT

Anxiety exerts a variety of effects on the performance of hockey players. These effects vary based on the age, gender, and level of experience. To facilitate peak performances by the players, sport psychologists must consider anxiety as an important variable which plays a very significant role in the performance of the players. In the present study, an attempt is made to analyze the role of anxiety on the performance of women hockey players of Karnataka. Normative survey method was used to collect the required data. The Burns Anxiety Inventory was employed to collect the data on the anxiety level of women hockey players. The total number of 126 women hockey players in the age group of 18–25 years belonging to different districts of Karnataka state was selected randomly as sample of the study. The normative survey method was used to collect the data. The survey revealed that majority of the participants had average level of anxiety.

Keywords: Anxiety, Women hockey players

INTRODUCTION

In India, hockey, which is regarded as national game, has become popular among women. Good performance in hockey is not only depends on the level of competency but also on the physical, performance variables, and the extent of competitive anxiety among the players. Anxiety is one of the psychological parameters which have great influence on the performance of players. Particularly, when the demands of training or competition exceed one's perceived ability, anxiety is the inevitable outcome. Sport poses a wide variety of stressors on participants; it can be physically exhausting, it pitches the player against superior opponents, hostile fans might verbally abuse them, the elements may need to be overcome. Anxiety is an emotion that is difficult to define and even more difficult to reliably detect in performance. Fear, a still higher level anxiety can have a serious effect on sport performance. The study of the effect of anxiety on the performance of the players is the major topic of interest to sports psychologists in recent years. Fear of failure and fear of physical harm appear to be the major determinants in competitive sports. The training-induced changes observed in various biochemical variables can be attributed to incremental training load. This would enable the coaches to assess the current status of an athlete and the degree of training adaptability and provide an opportunity to modify the training schedule accordingly to achieve the desired performance. The implications of this study may be useful for the players, coaches, and the team managers to set their own goals to ensure the better performance in field hockey. With this background, the present study has been taken up.

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Objectives of the Study

1. The study sought to know the level of anxiety among the women hockey players

2. The study sought to know the difference among the women hockey players of different age group in their level of anxiety.

Research Question
What is the level of anxiety among the women hockey players of Karnataka state?

Hypotheses of the Study
There is no significant difference among the women hockey players of different age group in their level of anxiety.

METHODOLOGY OF THE STUDY

Nature
The study is descriptive in nature. The normative survey method was used to collect the data. The study aimed at studying the anxiety with the background of age among women hockey players of Karnataka state.

Sample
The sample of the study was selected through random sampling technique. The total number of 126 women hockey players in the age group of 18–25 years participated in the Dasara Sports Competition and Major Dyanchand Invitation women Hockey Tournament belonging to different districts of Karnataka state was selected.

Tool
The Burns Anxiety Inventory consisted of 33 statements related to anxiety among players was employed to collect the data on the anxiety level of women hockey players. Each statement has four alternatives "Not at all," "A little," "Moderately," and "A lot." Not at all = 0 point, A little = 1 point, moderately = 2 points, and A lot = 3 points. Total of these items determine the anxiety score which ranges from as low as 0 to as high as 99.

Analysis of the Data
Analysis was done by answering a research question and testing the null hypothesis of the study.

What is the Level of Anxiety among the Women Hockey Players of Karnataka State?
To find the answer for the research question, the total score of each participant on the anxiety scale was noted, and mean and standard deviations (SD) were calculated. The participants scored more than 70 (mean + 1 SD, i.e., 56.72 + 13.36) are considered to be having high anxiety, the participants scored between 43 and 69 (between mean −1 SD and mean+1 SD) are considered to be having average anxiety and participants scored <42 (mean −1 SD, i.e., 56.72–13.36) are considered to be having low anxiety. The percentage analysis showed that majority of the participants had average level of anxiety (64%), 27% of them had high level of anxiety and as low as 9% of them had low level of anxiety.

Result of the "*t*"-test for different age group and anxiety

Age group	*n*	Mean	SD	Df	"*t*"-value	Result
14–18 years	70	56.3429	12.24495	124	.355	Not significant at 0.05 level
19–23 years	56	56.7963	14.49057			

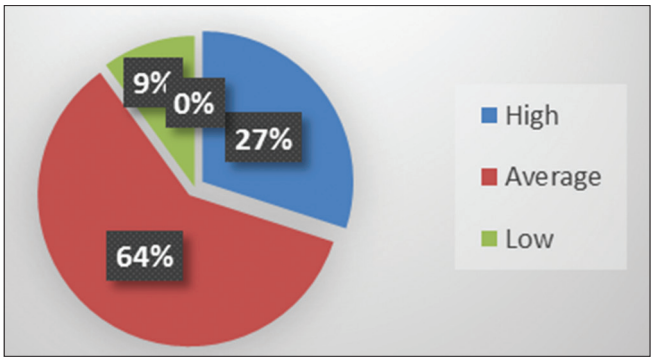

Figure 1: Pie chart showing the different level of anxiety among women hockey players

Hypothesis Testing
There is no significant difference among the women hockey players of different age group in their level of anxiety.

As it is indicated in the table, the obtained "*t*"-value 0.355 is not significant at 0.05 level. Hence, the null hypothesis is accepted and it was concluded that there is no significant difference among the women hockey players of different age group in their level of anxiety.

DISCUSSION OF THE FINDINGS OF THE STUDY

The results indicated that majority of the participants, that is, 64% had average level of anxiety, 27% of them had high level of anxiety, and as low as 9% of them had low level of anxiety. The results of the study conducted by Ravi (1993) which compared the criterion measures of motivation, anxiety, and aggression of three groups of 30 men hockey players and Martin and Hall (1996) who found that the ego orientation was positively related to cognitive anxiety on two occasions before competition which are complimentary to these results. However, the results of the study conducted by Nieuwenhuis *et al.* (2002) are in contradictory to this result. The investigation undertaken by Sivaramakrishnan *et al.* (1999) indicated no significant difference in state anxiety before competition between South and West zone universities. Another study done by Razeena (2004) revealed significant relationship between state anxiety and aggression of women hockey players and it also found that there is no relationship between defensive and attacking players.

Implications of the Study

The implications of this study may be useful for the players to set their own goals to ensure the better performance in field hockey. The study may give an insight to the coaches, physical education teachers, and the team managers to decide how to balance the anxiety level of players which is helpful for the better performance in field hockey; accordingly, they can plan their program. The study may be helpful for the sports organizers while organizing tournaments in field hockey to select suitable session in which the better performance may be expected. The study may provide useful information to the sports society to put a great deal of time and effort to enhance better achievement and putting more emphasis of scientific conditioning methods to accelerate development and optimize performance by balancing the anxiety level of the women hockey players.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Yoga for physical fitness and well-being

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ABSTRACT

The true essence of yogic asana and kriya revolves round improvement of physical and mental energy, which is required in every aspect of life; be it sitting, standing, sleeping, reading, playing, etc. The literal meaning of the word yoga is yoke. It means for uniting the individual spirit with the universal spirit or God. The origin of yoga dates back to the early days of human civilization and represents one of the intangible aspects of India's spiritual heritage. Yoga facilitates attainment of self-realization and harmony. Man is a physical, mental, and spiritual being; yoga helps promote a balanced development of the three. Yoga can be practiced by any individual, irrespective of the background, who is ready to transcend the self and attain enlightenment. Improves the purity of the body Yoga Cure and Prevention from Disease Yoga is a powerful instrumental force that helps to prepare the body, mind, and reflexes of a sportsperson. It is the "pranaic" forces where the "Nadis" (channels of the body) are cleansed, keeping the mind and body healthy. "Pranamaya" contributes to greater energy transmission and improving concentration. Yoga actually helps in an all-round development of the mind and body and prepares a sportsperson for better reflexes and performances. Yoga is a process of bringing mind and body to synchrony to gain good health, balance of mind, and self-realization. It heals our mind and liberates our soul. With proper understanding and regular practice, one can reach the zenith of physical and mental fitness

Keyword: Yoga for physical fitness and well-being

INTRODUCTION

The true essence of yogic asana and kriya revolves round improvement of physical and mental energy, which is required in every aspect of life; be it sitting, standing, sleeping, reading, playing, etc. The literal meaning of the word yoga is yoke. It means for uniting the individual spirit with the universal spirit or God. The word yoga is derived from the roots of Sanskrit Yuj which means to join, to attach, to bind and Yoke, and to concentrate on one's attention. It also means union. Yoga is the true union of our will with the will of God. Yoga means union, joining, harnessing, yoking, contact, or connection. It is the union between the individual self and the universal self. At the individual level, this refers to the unity of body, mind, and spirit and the underlying aim of all yoga practices is to cultivate harmony and the balance throughout the totality of our being. It is the harnessing of one's own underlying nature as well as under natural forces from which one has emerged. It is the yoking together of the body, mind, and spirit through self-discipline. Yoga was the foundation of the body – its secret energies and natural intelligence – to reach the summits of the spirit. In yoga philosophy, the Sanskrit terms for these concepts are Atman and Brahman. There is Brahman (ultimate reality), which is advaita (non-dual), eka (one without-a-second),

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santana or nitya (eternal), avikari (changeless), sarvagata (all-peruading) achala (unshakable), sthanu (stable) guantita (transcendental), and ananta (infinite).

DEFINITIONS

According to Kathopanishad

"When the sense is stilled, when the mind is at rest, when the intellect wavers not then, say the wise, are reached the highest stage. This steady control of the senses and mind has been defined as yoga. He who attains it is free from delusion."

Maharishi Ved Vyas

"Yoga is attaining the pose."

Shri Bharti Krishan Tirth

"Oneness of man with God is known as Yoga."

Agam

"The knowledge about Shiva and Shakti is yoga."

BRANCHES OF YOGA

*Heath Yoga or Yoga of Postures.
*Bhakti Yoga or Yoga of Devotion.
*Raja Yoga or Yoga of Self-control.
*Jnana Yoga or Yoga of the mind.
*Karma Yoga or Yoga of service.
*Tantra Yoga or Yoga of Rituals.

THERE ARE EIGHT COMPONENTS OF YOGA TO SECURE PURITY OR BODY, MIND, AND SOUL. THEY ARE

Yama (Social Discipline)

Yama means restrain or abstention. It has five moral practices. Non-violence (Ahimsa) means not to hurt any creature mentally or physically through mind, truthfulness (Satya) is the presentation of a matter as perceived with the help of the sense organs. Non-stealing (Asteya) means not to covet and acquire physically, mentally, or by speech other's possessions. Celibacy-moderation in sex (Brahmacharya). Brahmacharya does not mean lifelong celibacies, but moderation in sex between married couples. Non-acquisitiveness (Aparigraha) means abandoning wealth and means of sensual pleasure.

Niyama (Individual Discipline)

Physical and mental rules of conduct toward oneself. Cleanliness means internal and external purification of the body and the mind. Contentment (Santosh) is a state of mind by which one lives happily and satisfied in a congenial or uncongenial atmosphere. Austerity or Penance (Tapas) is the conquest of all desires or sensual pleasures by practicing purity in through, speech, and action. Self-study (Svadhyaya) means exchange of thoughts to secure purity in thought and accomplish knowledge. Surrender to God (Ishvara Pramidhana). It is pure devotion to God and surrender of all actions to him.

Asana (Postures)

Asana means holding the body in a particular posture to bring stability to the body and poise to the mind. The practice of asana brings firmness to the body and vitality to the body and the mind.

Pranayama (Breath Control)

Practice of pranayama is to stimulate, regulate, and harmonize vital energy of the body, for example, as bath is required for purifying the body, pranayama is required for purifying the mind and internal organs.

Pratyahara (Discipline of the Sense)

The extroversion of the sense organs due to their hankering after worldly objects has to be restrained and directed inwards toward the source of all existence. This process is putting the sense under restraint.

Dhahran (Concentration)

It means focusing the pure mind one one's personal deity or on the individual self. The practice of Dhahran helps the mind to concentrate on a particular object.

Dhyana (Meditation)

When one sustains and maintains the focus of attention through Dharana unbound by time and space, then it becomes dhyana (Meditation). 8. Samadhi (Self-realization): In this one's identity becomes both externally and internally immersed in meditation. Supreme happiness, free from pleasure, pain or misery, is experienced. Samadhi is the climax of Dhyana.

IMPORTANCE OF YOGA

The origin of yoga dates back to the early days of human civilization and represents one of the intangible aspects of India's spiritual heritage. Yoga facilitates attainment of self-realization and harmony. Man is a physical, mental, and spiritual being; yoga helps promote a balanced development of the three. Yoga can be practiced by any individual, irrespective of the background, who is ready to transcend the self and attain enlightenment. The practice of yogic exercises increases self-awareness, bestowing on every aspirant the power to control body and mind. It brings together physical and mental disciplines to achieve a peaceful body and mind, it helps to manage stress and anxiety and keep you relaxing. It also helps in increasing flexibility, muscle strength, and body tone. It improved respiration, energy, and vitality. The practice of

yoga reduces stress and tension in the physical body, thereby making us emotionally stable. Breathing exercises help to control the bodily functions and steady the mind. Yoga postures can foster strength, stamina, and flexibility of one's body and can contribute to the efficient functioning of all body organs and systems. They can stimulate healing by accentuating the process of clearance of toxins and channelizing the flow of energy.

Improves the Purity of the Body

Various yogic exercises can detoxify the human body and the internal organs. Substantially, our body comprises three elements, that is, kaph, pit, and vaata proper balance of these three elements can ensure a healthy lifestyle. Few examples of yogic exercises that help in detoxification can be Neti, Dhoti, Nauli, Dasti, Kapaalbhati, Tratak, etc.

Makes Mentally Strong

Yoga can be one of the powerful methods of stress relief. It reduces deep-seated mental and emotional tensions. Pratvahar, Dharana, and Dhyan play a key role in attainment of peace of mind. Vajrasana, Shavasana, Padamasana, Siddhasana, and Shalabhasana are very beneficial for releasing mental stress from the body.

Yoga Relaxes Body and Mind

Yoga can make one feel relaxed, restored, and rejuvenated. It pulls stress and negative energy out of the body. Shavasana, Makarasana, Padamasana, and nadam Sadhana are yogic exercises good for relaxation and reducing mental fatigue.

Yoga Cure and Prevention from Disease

Yoga can improve the quality of life and help alleviate some chronic diseases by promoting relaxation and overall fitness. Yoga can have profoundly positive impact on people suffering from diseases such as bronchitis, myalgia, neurasthenia, arthritis, high blood pressure, and leprosy. Vajrasana, a yogic exercise, can lower the diabetic levels, further exemplifying the positive impact of yoga.

Yoga Tone the Body

Yoga is commonly regarded as a wonderful option to obtain a toned physique. Practicing yogic asanas can give a limber look while improving cardiovascular wealth and overall wellness. High-intensity yogasanas can help building strength, Mayurasana can be helpful for lifting facial beauty, adding to one's glamour.

Yoga Keeps the Correct Posture of Body

The true essence of yoga revolves around elevating the life force or "kundalini" at the base of the spine. Today's modern lifestyle has strained the spine by keeping it curved for longer time. Sedentary jobs, long working hours, and excessive use of gadgets make our body more slouch and hunched and bring postural deformities. A correct body posture keeps a body in shape and helps in maintaining a smart, confident appearance. Regular yoga practice brings awareness about one's body.

Yoga Helps in Spiritual Development

Yoga brings synchronization of mind and body, creating a sense of calmness. The practice of yoga perpetuates composure, tranquility, and control over mind.

YOGA PROMOTES PHYSİCAL HEALTH AND LONGEVİTY OF A SPORTSMAN

Yoga is a powerful instrumental force that helps to prepare the body, mind, and reflexes of a sportsperson. It is the "pranaic" forces where the "Nadis" (channels of the body) are cleansed, keeping the mind and body healthy. "Pranamaya" contributes to greater energy transmission and improving concentration. Yoga is not only a form of exercise but also it relaxes the body as well, from tension and stress. It also helps to strengthen joints and spine along with the nervous, digestive, and cardiovascular system. Yoga actually helps in an all-round development of the mind and body and prepares a sportsperson for better reflexes and performances.

CONCLUSION

Yoga is a process of bringing mind and body to synchrony to gain good health, balance of mind, and self-realization. It heals our mind and liberates our soul. With proper understanding and regular practice, one can reach the zenith of physical and mental fitness. Sound mental and physical capabilities are a result of maintaining a balance among exercise, diet, and relaxation. Although yoga has the potential power to make us lead a healthy lifestyle, add to our vigor, still most people lack the knowledge of systematic practice of yoga.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Study on morphological characteristics of junior college state level basketball players

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ABSTRACT

Sports play a vital role in modern society, especially in young athletes. In modem era the sports performance are highlighted in the newspapers, news channels & they become national & international heroes. To achieve highest performance they train hard, the coach try to get maximum from the sportsman's. Therefore the study of morphological characteristics in sports has become significant role, because the best structure & physique of athletes will have best outcome in the high competitive world of sports. Sport is a highly organized form of play and play is a general innate tendency. Sports has very important role in growth and development of a human body. The main Purpose of this study was to investigate, selected & Limited morphological Characteristics of the Junior College State Level Basketball players. The present study is to identify the significant and limited number of morphological variables of Junior College State Level Basketball players, total 90 subjects were selected for fulfill the purpose of the study. The age group of the above players was between 16 to 18 years and players were selected from different Junior College from Dharwad, Ballari & Koppal District. In the Factor analysis, the Junior College State Level Basketball players, Among the Thirty six (36) Morphological variables Eleven (11) components were identified. The indentified Morphological Characteristics were found significant & limited. From this study it was concluded that there was a significant role Morphological Characteristics of Junior College State Level Basketball players & the morphological variables will helps in the selection of players, talent identification, to know players physical structure, for proper Coaching & Training of the Junior College State Level Basketball players.

Keywords: Morphology, Anthropometry, Junior College State Level & Basketball Players

INTRODUCTION

Sports play a key role in modern society, especially in young athletes. In modem era, the sports performance is highlighted in the newspapers, news channels and they become national and international heroes. To achieve the highest performance, they train hard, the coach try to get maximum from the sportsman's.

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Same way in sports has the perfect morphological characteristics (structure and physique) has best skill performance. The skill execution depends on the body movements and body structure. For example: In basketball, height of sportsman will have better shooting ability, dunking, rebound collection, and defensive tactics. Thus, morphological characteristics of basketball players have impact on their performance.

In performance sports, competition provides the means by which one can show one's worth by competing successfully.

Consequently, sports competitions have triggered off a vigorous competition in research on sports physiology, sports psychology, sports training, sports nutrition, and sports medicine. Competitive sports have brought into sharp focus many methods for improvement and achieving high-level performance. Everywhere efforts are on to set up research laboratories so that ways and means could be found out to access and accelerate human performance in sports.

Dr. S. Ravi Kumar (2017)[1]

The study was to find out whether there is any relationship between basketball playing ability and anthropometric variables such as height, weight, arm length, arm span, upper arm girth, hand span, standing reach, sitting height, leg length, thigh girth, forearm girth, and shoulder width among elite inter-university men guard players. Fifteen university basketball players (guards) from the teams which secured first four places in the South Zone inter-university basketball tournament conducted by Sathyabama University, Chennai, during January 2012 were selected as subjects. They were between the age group of 18 and 25 years. Three coaches who are experts in the coaching field assessed the playing ability of the players. The guidelines for assessment were provided by the investigator. During the league matches, each coach rated the playing ability of the players for 100 marks. The scores given by all the three coaches were added and divided by 3 to make the individual score of the subjects. All the anthropometric variables were measured using the standardized equipment. To analyze the relationship between basketball playing ability and anthropometric variables, Pearson's product-moment correlation was used. It was inferred that no significant relationship exists between basketball playing ability and anthropometric variables. Hence, the hypothesis that there would be significant relationship between basketball playing ability and anthropometric variables among guards was rejected.

Garcia-Gil *et al.* (2017)[2]

He studied the technical, tactical, and psychological skills, performance in playing basketball depends on anthropometry and physical fitness. However, limited information is available regarding such features in women. We hypothesized that anthropometry and physical fitness are associated with female basketball performance, and consequently, performance could be predicted using the results of certain anthropometric measures and fitness tests. Body parameters (age, height, body mass, skinfold thickness, limb perimeters, and lengths) were measured. Physical fitness capacities (jumping, agility with and without the ball, and speed) were measured by the specific test. In addition, game performance index rating (PIR). Teams ranked better in the regular season had smaller mean fat skinfold thickness and spend less time on the agility test (T-drill). Correction analyses indicated that players with better PIR were older, taller and had a longer arm and greater contracted arm perimeter (CAP). Further, those players had better results in the T-drills test. Multiple regression analysis indicated that combined age, height, CAP, fat skinfold thickness, and time in T-drill test yielded a string predictor of PIR per time played. In conclusions, the results of the present study indicate that some anthropometric and physical fitness characteristics of female elite basketball teams and players are highly associated with performance-related parameters. In addition, a regression model has been developed to predict the performance of female basketball players.

Ahmad Shaddi and Nahidalisofi (2016)[3]

The aim of this study was to evaluate the relationship between anthropometric characteristics and jump shoot skill in female basketball players. The statistical population consisted of all adolescent female skill in female basketball players in Zahedan. The subjects were included in this study by convenient sampling. Thirty teenage female basketball players (15–18 years old) were selected. Measurement of research variables including height, weight, body mass index (BMI), hip circumference, leg circumference, arm circumference, forearm circumference, hip length, triceps skinfold, under the scapular and biceps fat thickness, and jump shoot skill were measured using the standard tool. For statically analysis of the data, the Pearson correlation

1 Dr. S Ravi Kumar Analysis of basketball playing ability of elite inter university men players in relation to anthropometric variables among guard players International Journal of Physical Education, Sports and Health 2017; 4(3): 94-96.

2 Garcia-Gil, Maria; Torres-Unda, Jon; Esain, Izaro; Duñabeitia, Iratxe; Gil, Susana M.; Gil, Javier; Irazusta, Jon "Anthropometric parameters, age, and agility as performance predictors in elite female basketball players" Journal of Strength & Conditioning Research: Post Acceptance: June 02, 2017.

3 Ahmad shaddi and nahidAlisofi Relationship between anthropometric characteristics and jump shot skill in female basketball plaeys. European journal of physical education and journal sports sciencesVol 2, issues 6, 2016.

Administration of tests			
Morphological variables			
Length	**Skinfold**	**Width**	**Girth**
Body weight in Kg	Chest	Biepicondylar humerus	tensed arm
Stature in cm	Triceps	Biepicondylar femur	Arm relaxed
Sitting height	Biceps	Biacrominal width	Forearm
Leg length	Subscapular	Bi-iliocrystal width	Chest
Arm span	Supraspinale		Waist
Hand Length	Abdomen		Thigh
	Thigh		Medial calf
	Calf		

Varimax (Kaisers) rotated factor matrixes of junior college state level basketball players											
Rotated component matrix											
	1	2	3	4	5	6	7	8	9	10	11
Arm span	0.955			0.153							
Arm	0.953			0 .149							
Height	0.946	0.167									
Sitting height	0.904	0.122	−0.273								
Triceps skinfold	0.224	0.856		0.135		0.177	−0.121				
Muscle mass	0.254	0.762	−0.169		0.342		−0.157	−0.13	0.215		
Arm relax girth	0.104	0.712	0.273		−0.204	0.247	−0.144		−0.284	−0.117	0.22
Supraspinal skinfold		0.659	−0.152	−0.198	0.136	−0.152		0.311	−0.242	0.206	
Abdomen girth	0.477	−0.563	−0.142	−0.236	−0.228		−0.302		−0.123	0.13	−0.231
Biceps skinfold	0.343	0.511	−0.167	−0.161		−0.185	−0.437	0.255	−0.252	0.127	0.206
Sub scapular skinfold	0.311	0.406	−0.208	−0.168	−0.148			0.196	−0.385	−0.295	0.389
Arm tense girth			0.869		0.298						
Mid-calf skinfold			−0.713			−0.192		0.221	−0.116	0.141	0.429
Leg length	−0.215		0.709	0.268	0.17					0.162	0.15
Hand length				0.902	−0.219			−0.13			
Body density	0.134		0.205	0.668	0.47		0.139		0.251		0.185
Thigh skinfold	0.136			0.626	0.17	0.516			−0.126	−0.138	0.183
Percentage of fat		−0.356	−0.26	−0.524	−0.178		0.131	−0.452	−0.339	0.152	
Weight	0.139	0.153	0.255		0.892	0.108	0.158				
Body mass index	−0.474		0.195		0.786		0.141				−0.127
Thigh girth	−0.149	0.138	−0.125	0.17		0.825			0.102		
Chest skinfold			0.365		0.22	0.717	0.16		0.103	0.193	0.176
Chest girth		0.283				0.539	0.256	−0.298	0.203	−0.263	−0.406
Hand width	−0.282	0.125	0.312		−0.232	−0.5		−0.154	−0.171	0.166	0.304
Wrist girth	0.157				0.115		0.874			−0.126	
Waist girth		−0.369			0.149		0.749			0.181	0.136
Forearm girth			−0.238			0.161		0.83	0.12	0.124	
Calf girth	0.328			−0.156	−0.201		0.232	0.739		−0.237	
Femur width		−0.144		−0.162	−0.102				0.808		
Waist width	−0.138			0.359	0.161	0.303	0.224		0.709		0.138
Ankle girth			0.136		0.116	−0.111		−0.12	0.101	0.851	0.161
Shoulder width				0.181	0.273			−0.131	0.109	−0.795	0.274
Abdomen skinfold		0.221			−0.102	0.123		−0.122	0.174		0.83

coefficient was used. The result showed a significant relationship between the variables of height ($P = 0.0001$) and BMI ($P = 0.0006$) and shot skill score, but the rest variables showed no statically significant difference in terms of shot skill score. While a significant relationship between height and BMI and shooting skills was observed, most of the variables had no significant relationship with shot skill and for clarification of data in this regard, there needs to do more research so that by understating this information in selection of players and identifying of talents in basketball and training development programs, useful information would be provided to coaches and athletes.

Sarachandra (March 2014)[4]

Studied on anthropometric dimensions of basketball and volleyball players. To achieve the purpose of the study, 80 men intercollegiate players, 40 basketball players and 40 volleyball players were selected as a sample for the study. The data in respect of anthropometric dimensions were collected as per the standard procedure. The collected data were analyzed using "*t*"- statistical technique with the help of the 19th version of SPSS. The results of the study show that there exists a significant mean difference between basketball and volleyball players in the selected anthropometric dimensions, namely, height, arm length, chest girth, thigh girth, and calf girth, there was no significant difference leg length.

Purpose of the Study

The main purpose of this study was to investigate selected and limited morphological characteristics.

METHODOLOGY

The aim of the present study is to identify the significant and limited number of morphological variables of junior college state level basketball players.

Subjects

A total of 90 subjects were selected to fulfill the aim of the study. The age group of the above players was between 16 and 18 years and players were selected from different junior colleges from Dharwad, Ballari, and Koppal district.

The Variables

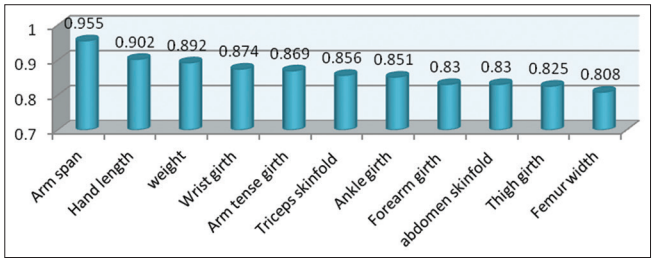
To assess morphological characteristics, selected anthropometric measurements were undertaken.

Data Analysis

RESULTS

By the examination of the factor loading in the table, the 10 components extracted earlier represent arm span (0.955), hand length (0.902), weight (0.892), wrist girth (0.874), arm tense girth (0.869), triceps skinfold (0.856), ankle girth (0.851), forearm girth (0.830), abdomen skinfold (0.830), thigh girth (0.825), and femur width (0.808) based on the high factor loading of related variables.

Significant morphological variables of junior college state level basketball players



CONCLUSION

The different factors loading of variables in morphological characteristics of junior college state level basketball players, it was found that arm span (0.955) was maximum while in femur width (0.808) was found to be minimum. From this research papers, we came to conclusion, we found a significant role morphological characteristics of junior college state level basketball male players and the morphological variables will help in the selection of junior college state level basketball players.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Physical activity among people – Impact on health

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ABSTRACT

A healthy Life paves the way for a better society. The society in which people are hale and healthy will be in the forefront to take part in the nation building process. In this globalized world which is very busy and keeps the people on their heels all the time, people find less time for physical activity. So, it has a severe impact on the Health of the general public. Leave alone older ones, even the young are suffering from stress, obesity, Diabetes, joint pains, cardiac issues, and other related problems. The Government spending on health is also not satisfactory, especially in countries like India. So, Public awareness among people to tackle these health issues is the best solution. Physical activities regularly will reduce the risk of all these problems and keep the people happy. This paper attempts to discuss the need of physical activity and the burden it reduces on public health, considering the growing health expenditures.

Keywords: Healthy life, Public health, Public awareness, Physical activity

Physical activity is a very important and necessary component for a healthy life. Exercising for some time everyday keeps us healthy and away from ailments. A healthy body will keep us active and reduce the risks that we face. It also reduces the medical expenditure and in the process saves the money. It also improves the quality of life. The quality of life not in the sense of being rich or luxurious but in the sense of being healthy. It is related to the status and the ability to lead the life independently. Physical activity improves health-related quality in our lives by having a positive impact on the psychological well-being and also boosting the physical functioning. Among many benefits of physical activity, it also reduces disability, impact, or severity of coronary heart disease, diabetics, hypertensions, swelling in the joints, and also problems related to arthritis.

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Physical activity is generally defined as an activity that is linked to any type of bodily movement or action, whereas, exercise is a systematically structured and planned activity and is taken up with a motive and a fitness goal in mind. Both these normally refer to muscular activities, heavy or light, and that may be aerobic, as in activities such as walking, jogging, and running, or anaerobic as in activities such as weight lifting and other gym-related activities. Physical fitness can be related to the cardio fitness, respiratory ease, and other related components such as strength, balance, flexibility, and body composition. Normally sedentary individuals who lack physical activity show signs of exercise-related health disorders. A sedentary individual can usually be recognized, by comparing the relative activity levels of others. The Oxford dictionary of sports science and medicine defines a sedentary individual as one who is "relatively inactive and has a lifestyle characterized by a lot of sitting." Relatively, they are prone to health related problems due to lack or insufficient physical activity.

In general, the three dimensions of physical activity are frequency, duration, and intensity. Frequency is generally termed as the number of times an activity is performed in a specific time slot or frame. Duration is the complete amount of time taken in performing an activity continuously over a session or accumulated over a specified time, may be a day or a week. Intensity is the energy expended during a specific activity. When it comes to the measurement of the intensity of any physical activity, it is relative to the individual's capacity and can be accurately measured only in scientific or laboratory settings. However, some measurements were taken based on the questionnaires. Although some of the data thus obtained are subject to self-reported bias, much of the data was proved to be fairly accurate and was very much useful in distinguishing active people from inactive ones. With such data at a macro level and implementing certain steps at microlevel and creating awareness among people the increase in physical activity can be shown as a god indicator of good health.

The types of physical activities to be taken up and the intensity of these activities to assess the health outcomes and obtain positive outcomes may vary. However, such data will be useful to have or frame a general opinion on various physical activities that can be taken up to reduce negative health symptoms. Aerobic activities such as running, jogging, or brisk walking that help improve the cardiorespiratory functioning will help in preventing coronary heart diseases. Activities such as bicycling or swimming that cause less strain to the joints and increase joint lubrication and flexibility are helpful in the prevention or delaying the progression of arthritis and related ailments. It decreases the pain, improves self-efficacy and physical function. The intermediate changes in blood pressure causing hypertension, the changes in serum cholesterol, and the impact of diabetes all can be reduced with physical activity. The improved body composition due weight loss will impact insulin sensitivity and glucose tolerance and so a positive impact. Adults should take up vigorous activity such as running for at least 20 min on 3 or more days/week or activities of moderate intensity such as brisk walking for at least 30 min on 5 or more days/week. Apart from these flexibility and muscle strengthening activities should be taken up on 2 days/week. Studies have proved that there will be improved health condition if physical activity is taken up on a regular basis.

The health of the people is the responsibility of the state. The government should take care of the medical facilities, but with the fast growing demands, it is becoming difficult for the governments to take care of all the health-related problems. On the part of the government, they should create awareness among the people on the positive impact of physical activity on health and how can the expenditure be reduced if the people are healthy. The decision to be active is an individual choice, but there are certain factors that support active lifestyles. From the government side, they should provide activity friendly structures such as safe green spaces, walking, and jogging tracks and enable people to use them. Such structural changes will have effect on the overall physical activity and also aim at change in individual behavior. The general public also must look for natural remedies than medicine for some disorders that can be controlled. Hence, all of us should work together for a healthy society.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Significance of strength fitness training in basketball game

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ABSTRACT

The strength training in basketball sports is an important and key training task and relates to many technical action levels. Therefore, the strength should be trained specially and effectively in basketball sports, so as to make basketball players have solid body posture, do the coordination of their upper and lower limbs well, and make their physical conditions reach the highest level, thus promoting the effective combination and coordinated development of each link of body and greatly improving the overall level in basketball sports. The strength training in basketball sports in detail, expecting to make the physical training of basketball players scientific, reasonable, and high-efficient and finally improve the competition level and performance of basketball sports.

Keywords: Strength, Fitness, Training, Basketball, Sports

INTRODUCTION

Strength training is a fundamental element for the well physical conditioning of basketball players. Its purpose is to improve explosive power and acceleration/speed around the court and to reduce the risk of joint and tendon injuries. During the season, resistance training and power training are performed in different periods. Moreover, individual and team development plans optimize the improvement of each player. Let's find out how athletic training aims to improve strength, speed, and acceleration in the field of play, as well as reducing the risk of joint and tendon injuries. We will understand specific team roles, their characteristics, and champions who have had specific success in these roles. We will also aim to understand how much work and fatigue are hidden behind the results and notoriety of such players.

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Basketball is a team sport characterized by high-intensity activities such as jumping, sprinting, shuffling, and direction changes. Basketball players' physical conditioning is focused on enhancing aerobic capacity, speed, agility, muscular strength, and power.

A professional game is made up of teams of 5 players each. As a team game, basketball is played on a rectangular field 94 ft wide and 50 ft long. The height of the basket from the ground is 3.05 m, so there is a fair advantage in being high, but not necessarily, depending on the role in which you play. The team that scores the most points by putting the ball into the opponent's basket wins. It seems easy to say, but this discipline needs a variety of sports skills and abilities, unlike many others.[2]

NEED TO TRAIN STRENGTH IN BASKETBALL

Many famous players today have started their love story with basketball by throwing the ball into a basket in their backyards. However, the work to reach certain levels of professionalism and notoriety links to rigid and challenging workouts and lifestyles. Let's discover together how a basketball player trains strength and more. Throughout the sports season, strength and power training is carried out at different times. In fact, an individual and team program must be developed to optimize the improvements of each player and left parts of the body, and between extensor muscles and flexors. Exercises are carried out at low intensity, with a load equal to 50–60% of a maximum repetition (one-rep max [1-RM]), 2 or 3 times a week. In the second phase, the first pre-season period is based on the development of the ceiling strength of each player. The exercises are performed with loads of 80–90% of 1-RM, 3 times a week for about 1 month. In the late pre-season phase, players begin to train together, and muscle work consists in the development of muscle power. Exercises are performed with a free body using different methods (e.g., plyometric and circuit training), taking into account to avoid exceeding 120 contacts with the ground within the same session (e.g., jumps). During the championship, training is functional to maintain the previously developed muscle strength. A key component in training is recovery. This can consist of a week without strength exercises every 6–8 weeks, or 2 weeks of low-intensity training in the same period of time.

Despite the importance of strength training, exercises can negatively affect the player's technical skills due to neuromuscular fatigue. In particular, the high-intensity training circuit reduces performance capabilities in jumping, agility, and accuracy of basket shooting. On the other hand, a circuit training of muscle power does not result in a reduction of these skills and, therefore, can be considered the most effective method of working to train the strength behind a competition. If, on the other hand, the aim is to perfect technical gestures in situations of fatigue, high-intensity circuit training can be adopted as a working method.

Basketball also involves many lateral movements and jumps, squatting, and sinking, which require strong leg muscles and stability of the core. Strength training using weights to perform squat or leg curl allows you to build quadriceps and strong calves. Finally, you can build the strength of the core with an abdominal crunch. As we have already seen, the qualities of a basketball player are many and different. The characteristics that a basketball player must train during the season are:

- Cording
- Elevation (strengthening thigh and foot extenders)
- Resistance and stamina
- Speed
- Explosive strength
- Resistance to speed.

These are some of the features that come into play during a basketball game:

- Changing speed – Increase (or decrease) of the speed of movement, executed in the shortest possible time.
- Changing direction – Deviation of the direction of your movement, keeping the movements and the coordination necessary for a positive response to changes in the game. The change of direction never draws a curve, but instead creates an angle formed by two straight lines.
- Contracting foot – Attack conducted at high speed to reach a close conclusion and with little disturbance on the part of defenders.

If we also add that the forwards and point guards do about 4 km per game and develop more actions at high speed while the centers and wings are defending constantly on the weak side (the side of the attack where the player in possession of the ball is not present), it becomes clear that a lot of stamina is required in basketball. Basketball fast pace and erratic movements mean that players have to be agile, strong, and able to make sudden and explosive moves. But also can quickly change direction. Exercises that work with the cardiovascular system and include all major muscle groups are ideal for improving basketball skills.

SHOOTING PRACTICE

Although not everyone in the team is shooters, some of the most enjoyable activities that you can have in basketball, are basketball shots. There is a real sense of achievement in looking at the ball from the sides of the basket, sliding down through the net. Shooting is a skill that can be improved with the correct technique and daily practice.

The first step to correct the shot is the "square up," which means standing by pointing all the feet straight toward the basket. Now turn the upper part of the body so that the sides align the front side parallel to the basket. This helps to make shots more precise; the hand of fire is usually the dominant hand. Then keep the elbow of your shot in tight with your hip and balanced ball on the fingertips at the base of the ball. The power comes from the hand of the shot, but you can stabilize the ball with the other hand. Bring the ball at the chin level and bend your knees so that you are squatting. Extend the shooting elbow upward and forward by turning the wrist forward. Let the ball jump forward while the arm stretches out completely, pulling it back instead, while the ball is released. It is also important to continue to follow the movement with your hand after releasing the ball. To get more power from your shot, you have to push up with your legs from the crouching position while you shoot.[3]

Play basketball in a competitive way or for recreational activities, it is essential to know how to be fully aware of the surrounding environment. In other words: do it without looking down. This requires advanced hand-eye coordination, achieved through many hours of practice. Correct manipulation of the ball involves the use of fingertips and the possibility of b-balling with both hands.

As a result, basketball is ideal to ensure a balanced approach of the body to training. Unless you want to limit the game by playing only with your dominant hand, you need to train both sides of the body in the same way. In addition, the high degree of concentration and concentration required to play basketball well means that you must also be mentally agile. The combination of the physical and mental abilities of basketball makes it the ideal candidate for a total wellness activity. To improve your endurance, there are many methods of training, but the most used are slow, with its possible variables, and/or the very long or cross-training. A method in which you run at a slower rate, between 40 and 55 s, compared to your reference speed. Its length is variable, depending on the race (marathon or half marathon) that we are going to prepare can provide from 10 to 22 km. Its use is recommended the day before or the day after the demanding workouts or races.

TYPES OF BASKETBALL TRAINING FOR STRENGTHING THE MUSCLES

We can split the term "strength" into three separate categories. Each is important in basketball. Absolute or maximal strength absolute strength is the maximum force that a muscle group can exert in a single, momentary contraction. For example, a player who can bench press 200lbs has greater absolute strength than a player who can bench press 180lbs. As a basketball player, it is important that you devote a portion of your strength program to developing maximal strength. Why? Because it serves as a foundation for muscular power and speed. However, there is one condition. Maximal strength (usually measured by one repetition max) makes no allowances for time – a weightlifter can spend 20–30 s lifting a weight inch by inch. That's next to useless in basketball. The ground contacts in most explosive movements (such as jumping and sprinting) occur in less than a second! Hence, maximal strength training is simply a means to an end (still a very important one though). Moreover, the end is to increase your explosive speed and muscular power. Muscular Power Power is a combination of both absolute strength and speed of movement.

Increase either one (without reducing the other) and you increase explosive power. As we will see in a moment, strength training for basketball should fall into some distinct phases over the course of a season. If you can build a high level of maximal strength first, you can then convert much of those gains into explosive power. A very effective form of power training is called plyometrics or jump training – and it is ideally suited to basketball. Plyometrics combines elements of both speed and strength in single movement patterns. However, you must have a solid strength base before you move on to these types of sessions, for example, plyometric exercises.

PHASES OF STRENGTH TRAINING FOR BASKETBALL

Strength training for basketball should be periodized. What exactly does that mean over the course of a year, strength training for basketball should follow several distinct phases or cycles. Each of these phases has a very specific objective that leads you naturally into the next phase of training. Follow a periodized strength regime and you will maximize your results. Unless you are an elite basketball player, very few of your opponents will take this approach to their strength training routine. That gives you a real competitive advantage. Let's have a look at each phase one by one. Off-season – build functional strength before you begin the more intensive strength training for basketball, it is crucial that you prepare your body. During the off-season, and even the early pre-season, begin by performing functional exercises that focus on stabilizing muscles and in particular, core stability. Basketball places a lot of uneven strains on your body. You throw predominantly with one arm for example. Some joints and tendons are placed under more stress than others. The same muscles are used over and over and grow strong while others are neglected. A low-intensity functional strength phase helps to restore the balance. Hence, the goals of this phase are:

- To prepare joints, ligaments, and tendons for more intense work in subsequent training phases.
- To strengthen neglected stabilizer muscles.
- To balance the right and left side of the body.
- To correct any imbalance between flexors and extensors (the pectorals and triceps may become overly strong in relation to the rhomboid and biceps for example).

REVIEW OF THE LITERATURE

Sharma (2014), the purpose of the present study was to find out the effect of 9 weeks resistance training program on selected physical fitness variables of Basketball players. For this purpose, 20 female basketball players from Delhi University were selected to act as subjects for the study, the age of the subjects ranged from 17 to 21 years. The minimum level of participation was Inter-University. The subjects were further divided into two groups, that is, control and experimental group, Group-I underwent resistance training and Group-II acted as a control and continued with their regular physical activity. The training period for the study was 3 days in a week for 9 weeks. Predata of both the groups were taken before

the training period; the subjects were tested for speed, back strength, and abdominal strength. The dependent's test and analysis of covariance was applied as a statistical tool. In all cases, 0.05 level was fixed as significance. It was concluded from the results of the study that training groups had improved on back strength and had no significant improvement on the speed and abdominal strength.[1]

Shan (2011), the traditional basketball skill teaching process has shown some disadvantages in the teaching practice. To seek a totally new process of basketball skill teaching, in the passage, the writer takes the rationalization process of basketball skill teaching as the object of study and the writer chose the team which trains by himself as the object of reach, through documentation method mathematical statistics method, experimental method, and other methods, getting relative achievement of the study. Meanwhile, the writer gives us a way about the innovation and reform of basketball skill teaching and makes a daring attempt; these provide us accountable assistance on reform of basketball technology teaching.[2]

Andrejić (2012), the aim of this study was to evaluate and compare the effects of two short-term off-season conditioning training programs on fitness performance in young basketball players. Twenty-one young basketball players, aged 12–13 years, volunteered to participate in this study. The participants were randomly assigned to a strength training group (ST, $n = 10$) or a combined plyometric and strength training group (CT, $n = 11$). The ST group performed free full-court basketball play followed by strength training, whereas the CT group performed plyometric exercises followed by the same strength training program. Young basketball players were assessed before and after a 6-week training period on the vertical jump, long jump, medicine ball toss, 20 m sprint, 4 × 15 m standing start running, and stand and reach flexibility. The CT group made significantly ($P < 0.05$) greater improvements than the ST group in the vertical jump (3.2 cm vs. 0.6 cm), long jump (10.3 cm Vs. 2.2 cm), 20 m sprint (−0.2 s vs. 0.0 s), 4 × 15 m standing start running (−0.41 s vs. −0.05 s), and the medicine ball toss (40.7 cm vs. 18.2 cm) following the training. The results of this study demonstrate that a short-term plyometric and strength training program significantly increases motor performance skills in young basketball players.[3]

Wen (2009), multimedia is the core and main technical measure of the application of modern information technology into education. As a new modern teaching method, multimedia technology has been widely applied to all fields of teaching. Applying multimedia technology to the basketball practice class of college will benefit the improvement of teaching method and system and students will become more active in the learning of basketball theory and skill. This will also give them sufficient knowledge to appreciate a basketball match and contribute to China's basketball industry. This paper analyzed the use of basketball multimedia courseware by literature and mathematical statistics. Basic on the investigation and discussion on the effect of multimedia teaching, the author of the paper thought the application of multimedia technology should be accelerated and popularized.[4]

Haijun (2011), at present, the university reform urgently needs to achieve educational innovation. The key of innovation is to implement comprehensive qualified education. This requires the teaching methods and means changing from simply impart knowledge to focus on training skills and developing abilities when impart knowledge. Traditional teaching thought and methods cannot solve this problem. For this contradiction, we have carried out research on the integrated teaching methods using in the basketball special elective, looking forward to overcome and find solutions for the problems existed in present basketball teaching, updating the basketball teaching philosophy, and further improving the whole process of basketball teaching. In the reform of the unit teaching process, integrated teaching methods make the past teaching "from part to decompose the teaching" to "from whole teaching to part teaching and then back to whole teaching," make students "understand" the overview and basic profiles of project (especially the collective ball games) from the start, master the tactical concepts early, form the awareness of basketball, practice in teaching and racing, enable students to improve technical, and tactical level in basketball special elective, have a certain basketball tactical sense, and grasp the characteristics and rules of basketball.[5]

CONCLUSION

The strength training in basketball sports becomes more and more important, which is one of the effective ways of making the physical training of basketball players scientific, reasonable, and high-efficient. The major influence elements of basketball player's athletic ability are reaction speed, shoot accuracy, action speed, displacement speed, understanding of techniques and tactics, burst power, height, jump height, rebound ability, will and character, mental stability, and tactic provision.

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Volume 39 • Issue 1 ISSN 2231-3265

International Virtual Conference on
"Digital Teaching, Training & Coaching - An Approach to Physical Education & Sports Sciences"
22nd and 23rd August 2020

Organized by
Government First Grade College, K G F - Kolar - Karnataka. &
Smt. G.B. Ankalkoti Govt. First Grade College, Shiggaon - Haveri - Karnataka.

Collaboration with
International Federation of Physical Education,
Fitness and Sports Science Association

International Journal of Health, Physical Education and Computer Science in Sports
A Peer Reviewed (Refereed) International Research Journal - ISRA Journal Impact Factor 7.217

Research Article

Digital education is transforming teaching methods

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ABSTRACT

Information technology practice has transformed education systems with important impacts to educational life and to the reform of the educational surroundings. Therefore, it is necessary to appreciate the benefits arising from the acceptance of new effective teaching practices connected to the digital world. In fact, such transformations are increasingly occurring and having impacts further than institutional barriers. However, it is not completely clear whether information technology has truly transformed teaching practices. The reason of this paper is to know the changes in teaching practices motivated by information technology based on experiences. This study proposes qualitative/interpretive study through a case study in new teaching methods.

Keywords: Technology, Education, Teaching, Information, practices etc,.

INTRODUCTION

Education entities are slowly looking at technology as an opportunity to develop teaching methods and resonate with students on a technology level. Regardless of age, almost everyone owns a smartphone. Google is our library and Wikipedia is our encyclopedia. Thesaurus is our dictionary, and Kindle is our textbook. At a time like this, learning to change our teaching methods by incorporating technology is the only way to bring light to the lives of our students. The following are the different methods of teaching aids/methods in digital era.

SMART CLASS

Teaching with a whiteboard, chalk, and markers are now a thing of the past, and teachers have shifted to making use of projectors, VCD, DVD players, and eLearning system to display tutorial videos and short sessions online to help understand that learning can be fun too. Many schools now come with a television or a projector attached to their whiteboard, where it is easy to shift from a normal classroom session to an interactive digital session. This can make students pay more attention as we are now in the digital era where google is our go-to place.

BEING DIGITALLY UPDATED

In a tech-savvy world, education can become easily outdated, as there is always something new happening. Equipping students to be updated with news and other subject-related topics is the best way to teach students to grow as a person. Students spend most of their time on their laptops, their phones, and their iPads. Knowing what sources students can refer to, online, and knowing which websites offer the best information can be a great way to guide students.

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CONVERTING BOOKS TO PDFS

Books are now taken to kindle and other tabs. Sending them notes, references, and other information in PDF formats that can be easily accessed on laptops, phones, and tabs is a good way to encourage students to choose to study better.

ENCOURAGING ONLINE TESTS

Training students on subjects by conducting fun online tests from time to time can create a good learning environment for them. Students can be given online quizzes and assessments that they can take from home, replacing general homework that they find excuses for.

CONDUCTING ONLINE WEBINARS

How attentive are students when there is only one-way communication with the teacher standing in front of a whiteboard? We find the classroom becoming noisy or students becoming easily disinterested in the topic. Conducting online seminars and webinars, enabling all students interested throughout a lecture, are an art and a talent that teachers need to have to benefit from the entire teaching-learning process. It is very vital that students engage in seminars and the lectures involve two-way communication.

SUPPORTING ONLINE RESEARCH

Similar to how a teacher is well prepared for a classroom session, encouraging students to be prepared too, can drive students to be excited about taking up classes. Online research is trending and people find exciting careers in market research and more. Asking students to find something online that is difficult to find or encouraging online research by giving them a list of things to find before the next class is a good way to keep students looking forward to more classes. It really does feel like a great achievement knowing you have found something that no other student could find. Giving them rewards or appreciating their online findings can encourage students to make the best use of the digital resources they have.

CREATING COMMUNITIES

The interaction between a teacher and a student does not have to end at school, in a classroom. An online community is where a group or a team stays connected online, submitting projects, discussing topics, or expressing ideas. Teachers can set a platform for students to communicate their ideas, suggestions, and subject-related queries for them to solve any time. Being open to online activities like these keep students more focused even outside of school, without realizing the fact that the learning process continues even after classes are done.

SUMMARY

Textbooks, homework, classroom notebooks, whiteboard, chalk, and markers are now history. Smartboards are introduced where teachers can drag and drop shapes, bring in online calculators on the board, measure with AR tools, and voice out the text they want to see on the board. How practical is it to be disconnected from the digital world when students are way faster in terms of technology? Schools are now offering to provide free tablets and kindle-like tabs for students to take notes in. It is time to collaborate teaching methodology with technology and make classroom sessions more lively and interesting.

Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Effect of plyometric training and weight training on agility of college men players

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ABSTRACT

The purpose of the present study was to investigate the effect of plyometric training and weight training on agility of college men players. To achieve the purpose of the study Forty Five men players were selected from PSR Arts & Science College, Sivakasi, Tamilnadu, were selected as subjects at random and their age ranged between 18 to 21 years were selected as subject at random. The study was formulated as pre and post test random group design, in which forty five were divided into three equal groups. The experimental – 1 (n=15, PT) underwent plyometric training, the experimental group-2 (n=15, WT) underwent weight training and group-3 (n=15, CG) served as a control group did not undergo any training. In this study, two training programme were adopted as independent variables, i.e., plyometric training and weight training. The agility was chosen as dependent variable. It was tested by T-test jump and performance recorded in seconds. The selected two treatment groups were performed twelve groups, as per the stipulated training programme. The capacity of agility was tested by before and after the training period. The collected pre and post data was critically analyzed statistical tool of analysis of covariance, for the observed the significant adjusted post-test mean difference of two different groups. The Scheffe's post hoc test was used to find out pair-wise comparison between groups. To test the hypothesis 0.05 level of significant level was fixed. The result of the present study proved that the two training interventions have produced significant improvements on agility.

Keywords: Plyometric raining, Weight training, Agility

INTRODUCTION

Resistance training is the ideal counterpart to plyometric training because it helps prepare the muscles for the rapid impact loading of plyometric exercises. In resistance training, the athlete works to develop the eccentric phase of muscle contraction by first lowering the body or weight and then overcoming the weight using a concentric contraction. Plyometric training can be successfully integrated with resistance training by immediately imposing a speed-strength task on muscles that have been subjected to pure strength movements such as those in weightlifting (as discussed earlier regarding complex training). Chu and Myer[1] plyometric and resistance exercises in their research and stated that if plyometric and resistance exercises were used together, they would result in an increase in explosive power, Bauer *et al*.[2] functional movements and athletic success depend on both the proper function of all active muscles and the speed at which these muscular forces are used. The term used to define this force-speed relationship is power. When used correctly, plyometric training has consistently been shown to improve the production of muscle force and power, LaChance.[3]

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Table 1: The results of the analysis of covariance of agility of different groups (scores in seconds)

Means	G - I (PT)	G - II (WT)	G - III (CG)	Source of variance	Sum of square	Df	Mean square	"F" ratio	Sig.
Pre-test SD±	12.44±0.800	12.47±0.648	12.46±0.758	Between	0.009	2	0.004	0.01	0.992
				With in	22.909	42	0.545		
Post-test SD±	11.31±0.684	11.34±0.833	12.43±0.452	Between	12.217	2	6.108	13.40*	0.000
				With in	19.148	42	0.456		
Adjusted post-test	11.32	11.34	12.43	Between	12.192	2	6.096	14.83*	0.000
				With in	16.852	41	0.411		

*Significant at 0.05 level of confidence (the table values required for significance at 0.05 level of confidence for 2 and 42 and 2 and 41 are 3.22 and 3.23, respectively)

METHODOLOGY

The 45 men players were selected from PSR Arts and Science College, Sivakasi, Tamil Nadu. The study was formulated as pre- and post-test random group design, in which 45 subjects were divided into three equal groups. The experimental Group-1 (n = 15, PT) underwent plyometric training, the experimental Group-2 (n = 15, WT) underwent weight training, and Group-3 (n = 15, CG) served as a control group did not undergo any training. In this study, two training programs were adopted as an independent variable, that is, plyometric training and weight training. The agility was chosen as the dependent variable. It was tested by *t*-test and recorded seconds. The selected two treatment groups were performed 12 weeks, as per the stipulated training program. The condition of agility was tested before and after the training period. The collected pre- and post-data were critically analyzed with the statistical tool of analysis of covariance, for observed the significant adjusted post-test mean difference of two groups. The Scheffe's *post hoc* test was used to find out pairwise comparisons between groups. The subjects were involved with their respective training for a period of 12 weeks.

Table 1 reveals that the pre-test means values of plyometric training, weight training, and control groups of college men players on agility are 12.44, 12.47, and 12.46, respectively. The obtained "F" ratio value is 0.01and the P = 0.992 which is greater than 0.05. This shows that there was an insignificant difference between the experimental groups and control group. The post-test mean values of plyometric training, weight training, and control groups of college men players on agility are 11.31, 11.34, and 12.43, respectively. The obtained "F" ratio value is 13.40 and the P = 0.000 which is <0.05. It shows a statistically significant difference between the experimental groups and control group on agility. The adjusted post-test means values of plyometric training, weight training, and control groups of college men players on agility are 11.32, 11.34, and 12.43, respectively. The obtained "F" ratio value is 14.83 and the P = 0.000 which is <0.05. It revealed that there is a significant change due to plyometric training and weight training on agility. To find out the paired mean differences if any Scheffe's *post-hoc* test was applied.

Table 2: The results of Scheffe's *post hoc* test mean differences on speed among different groups (scores in seconds)

G-I (PT)	G-II (WT)	G-III (CG)	MD	CI
11.32	11.34	-	0.02	0.58
11.32	-	12.43	1.11*	
-	11.34	12.43	1.09*	

*Significance of .05 level of confidence, Scheffe's C.I value of agility was 0.58

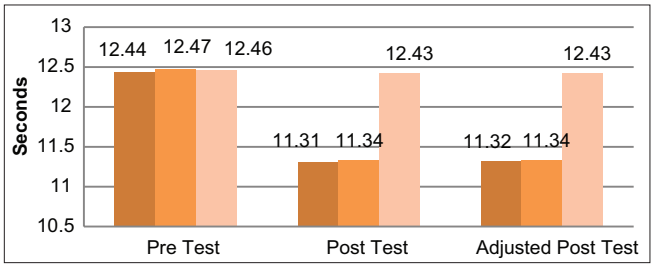

Figure 1: Bar diagram shows the pre, post, and adjusted post-test mean values on agility of different groups (scores in seconds)

Table 2 shows the paired mean differences of plyometric training and weight training and control group on agility. The pairwise mean difference of Group 1 and Group 2 values 0.02 was lesser than the confidential interval value of 0.58. Hence, the first comparison was insignificant. The results of this comparison clearly proved that plyometric training has produced a significantly different effect on agility than weight training. The pairwise mean difference of Group 1 and Group 3 values 1.11 was higher than the confidential interval value of 0.58. Hence, the second comparison was significant. The results of this comparison clearly proved that plyometric training has produced a significantly different effect on agility than the control group. The pairwise mean difference of Group 2 and Group 3 values 1.09 was higher than the confidential interval value of 0.58. Hence, the third comparison was significant.

The results of this comparison clearly proved that plyometric training has produced a significantly different effect on agility than the control group.

DISCUSSION ON FINDINGS

The results of the study denote that the experimental groups, namely plyometric training and weight training, have significantly differed from the selected dependent variables, namely agility, compared to the control group. It is also found that the improvement caused by plyometric training was greater when compared to the effects caused by the weight training group and control group.

Agility

The end result of the study clearly indicated that there was a significant difference among the training groups and control group on agility responses to 12 weeks of training intervention among college men players. Further significant improvement has been noticed in the level of agility between the experimental groups when compared with the control group. After analyzing statistical end results, the researcher found the selected training groups have significantly increased the level of agility from the base to post interventions. The change from pre- to post-intervention is as follows.

The plyometric training group from pre-12.44 to post-11.31 and weight training group from pre-12.47 to post-11.34 has significantly changed the pre- and post-results. The present study demonstrates the increased level of agility of 9.08% and 9.06% for plyometric training and weight training group, respectively.

CONCLUSIONS

The results of this study indicate that the selected two training interventions, namely plyometric training and weight training, would produce significantly altered on agility to the college men players. However, plyometric training influenced the greater development of agility. Further plyometric training has produced a significant alteration in the condition of agility than weight training.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Impact of physical education and sports in promoting social values among youth

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ABSTRACT

The purpose of this study is to investigate the impact of physical education and sports in promoting social values among youth. Physical education and sports play a key role in educating the youth regarding the importance of social values in their life. Reviewed literature investigated the importance of association in educating both minds and body. Further, it also encourages the social values among youth that allow them to develop social relations with their community. Moreover, the benefits of physical education and sports can influence both academic learning and physical activity of the youth.

Keywords: Academic learning, Physical education, Social values, Sports, Youth

INTRODUCTION

In the present era, physical education and sports are an essential part of education. It contributes directly to the development of physical competence and fitness. It also helps the youth to be aware of the worth of leading a physically active lifestyle. The healthy and physically active youth is more likely to be academically motivated, attentive, and promising. In other words, we can say that physical education and sports are exclusive to the school core curriculum. It is the only program that provides opportunities to youth to learn motor skills, progress mental and physical fitness. The benefits of physical gained from physical activity such as disease prevention, safety, and injury avoidance, decreased morbidity and premature mortality and increased mental health. The physical education is only the course where youth learn about all of the benefits gained from being physically active as well as the skills and knowledge to incorporate safe, satisfying physical activity into their lives, in addition, how to interact with others (National Association for Sport and Physical Education, 2001). Moreover, it is observed that physical education sessions should be easy to get from preschool until secondary. It targets to deal with a variety of physical activities and encourage those who are lack of leaning to take unplanned competitive sports. This involves discard conventional methods of physical education teaching and focusing more on the individuals' needs and abilities as an alternative of the enjoyment of the physical activity. As the time for physical education is generally limited within the school time schedule and curriculum, its content must be valuable and resourceful (Fox and Harris, 2003). Further, Gonzalez *et al*. (2010)[1] believed that curricular physical education within any sport not only talent development scheme but also a high development in social values among youth. Therefore, the purpose of this study is to investigate the role of physical education in promoting social values among youth.

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PHYSICAL EDUCATION PROGRAM

Physical education curriculum can offer youth with the appropriate knowledge, skills, behaviors, and confidence to be physically active for life. Moreover, physical education is the basis of a school's physical activity program. In the same vein, participation in physical activity is correlated with academic advantages such as improved concentration, memory, and classroom behavior. According to the World Health Organization (2001),[2] it includes the development of physical abilities and physical conditioning; motivating the students to continue sports and physical activity; and providing recreation activities.

DEVELOPMENT OF PHYSICAL ABILITIES AND PHYSICAL CONDITIONING

Physical education facilitates to build up and practice physical fitness entails basic motor skills (Barton *et al*. 1999) and gets hold of the competency to perform various physical activities and exercises. Physical fitness builds mentally sharper, physically comfortable, and also able to deal with day-to-day demands (Jackson, 1985).[3] Further, endurance, flexibility, strength, and coordination are the key components of physical fitness. Moreover, to execute the physical exercises and sport, youth must be developed basic motor skills.

MOTIVATING THE STUDENTS TO CONTINUE SPORTS AND PHYSICAL ACTIVITY

Teachers always motivate the youth to contribute in sports and physical activities as well as academic education programs. Further, they always direct and instruct them, sports and physical activity are a vital part of academic education. They have also guided the youth; we cannot think wholesome development of human personality without sports and physical education. Moreover, they have also to manage a meeting in which discusses their parents about the importance of sports and physical activity as well as academic education. Further, teachers must engage parents or family members in physical activity, for example, by giving youth physical activity "homework," which could be performed together with the parent's, namely, family walks after supper or playing in the park (World Health Organization, 2001).[2]

PROVIDING RECREATION ACTIVITIES

Institutions must focus on the implementation of physical activity course which facilitates to make enjoyable participation to all youth in physical activity program which provides the youth with a collection of ideas for active games and activities and the skills and fitness to play them (Fox and Harris, 2003) to reduce the stress, anxiety, drug abuses, and obesity.

PROMOTING THE SOCIAL VALUES AMONG YOUTH

Physical education and sports play a key role in promoting the social values among the youth. Moreover, physical education is considered as a school subject, which facilitates to prepare the youth for a healthy lifestyle and focuses on their overall physical and mental development, as well as imparting important social values among the youth such as fairness, self-discipline, solidarity, team spirit, tolerance, and fair play (Bailey, 2005).

DISCUSSION AND CONCLUSION

The present study focuses on physical education and sports helps to promote the social values among youth. Physical education and sports are considered as an essential part of education and culture. It builds up the abilities, will-power, moral values, and self-discipline of every human being as an entirely integrated member of society. The contribution of physical activity and the practice of sports must be certify that throughout life by means of a global, lifelong, and democratized education. It contributes to the preservation and enhancement of mental and physical health, gives a nourishing leisure-time activity, and also helps to an individual to overcome the drawbacks of present stressful living. At the community level, they build up social qualities, social relations, and also fair play, which is vital not only to the sport itself but also to life in society. Education system must allocate the required position and applicable to physical education and sport to create a balance and strengthen between physical activities and other components of education. Physical education and sport course must be intended to suit the requisites and personal attributes of those follow them, as well as the institutional, cultural, socioeconomic, and climatic conditions of each country. In the process of education in general, physical education and sport programs must, by virtue of their content and their timetables, help to create habits and behavior patterns beneficial to full development of the human personality. Further, voluntary people, given appropriate training and supervision, can make an invaluable contribution to the inclusive expansion of sport and promote the participation of the inhabitants in the training and association of physical and sport activities. In addition, it also focuses on adequate and sufficient facilities and equipment which meet the needs of exhaustive and safe participation in both in-school and out-of-school programs regarding physical education and sport. Physical education as a generic term is linked with sociocultural, educational and social values, psychosocial

qualities, socialization, inclusion, moral codes of behavior, cognitive and physical development, well-being, healthy diet, and other benefits to be derived from engagement in regular physical activity (Bailey, 2005). To conclude, education in general and physical education, in particular, should respond to the needs of optimally developing individuals' capabilities and provide opportunities for personal fulfillment and social interactions, fundamental in human co-existence.

Limitations and Future Research

The major limitations of this study are the lack of participation of students in physical activities. In future research, school management should organize the seminar and workshop in which aware the students about the importance of physical activity programs. Further school management should also make compulsory physical activity programs. In future research should also include broader aspects of physical activity and assess the multidimensional nature of self-esteem. Further, this study is conceptual in nature; empirical study should be done to improve the generalizability of the findings.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

To study the competent plan and new sports strategy of the players in the state of Maharashtra

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ABSTRACT

The development of the sports sector in a country or a state is considered to be a stage of progress of that country-state. Therefore, it is the policy of every government to continuously promote sports and players, through which various schemes and activities are implemented by the government. The Government of Maharashtra is also implementing various innovative schemes and initiatives for the development of the sports sector, through which the sports sector is being promoted in the state. The state should be at the forefront in the field of sports. Citizens should cultivate the love of exercise. An important recommendation in this policy is to provide financial assistance for the construction of sports facilities.

Keywords: Citizen, Financial, Innovative schemes, Players, Policy

INTRODUCTION

For the development of sports sector in the state, the government announced an independent sports policy of the state in 1996, followed by a revised policy in 2001. In the meantime, an updated sports policy was announced in 2012 to take into account the changes that have taken place in the field of sports and to prepare medal winners at the international level. These policies are being implemented through various schemes at the state and district level. In general, playgrounds, sports material grants, survey of sports facilities, development of training wrestling centers, use of construction facilities of department, district and Taluka sports complexes, maintenance repairs, sports-related activities from MLA local development fund, establishment of state-district sports development fund, and financial assistance for construction of sports facilities. Sports Training Camps, Awards, etc., are included in this policy and various activities are implemented accordingly.

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While the players in Maharashtra are doing well nationally and internationally, a study is being done to find out what schemes can be implemented to give more incentives to these players. Furthermore, a sports map of Maharashtra is being prepared. Selected sports facilities in the state will be developed to international standards. Action is being planned to achieve the goal of fulfilling the Olympic 2020 Olympic medal.

Objectives

The objectives of the study were as follows:

1. To study whether the state remains a leader in the field of sports and whether the interest in exercise is cultivated among the citizens

2. To study which sports facilities are provided to the players in the state for quality performance at national and international level
3. To study whether technical training in various sports, improvement in the quality of sports, glory of the players, quality sports facilities are being provided by the state
4. To study the beneficial schemes implemented for the players in the state with the players as the focal point
5. To study the amount of financial assistance given to the players for the construction of sports facilities.

VARIOUS SCHEMES AND ACTIVITIES IN THE FIELD OF SPORTS

Schemes to honor international medal-winning athletes and their sports mentors with cash prizes athletes and their mentors, coaches, Olympic, World Championships, Asian Games, Commonwealth Games, Commonwealth Youth Championships, Youth Olympic Games, Youth Olympic Games/World, Championships/School Asian Championships, Paralympic Games, and Para Asian Games are awarded with cash prizes. In the years 2015–2016 and 16–17, 34 and 95 players-guides were honored, respectively.

TRAINING

Regarding the development of wrestling center, the contribution of training and arenas is important for cultivating the tradition of wrestling in Maharashtra. The arena-training is being modernized, keeping in view the changes in the wrestling technique. About 75% of the estimated cost or a maximum of Rs. 7.00 lakhs is provided for repair/renewal of old training.

ORGANIZING TRAINING CAMPS FOR TEACHERS IN THE STATE

Changed modern technology in sports, training methods, new sports, and scientific knowledge of sports needs to be imparted to the teachers from time to time. To increase the knowledge of sports teachers at Taluka, district, division, and state level and to be aware of the changes taking place in the field of sports from time to time, school education students in the state need to have up-to-date training of sports teachers. For this, 10 days training camps are organized for state level master trainers and district level teachers.

ORGANIZING STATE LEVEL SPORTS TRAINING CAMPS

To nurture, promote, propagate, and nurture the sports culture and to produce talented players, training is imparted to the players of the respective official organizations in the men's and women's groups as well as boys and girls in the school 17 and 19 groups.

SURVEY OF SPORTS FACILITIES IN THE STATE

The sports department conducts a survey of the sports facilities developed by the state government, local self-governing bodies as well as private institutions with the objective of making the sports facilities available to the general public and sportspersons as well as providing new sports facilities where sports facilities are not available.

SECONDARY SCHOOL

Incentive grants for sports to junior colleges-Incentive grants are given to schools in view of the participation of the maximum number of schoolboys/girls in Taluka, district-level school sports competitions.

ESTABLISHMENT OF DISTRICT SPORTS TRAINING CENTER

Sports training centers are set up at every Taluka, district, and state level to enhance the sportsmanship of the sportspersons and also to provide training facilities in each district.

FINANCIAL ASSISTANCE FOR CONSTRUCTION OF SPORTS FACILITIES

Financial assistance is provided to private or government-accredited schools, colleges, vocational colleges, various registered social organizations, gymnasiums, sports, youth groups, etc., for the construction of sports facilities or sports equipment. Training and financial assistance to players who have participated in or are participating in official international competitions.

The players from the state are given financial assistance for technical training, improvement in the quality of players, infrastructure, etc., for quality performance at the international level. The official competitions for this scheme are Olympic Games, World Championships, Asian Games, Commonwealth, Youth Commonwealth, Asian Championships, Youth Olympics/Junior Asian/World, Championships, School Asian/World Championships, Paralympics, Asian Cups, and World Cups.

ESTABLISHMENT OF DISTRICT AND DIVISIONAL SPORTS COMPLEXES

To create state-of-the-art sports facilities in the state, a divisional and district sports complex scheme equipped with open auditoriums, swimming pools, various playgrounds, etc., is being implemented.

TALUKA SPORTS COMPLEXES

The Taluka is considered a factor in the sports policy of the state. Therefore, a Taluka sports complex is set up to provide all the basic sports facilities in one place.

MAHARASHTRA SPORTS COUNCIL GRANT SCHEME

From the funds of Maharashtra State Sports Council, grants are given to sports boards/associations/local level organizations/district sports councils for subsistence, purchase of sports equipment, organization of official state/national/international competitions, and maintenance of stadiums.

ESTABLISHMENT OF NON-RESIDENT SPORTS ACADEMY

There is a residential sports academy for students in the age group of 8–14 to increase sports proficiency, but the concept of a non-resident sports academy is being implemented as some students are not ready to leave school.

STATE LEVEL VOLLEYBALL SPORTS COMPETITION

This competition is open to boys and girls under 19 years of age. Organizing Eklavya state level Kho kho sports competitions remuneration to renowned wrestlers – a honorarium is given every month to the wrestlers who have received a book to cultivate the tradition of wrestling.

DIRECT JOB AND JOB RESERVATION TO PLAYERS

Athletes from the state who have won medals in specific sports competitions at the international level are directly appointed to the government service. Athletes who have won medals in state and national competitions have been given 5% reservation in government and semi-government jobs.

SOME IMPORTANT DECISIONS TAKEN BY THE SPORTS DEPARTMENT

About 5% reservation for government, semi-government, and other sectors for proficient players in the state. Athletes who win medals in national and international competitions achieve national as well as state level honors. It is not possible for these talented players to pay equal attention to both the fronts as the duration of the opportunities and educational qualifications that the players get in the game is generally the same. As a result, they lag behind in education. Hence, they cannot compete with other students in the job business competition. With this in mind, the government decided to reserve 5% for these medal-winning quality players for jobs in various government departments, corporations, and local authorities.

DIRECT APPOINTMENT OF HIGH-QUALITY DISABLED PLAYERS IN THE GOVERNMENT SERVICE WHO HAVE MADE THE NAME OF THE STATE BRIGHT

It was decided to give a direct appointment to the government service to the disabled players who have made the name of the state bright and have the best quality. Disabled athletes who have excelled in various international, national competitions such as Paralympic Games, Asian Para Games, Commonwealth Para Games, Asian Para Championships, and Junior World Para Championships were given government job opportunities.

POLICY TO ALLOW EARLY DEPARTURE FOR SPORTS PRACTICE

A strategic decision was taken to allow government sports personnel attached to the Secretariat Gymkhana, which is part of the team for the practice of All India Civil Service Sports Competitions, to leave the office early for the respective sports competitions. Players who were proficient in various sports by taking care of office services were not getting the required time for practice due to office hours. That is why such players were allowed to leave their offices early to perform well in all-India civil service competitions. It was decided to give a certain amount of time to the players participating in cricket, football, kabaddi, and athletics to prepare for the competition.

FINANCIAL ASSISTANCE FOR CONSTRUCTION OF SPORTS FACILITIES

The state should be at the forefront in the field of sports. Citizens should cultivate the love of exercise. An important

recommendation in this policy is to provide financial assistance for the construction of sports facilities. Accordingly, financial assistance was started by the Government Resolution dated March 1, 2014, for the construction of sports facilities and for providing grants for sports equipment.

VARIOUS SPORTS AWARDS

- Shivchhatrapati State Sports Lifetime Achievement Award
- Shivchhatrapati State Sports Award (Athletes and Activists).

OUTSTANDING SPORTS GUIDE AWARD

- Eklavya Sports Award
- Jijamata Sports Award.

CONCLUSIONS

1. Various schemes and activities are implemented in the field of sports
2. It is planned to honor international medal-winning players and their sports guides by giving cash prizes
3. Athletes and their mentors who have made a name for the state by their outstanding performance at the international level, Olympic, World Championships, Asian Games, Commonwealth Games, Youth Commonwealth Games, Asian Championships, Youth Olympics/Junior Asian/ World, Championships, and School Asia Cash prizes are awarded for the Olympics and Para Asian Games
4. Regarding the development of wrestling center – The contribution of training and arenas is important for cultivating the tradition of wrestling in Maharashtra
5. It was seen that the Akhada-training has been modernized considering the changes in the wrestling technique
6. Changed modern technology in sports, training methods, new sports, and scientific information of sports is given to the teachers from time to time
7. Increases the knowledge of sports teachers at Taluka, district, division, and state level and gives proper sports training to school children in the state to be aware of the changes taking place in the field of sports from time to time
8. Up-to-date training of sports teachers is given. For this, 10 days of training camps are organized for state level master trainers and district level teachers
9. It was seen that sports training centers have been set up at every Taluka, district and state level
10. Apart from giving scope to the sports scores of the athletes, there are training facilities in every district
11. Seminars, seminars, and workshops are organized for sports teachers-coaches-guides through this center
12. Financial assistance is given to schools, colleges, various registered social organizations, gymnasiums, sports, youth groups, etc., for the construction of sports facilities or sports equipment.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Impact of fitness awareness on physical fitness and exercise activities of visitors in public parks

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ABSTRACT

Awareness of physical fitness exercise and health is essential for everyone. The aim of the current research was to analyze the impact of fitness awareness on physical fitness and healthy habits of visitors in public parks. A sample size of 24 male visitors was selected randomly. Twenty-four comprehensive sessions of physical fitness awareness were conducted. Standardized physical fitness measurements of 20 m shuttle run, one-minute pushup, standing broad jump, core plank, 100 m sprint, and 600 m running of all participants were recorded before and after the awareness programs. Descriptive statistics were used to explore the test variables. Correlation technique was used to find out the pattern of relationships of variables. *t*-test was applied to measure the effects of awareness programs on fitness exercise and health of visitors. It was revealed that 600 m running and 100 m sprint were significantly ($P < 0.05$) correlated with other test variables. Physical fitness awareness had significant ($P < 0.001$) and positive effects on physical fitness and exercise. It will help people to improve their physical fitness and exercise programs as well.

INTRODUCTION

General fitness is a part of overall health. It means having a healthy body weight as well as an ability to perform physical activities without tiring easily. Specific fitness is the opposite of this form of fitness. It refers to how well a person is able to master specific levels in a sport. Physical fitness is a basic state of wellness and well-being and, extra especially, the capacity to perform aspects of sports, occupations, and day-to-day movements. Physical fitness is customarily completed by means of proper nutrition, average-vigorous physical recreation, physical awareness, and sufficient rest. It is examined that the improvement of common health by means of physical awareness to expand physical recreation and recreation adherence.

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Awareness of physical activity can also reduce the risk of injuries, as well as improve physical fitness, weight management, cognitive function, and quality of life. Despite having knowledge about physical health, Holalkere people still not meeting the recommended level of physical activity. Holalkere society has limited sources to promote physical activity such as lack of exercise planning, training, instruments, and cross-sectional analysis. Many people who move to ground are active enough to take part in vibration but unconscious about the real motive behind the physical activity. Unawareness leads them to chronic disorder and imbalance. Miss perception of physical activity, putting the mat risk. We call them active by default, not by their part in exercising. People with an understanding of low-level activity are healthier than unaware

physical active masses. It is complex and multi-dimensional behavior which is not easy to access. Knowing your physique, problem, benefit, and the atmosphere are prerequisites for pacified sports. Awareness is the first step for advice.

Objectives of Study

The objectives of the study were as follows:

- To explore the perceptions toward developments about physical activity
- To improve the general fitness of the people through physical fitness awareness
- To analyze the impact of physical fitness awareness on physical activity levels.

Hypothesis

Physical fitness awareness has positive effects on fitness exercise and health.

METHODOLOGY

Participants twenty-four (n = 24) male participants were selected randomly from the regular visitors in public Holalkere; the participants were already doing their regular activity for general fitness. The age of each participant was 20–30 years old. They were looking physically appropriate and active.

DISCUSSION AND CONCLUSIONS

The aim of this study was to examine the perceptions about fitness and to analyze the impact of fitness awareness on physical fitness and healthy habits of visitors in public parks. It explored the physical fitness measurements such as 20 m shuttle run, one-minute pushup, standing broad jump, core plank, 100 m sprint, and 600 m running of the visitors. It was concluded that fitness awareness had significant and positive effects on physical fitness and healthy habits. The obtained results showed that the majority of the people were unaware of physical activity. It will help people to improve their physical fitness and exercise programs.

SUGGESTIONS

Further research may be carried out to examine the effects of awareness on a large sample for both genders. This study may also use to compare the study at national and international level. Proper awareness programs may be introduced at national level. The impact of fitness awareness is positive and significant towards health and fitness; therefore, cultural activities may also be introduced with physical fitness awareness. More funds should be allocated for parks for physical fitness activities.

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Research Article

A study on modern innovative methods of teaching training coaching in physical education

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ABSTRACT

Aim of innovative teaching strategies that improve student engagement by inquiry-based learning is one of the most powerful teaching strategies in the classroom because research tells us that students learn best when they construct their own meaning, QR codes, project-based learning, and wisely managed classroom technology. Teaching through collaboration, another innovative method of teaching involves encouraging student collaboration for various projects. Teachers can help foster this skill in the classroom by allowing students to learn and work in groups to bring out the talent of the children. There are many new modern innovative methods of teaching that are being used in classrooms today's world through social networking, online teaching, class blogs and wikis, podcasting interactive whiteboards, tabs, and mobile devices. Modern concept of physical education is broader and more meaningful physical education is not confined to some forms of drill and regular exercises but emphasizes on the physical fitness value. Physical development and mental development are inter-related and go together; it is also most important to develop the components of physical education in the child which impacts the change which can be an overall development of student speed, moving body parts quickly. Strength, ability to push, pull, lift, and jump. Agility, quickness, coordination, ability to move body parts together fluently. Balance, being steady, flexibility, making muscles longer. Endurance, long steady activity. Encourage contact between students and faculty to develop reciprocity and cooperation among students, encourage active learning to give prompt feedback to emphasize time on task to communicate high expectations to respect diverse talents and ways of learning in physical education. The current physical education teachers are focused on recreation and team sports and more on getting children healthy. To that end, instructors have had to outline and define goals specific to increasing life-long health.

Keywords: Coaching, Modern innovative methods, Physical education, Teaching, Training

INTRODUCTION

Physical education develops students' competence and confidence to take part in a range of physical activities that become a central part of their lives, both in and out of school. A high-quality of physical education curriculum enables all students to enjoy and succeed in many kinds of physical activity. Here are some new innovative practices to be discussed to learn their peak heart rate levels to achieve maximum physical fitness. Electronic activity trackers record step counts, quality of sleep cycles, and a host of other personal metrics to ensure that students stay active throughout their developmental innovative teaching techniques in physical education. Innovative teaching technology in physical education is based on methods that provide an interactive teaching-learning environment for kids who are always eager to explore the world to fulfill their curiosity. It involves

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creativity in teaching, which makes learning an interesting through creativity to learn.

Physical development involves growth and changes in the body and brain, the senses, motor skills, and health and wellness. Cognitive development involves learning, attention, memory, language, thinking, reasoning, and creativity. Psychosocial development involves emotions, personality, and social relationships. According to the national planning of physical education and recreation, the aim of the physical education must be to make every child physically, mentally, and emotionally fit and also to develop in him such personal and social qualities as will help him to live happily with others and build him up a good citizen. Aim and statements of intent in the broad term of modern innovative methods of teaching, coaching, and training in physical education is hope to achieve at the end of the project objectives; on the other hand should be specific statements that define measurable outcomes.

Physical education analyzes the innovation of physical teaching method using network enrich and innovate the modern sports teaching to provide reference methods and the research results of each stage played a role in promoting the healthy sports activity in physical education world the activities of the use and operation of important ways over the previous method of operation creates long-lasting innovations in society modern education has been review and knowledge of talent and abilities to innovate teaching techniques in physical education.

MODERN INNOVATIVE METHODS OF TEACHING

Aim of effective teaching strategies for the classroom visualization to bring all academic concepts to life with visual and practical learning experiences, helping your students to understand how their schooling applies in the real-world. Cooperative learning, inquiry-based instruction, differentiation, technology in the classroom, behavior management, and professional development. These are the six methods of modern innovative methods of teaching. These are teacher-centered methods, learner-centered methods, content-focused methods, and interactive, participative methods.

MODERN INNOVATIVE METHODS OF TRAINING

Instructor/teacher-centered methods, learner-centered methods, content-focused methods, Interactive/participative methods, specific teaching methods, and lecture method. The natural approach in the classroom is designed to develop basic communication skills. The development stages are as below.

1. Comprehension (preproduction)
2. Early production and
3. Speech emergence.

The development or maintenance of modern innovative training skills related strength, agility, flexibility, movement, and stamina including dance; the development of knowledge and skills regarding teamwork and fair play; and the development of knowledge and skills regarding nutrition and physical fitness as part of a healthy lifestyle. Physical education in high school is essential to the development of motor skills and the enhancement of reflexes. Hand-eye coordination is improved as well as good body movements, which helps in the development of a healthy body posture; physical training teaches the students the importance of physical health.

MODERN INNOVATIVE METHODS OF COACHING

Coaching is a sport environment that is a training method in which a more experienced or skilled individual provides an employee with advice and guidance extended to help develop the individual skills, performance, and development of skill growth. Coaching is a style that involves and facilitates the engagement of people as well as drawing out and understanding and empathizing with their specific and individual motivations. Effective coaching in physical education is about achieving goals. The coach helps the students to set meaningful ones and identify specific behaviors or steps for meeting them. The coach helps to clarify milestones or measures of success and holds the student accountable for them for overall development in today new rapidly growing development world in sports as a physical education leader.

CONCLUSION

My study says that "Modern Innovative Methods of Teaching, Training, Coaching in Physical Education" It is very essential in today's world which deals with the latest trends on teaching techniques and where we can see lots of development on the student's life and also a proper training may be a good citizen its impacts individual personality to mold him to be the best. Good coaching makes a good knowledge transfer and makes him an enlightened of the sports and games in the field of the physical education world. My study which in impacts a greater development of the physical education field to grow the students overall development and also a good citizen of the country.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Yoga and wellness

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ABSTRACT

This article focuses on the importance of yoga in well-being ness of our body. Yoga is the most perfect health and wellness module as it is comprehensive and holistic in nature. Wellness is an active process of becoming aware of and making choices toward a healthy and fulfilling life. Wellness is more than being free from illness; it is a dynamic process of change and growth. All type of body wellness promotes proper care of our bodies for optimal health and body function. There are many parts of wellness that all must be cared for together. Overall, body wellness encourages the balance of physical activity, nutrition, and mental well-being to keep your body in a healthy or fit condition. Obtaining an optimal level of body wellness allows you to nurture personal responsibility for your own health. As you become conscious of your physical health, you are able to identify elements you are successful in as well as elements you would like to improve. Yoga is a holistic and integral science of life dealing with physical, mental, emotional, and spiritual health of an individual and society. Yoga is one of the Indian philosophical systems that emphasize the importance of the work with the body to develop healthy behaviors as well as body wellness. Yoga is a method for superior living and well-being. It guarantees extraordinary or effectiveness in work and superior authority over psyche and feelings, through yoga one can accomplish both physical and mental concordance. Well-being is the best gift of all. Well-being is not only the nonappearance of ailment, to empower the people to lead an actual existence of complete physical, mental, and social prosperity and not simply the nonattendance of illness or ailment. Yoga is a finished science that joins the body, psyche, and soul. Everyday routine with regards to yoga expands peacefulness, affectability, instinct, mindfulness, body wellness, and increasing of immunity in the present condition of coronavirus disease-19. Yoga is not just about working out; it is about a sound way of life.

Keywords: Health, Immunity, Physical fitness, Wellness, Yoga

INTRODUCTION

Yoga is an effective way to maximize the joy of living in a fit and healthy body. Regular practice of yoga can give more flexibility, more stability, and give your body good balance and strength. In today's fast-paced world and present coronavirus disease [COVID]-19 condition, it is as important as ever to attend to your mind, body, and spirit. Yogic principles help to strengthen and develop positive health, enabling us to withstand stress better.[1] The act of yoga enables understudies to discover stillness in a world overwhelmed by disorder. Harmony and serenity accomplished through cantered preparing requests to everybody. Yoga is the science of right living and as such, is intended to be incorporated in daily life. It works on all aspects of the individual: The physical, vital, mental, emotional, psychic, and spiritual. The word yoga means "union" or oneness" and is derived from the Sanskrit word Yuj, which means to join. This unity or joining is described in

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spiritual terms as the union of individual consciousness with the universal consciousness. On a more practical level, yoga is a means of balancing and harmonizing the body, mind, and emotions. This is done through the practice of asana, pranayama, madra, bandha, shatkarma, and meditation.

YOGA AND THE BODY-MIND RELATIONSHIP

The mind and body are not separate entities, although there is a tendency to think and act as though they are the gross form of the mind is the subtle body and subtle form of the body is the mind. The practice of yoga during the transitional period of adolescence helps to integrate and harmonize the two, that is, body-mind. Both the body and the mind harbor tensions or knots. Every mental knot has a corresponding physical, muscular knot, and vice-versa.[2] Yoga releases these knots and mental tensions by dealing with them on the physical level, acting somato-psychically, through the body to the mind. Regular practice of asana-pranayama maintains the wellness of the body in an optimum condition and promotes health even in an unhealthy body. Through yoga practice, the dormant energy potential is released; mind becomes light, creative, joyful, balanced, and experienced as increased confidence in all areas of life.

IMPROVEMENT OF HEALTH AND WELLNESS THROUGH YOGA

Disciplined Life

If one takes a look at the lives of all great personalities, one thing that will be evident that they all are disciplined. In a contemporary lifestyle, there are many things which make you divert from the real aspects of life, and thus hamper the disciplined progress. Yoga can bring due transformation in the lives of these people. It is here to note that one can realize the advantages of yoga only when he/she becomes consistent. And to be consistent, it is important for the person to be disciplined. You have to sleep in time, eat balanced foods, and quit the various forms of addictions as well. In fact, yoga has been the best way to quit addictions such as alcohol, drug, and smoking. Yoga creates a positive nature of mind for well-being ness.

Create Happiness in Mind

As explained above, the world is a fan of yoga for good health**.** However, it is important to understand that health or good health is not just limited within the physical body. It refers to mental health as well. No matter how strong is the body of a person, but, he/she cannot progress if the mind is not at proper state. Moreover, yoga provides that tranquility to mind so that the person feels ever motivated to accept any challenge in life. To be specific, yoga is relevant for contemporary people who have to deal with a great amount of stress.[3] Great to see, however, is that many people have started realizing about the importance of yoga in daily life in the contemporary scenario.

Create Positive Nature

Problem means nothing for a person positive inside. Therefore, making the person positive is perhaps the biggest benefit of yoga. Yoga brings incredible hormonal balance in the body. These hormonal imbalances are the prominent reasons behind the whole range of negativities or the negative thoughts arising in the minds of a person. Yoga has been absolutely incredible on this regard.

Increase Immunity Power

There is no workout in the world in the present condition of COVID-19, other than yoga that makes a person immune from inside. This is indeed the biggest blessing possible for a person. In present disordered lifestyle and COVID-19, where the threats of getting attacked by the microorganisms or of falling sick always remain at the peak, yoga is indeed like a confidence booster. Hence, it is therefore advised to take yoga exercise daily, and offer the best gift to your body. One of the first studies to look at how yoga affects genes indicates that practice can alter the expression of immune-related genes in blood cells. This suggests yoga may have the potential to influence how strongly the genes you are born with affect your health. Meditation has the most science backing a beneficial effect on the functioning of the immune system, appearing to both boost response when needed to fight infection and lowering it in cases of some autoimmune disease, such as psoriasis.

Increase Fitness Level

Improved flexibility is one of the most obvious benefits of yoga, but it is one that can lead to multiple benefits, including a reduction in aches and pains. Tight hips can affect the alignment of the thigh and shin bones, causing knee pain knees. Tight hamstrings flatten the lower spine, which can cause back pain. Many yoga asana build muscle strength as well.[4] You can grow stronger and maintain muscle mass using just the weight of your body. While flow or ashtanga, classes can get your heart rate up, even gentler yoga exercises improve cardiovascular fitness. Studies have found that yoga lowers the resting heart rate, increases endurance, and can improve your maximum uptake of oxygen during exercise.

Improvement in Mental Fitness

It has been found through studies that the benefits of yoga include increased focus, concentration levels, and mental clarity. It also helps to bring down the stress levels, reduce depression and anxiety. Since the stress is reduced, the sleep cycle is improved.[5] Yoga as a way of life boosts feelings of self-image and well-being. To be more precise, it helps the mind to take control over the body and not the other way round.

EFFECT OF YOGA ON PHYSICAL AND MENTAL LEVEL

Physical Level

- An improved blood circulation
- A stronger immune system
- Improved cardiovascular system, lymph system, and respiratory system
- Less fatigue
- Balanced cholesterol level.

MENTAL LEVEL

A peaceful mind complements a healthy body. Yoga releases the toxins that get accumulated in the cells of our body due to everyday stress. This makes the mind more calm and peaceful. By regular yoga practice, you also start to burn unnecessary fat, so your cholesterol level is balanced. Another beautiful thing about the yoga practice is the feeling of freedom you get in the body and the mind as you become more centered, strong, and flexible.

STEPS TO A FIT BODY WITH YOGA

- Warm-up with joint movements. Includes light asana
- Yoga postures can include sun salutations and Padmasana
- Relaxation: After practicing yoga, it is important to lie down and relax for a few minutes. Taking your attention to various parts of the body also helps
- Pranayama and meditation: Regularly doing pranayama and meditation adds to the positive effect of yoga.

CONCLUSION

The current paper focuses on the preventive, primitive, and curative aspects of yoga as natural health-care measures, which are really in great demand for the strength and support of the modern health care system. The regular practice of yoga is an antidote for many of the psychosomatic and lifestyle disorders of modern life with the revival of the traditional heritage along the lines of the sustainable approach. This article shows the effect of yoga in achieving a feeling of well-being among people, which is in line with similar studies carried out by other researchers. These will also contribute to better physical health, considering the fact that the lack of wellness and peace at the mental level is an important factor influencing the incidence of many diseases. Hence, the occurrence of many psychosomatic disorders in our society can be reduced considerably through the practice of relaxation techniques such as yoga.[3] This assumes relevance in the present-day context, where people mostly lead a fast, hectic, and tense life as an outcome of the unavoidable necessities of family/social commitments, work pressure, etc. In this context, it will also be worthwhile if institutions such as yoga centers, recreational clubs, residents' associations, schools, offices, etc. take the initiative in popularizing such mind-body relaxation techniques through awareness and demonstration programs. This should also include information generated from research carried out, with the objective of creating a healthy society. The benefits of increased feelings of relaxation, improved self-confidence and body image, improved efficiency, better interpersonal relationships, and increase in attentiveness through yoga.

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Research Article

Physical education health and fitness

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ABSTRACT

Fitness is survival-Einstein. To survive in this world to become fit is almost compulsory physical education is the root of the education-without physical education one cannot achieve the goal, physical education is the central post of their lives ,it develops the confidence and competence in students, physical activities take place in and out of the school it gives enjoyment in students physical education it leads all round development of a person it strengthen body mind and spirit: it has a major role in bringing social developments. Health and fitness are the two faces of a single coin. We can maintain good health and developing fitness, here health nothing but physical health, mental health, emotional health is bring stable in this regard fitness is most important to survive in this world. Various types of physical excercises, yogsanas, and pranayamas practical make strengthen body nothing but fit body, here fitness can be obtained by regular practice of exercise or gym. "A sound mind in a sound body"-it can be possible through practicing of regular exercise.

Keywords: Physical education, Yoga, Physical activity, Health and fitness

INTRODUCTION

Physical education is a vast subject under these different types of physical activities, fitness and health tips, and all included in this.

Fitness can be processed through using bands, equipments, and trackers. According to the united states department of health and human services, fitness is a set of attributes that people can have or achieve that relates to the ability to perform physical activities.

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Let's look into health. Health is nothing but the state of being free from illness or injury "anyhow it is state of complete physical, mental, and social well-being, in this regard to take care of health many organization and government department and NGO's and agencies working on it.

Nowadays, health matters on issues because of corona diseases – everybody must understand about health must learn new things about health, must follow the gelidness about health and how health is most important for all of us. Thus, we to develop our health and fitness, by the way, we can develop our body immune system to leave longer, by the way, we can be away from the diseases. In this world, if anyone can achieve anything in his life means, health is very important – that's why generally it could be called as "health is wealth."

WHY HEALTH AND FITNESS IMPORTANT?

Healthy lifestyle leads to a happy life, health and fitness go hand in hand-health, and fitness ask consists good nutrition and diet, sports medicines, regular exercises including yoga and all, here one quote we can remember "exercise not only change your body, it changes your mind, your attitude, and your mood," that is how exercise has a major role to develop health and fitness for all – further can say exercise should be regarded as a tribute to the heart.

Anyhow, I conclude this with the following saying, "strength does not come from the physical capacity, it comes from an indomitable will" – Mahatma Gandhi.

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Volume 39 • Issue 1 ISSN 2231-3265

International Virtual Conference on
"Digital Teaching, Training & Coaching - An Approach to Physical Education & Sports Sciences"
22nd and 23rd August 2020
Organized by
Government First Grade College, K G F - Kolar - Karnataka. &
Smt. G.B. Ankalkoti Govt. First Grade College, Shiggaon - Haveri - Karnataka.
Collaboration with
International Federation of Physical Education,
Fitness and Sports Science Association

International Journal of Health, Physical Education and Computer Science in Sports
A Peer Reviewed (Refereed) International Research Journal - ISRA Journal Impact Factor 7.217

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Research Article

Impact of library automation services in Government First Grade College Libraries in Kolar District: A survey

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INTRODUCTION

To investigate the impact of library automation services in Government First grade college libraries in Kolar district. The investigators used a questionnaire and interviews. They chose samples on the basis of a stratified sampling method and administered the questionnaire according to a random method for collecting the data. This study revealed that 7 of 8 libraries are completely automated. Seventy percent of librarians believe that automation has improved their library's services, while 85% of users believe that an automated library system is better than the traditional manual system. Of the eight libraries, one library has a shortage of general staff to deal with automation services. The investigators could only select all the institutions for his study. Although so many studies of the same kind have already been conducted on library automation services in different areas of the world, this paper revealed the current status of library automation services in Government First grade college libraries in Kolar district.

ACADEMIC INSTITUTES IN THE STUDY

For this study, the investigators have selected eight academic institutes because these institutes are the only ones to have taken some initiatives regarding automation at government college libraries.

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Year of Starting Automation

Table 1 indicates that GFGC Kolar was clearly the first to initiate library automation in the area and GFGC, KGF was the last of the eight.

REVIEW OF THE LITERATURE

The review of related studies is essential in any new research topic and the establishment of any research foundation. Kumar (2003) studied the automation processes of four university libraries in Haryana. The study's major objectives we Thapa and Sahoo (2007), surveyed several libraries in Bhopal to understand the problems imposed by automation in contrast to routine activities used in other libraries.

Sani and Tiamiyu (2005) created a questionnaire and interviewed administrators, teaching/non-teaching staff, students, and researchers in the universities to evaluate the automated services in selected Nigerian universities. It was found that automated services were far from adequate and that, of the 29 different automated services that one would expect in a modern university, only about 40% were available and utilized.

Ahmad and Iqbal (2009) presented a case study of the ABIMS, focusing primarily on the implementation of library automation of its institute's library. The study also discussed

Table 1: Year of starting automation

Name of institute	Year	Type of automation
Government First Grade College, Kolar	2003	Easy Lib
Government Women's College, Kolar	2005	Easy Lib
Government First Grade College, Mulbagal	2005	Easy Lib
Government First Grade College, Bangarpet	2008	e-Granthalaya
Government First Grade College, Srinivaspur	2010	Easy Lib
Government First Grade College, Malur	2010	e-Granthalaya
Government First Grade College, Bangaru Tirupati	2013	Easy Lib
Government First Grade College, KGF	2019	New Gen Lib

why Al-Barkaat Educational Society established the ABIMS, why they chose Alice for Windows library software for its library automation, and provided a detailed overview of various modules of AFW library software.

Jayaprakash and Balasubramania (2011) created and administered a questionnaire designed to investigate automation in university libraries in Tamil Nadu, India. The authors concluded that automation is essential for efficient library operations and to help save library users' time. The questionnaire results also explained the problems imposed by authorities and staff during and after the automation process.

OBJECTIVES OF THE STUDY

The primary objective of the study is to investigate the impact of automation on library management services at Aligarh. The other objectives of the study included:

- To know the starting year and confer state of automation services in government first grade college libraries
- To discover the impact of library automation services of government first grade college libraries
- To decide the several software packages requisite by government first grade college libraries for automation
- To recognize the barriers to library automation services confronting librarians
- To identify library functions and services being automated in government first Grade College libraries.

HYPOTHESIS

All the government first grade colleges of Kolar district are automated and most of the users are satisfied with the services and facilities provided by the government first grade colleges of Kolar district.

METHODOLOGY

The present study is being conducted on a sample of 1000 users of eight selected government first grade colleges of Kolar district. The methods used included questionnaires and informal interviews of librarians. The investigators chose the sample on the basis of a stratified sampling method and administered the questionnaire according to a random method.

SCOPE AND LIMITATION OF THE STUDY

Kolar is one of the instructive hubs of south India, caters to the necessity of the students of diversified strata in rhythmical fields of education. Despite the abundant instructive benefit in the country, the investigators could hide eight government first brand colleges of Kolar rigorous for as much as of delay and logical constraints.

ANALYSIS AND INTERPRETATION

One hundred questionnaires were administrated among degree students attending the eight institutions because the numbers of seats for Arts, Science, Commerce, and Management students are the same in each institution.

Present Status of Automation

Table 2 indicates that of the eight libraries surveyed, one indicated that automation implementation is underway but incomplete. All other seven libraries claim that their automation work is complete.

Impact of Automation on Library Services

Table 3 indicates that five librarians believe automation has helped enhance the efficiency of library services. The three librarians said that automation has had only a slight impact on the efficiency of library services.

Type of Library Automation Software

Table 4 reveals that only two libraries surveyed are using open or free software or in-house software for library automation. Remaining six libraries are using various licensed or purchased software for automation work.

Barriers to Automation

Table 5 reveals that the five libraries are facing the problem of space. There are shortages of staff in three libraries, and three reports that users lack the necessary knowledge to use the automation. Moreover, all eight have experienced

Table 2: Present status of automation

Category	Number of respondents								
	GFGC, Kolar	GWC, Kolar	GFGC, Mulbagal	GFGC, Bangarpet	GFGC, Srinivaspur	GFGC, Malur	GFGC, Bangaru Tirupati	GFGC, KGF	Total
Completed	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	5
Partially completed	-	-	-	-	-	-	-	-	0
At initial stage	-	-	-	-	-	-	-	Yes	1

Table 3: Impact of automation on library services

Category	Number of respondents								
	GFGC, Kolar	GWC, Kolar	GFGC, Mulbagal	GFGC, Bangarpet	GFGC, Srinivaspur	GFGC, Malur	GFGC, Bangaru Tirupati	GFGC, KGF	Total
Slightly improved	-	-	-	-	Yes	Yes	Yes	-	3
Improved	Yes	Yes	Yes	Yes	-	-	-	Yes	5
Deteriorated	-	-	-	-	-	-	-	-	0
Remain same	-	-	-	-	-	-	-	-	0

Table 4: Type of library automation software

Category	Number of respondents								
	GFGC, Kolar	GWC, Kolar	GFGC, Mulbagal	GFGC, Bangarpet	GFGC, Srinivaspur	GFGC, Malur	GFGC, Bangaru Tirupati	GFGC, KGF	Total
Open/free	-	-	-	Yes	-	Yes	-	-	02
In-house	-	-	-	-	-	-	-	-	0
Purchased/licensed	Yes	Yes	Yes	-	Yes	-	Yes	Yes	06

Table 5: Barriers to automation

Category	Number of respondents								
	GFGC, Kolar	GWC, Kolar	GFGC, Mulbagal	GFGC, Bangarpet	GFGC, Srinivaspur	GFGC, Malur	GFGC, Bangaru Tirupati	GFGC, KGF	Total
Insufficient funds	-	-	-	-	-	-	-	-	0
Inadequate staff	Yes	Yes	-	-	-	-	-	Yes	3
Lack of staff coordination and skills	-	-	Yes	-	Yes	Yes	-	-	3
Lacks of used information technology knowledge	-	-	-	-	Yes	Yes	Yes	-	0
Problem from authority	-	-	-	-	-	-	-	-	0
Lack of space	-	-	Yes	Yes	Yes	Yes	Yes	-	5

no interference and no library faced problems from higher authority.

Status of Automation of Various Sections of the Library

Table 6 indicates that two of the eight libraries' acquisition sections are fully automated and one is partially automated. Technical sections in four libraries are fully automated and two are partially automated. Circulation sections of two libraries are fully automated, one is partially automated, and the remaining library was in the initial stage of automation. The periodical section of two libraries is fully automated, two are partially complete, and the other is in the initial stage of implementation. In the GFGW, Kolar, all sections of the library are automated.

User Opinion about the Library System

Table 7 reveals that among 1000 respondents, 658 said they believe that the automated library system is better than the manual system, and 342 favored the manual system.

Awareness of Library Services

Table 8 indicates that 669 users were aware of a circulation service and 235 reportedly indicated an awareness of periodical service. There were 284 users who said they were aware of reference service, 493 were aware of OPAC service, and 282 users revealed awareness of online journals.

Satisfaction with the Overall Function of Management Libraries

Table 9 revealed that 249 users were partially satisfied with the overall functions of first Grade College libraries, whereas 405 were completely satisfied with the overall functions of first Grade College libraries. One hundred forty-six users were not satisfied with the overall functioning of first Grade College libraries. The satisfaction level was highest in the GWC, Kolar and lowest in GFGC, Bangarpet.

Staff Availability

Table 10 reveals that out of all eight libraries, six were facing a shortage of general staff and two had sufficient general staff. Six libraries had sufficient specialized staff for automation.

Table 6: Status of automation of various sections of the library

Category	Number of respondents								
	GFGC, Kolar	GWC, Kolar	GFGC, Mulbagal	GFGC, Bangarpet	GFGC, Srinivaspur	GFGC, Malur	GFGC, Bangaru Tirupati	GFGC, KGF	Total
Acquisition	-	-	-	-	Yes	-	-	Yes	2
Technical	Yes	-	Yes	Yes	-	Yes	-	-	4
Circulation	-	-	-	-	-	-	-	-	0
Periodical	-	Yes	-	-	-	-	Yes	-	2

Table 7: User opinion about the library system

Category	Number of respondents								
	GFGC, Kolar	GWC, Kolar	GFGC, Mulbagal	GFGC, Bangarpet	GFGC, Srinivaspur	GFGC, Malur	GFGC, Bangaru Tirupati	GFGC, KGF	Total
Automated	85	95	86	96	54	87	91	64	658
Manual	15	05	14	14	46	13	08	36	342
Total	100	100	100	100	100	100	100	100	1000

Table 8: Awareness of library services

Category	Number of respondents								
	GFGC, Kolar	GWC, Kolar	GFGC, Mulbagal	GFGC, Bangarpet	GFGC, Srinivaspur	GFGC, Malur	GFGC, Bangaru Tirupati	GFGC, KGF	Total
Circulation	86	95	90	87	80	89	76	66	669
Reference	44	36	46	26	39	34	29	30	284
Periodical	12	16	29	38	34	39	42	25	235
Online Journal	36	39	32	29	35	42	43	26	282
OPAC	80	89	82	75	72	26	30	39	493

Table 9: Satisfaction with the overall function of management libraries

Category	Number of respondents								
	GFGC, Kolar	GWC, Kolar	GFGC, Mulbagal	GFGC, Bangarpet	GFGC, Srinivaspur	GFGC, Malur	GFGC, Bangaru Tirupati	GFGC, KGF	Total
Satisfied	46	65	52	36	49	51	58	48	405
Partially satisfied	30	28	30	42	26	19	24	50	249
Not satisfied	24	07	18	22	25	30	18	2	146

Table 10: Staff availability

Category	Number of respondents								
	GFGC, Kolar	GWC, Kolar	GFGC, Mulbagal	GFGC, Bangarpet	GFGC, Srinivaspur	GFGC, Malur	GFGC, Bangaru Tirupati	GFGC, KGF	Total
General staff	Yes	Yes	No	No	No	No	No	No	
Specialized staff	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

Table 11: Satisfaction with Internet speed and connectivity

Category	Number of respondents								
	GFGC, Kolar	GWC, Kolar	GFGC, Mulbagal	GFGC, Bangarpet	GFGC, Srinivaspur	GFGC, Malur	GFGC, Bangaru Tirupati	GFGC, KGF	Total
Satisfied		Yes		Yes					2
Not Satisfied	No		No		No	No	No	No	6

Satisfaction with Internet Speed and Connectivity

Table 11 clearly shows that two librarians were satisfied with the speed and connectivity of Internet services available in their library, while six librarians were not satisfied.

FINDINGS

Based on the analysis of the results of the survey, one can conclude that:

- All the govt. first grade colleges began their automation work in or after 2005 [Table 1]. In the selected geographical area, automation work was initiated by the Department of Collegiate Education, Bengaluru. Taking into account the improvement in the quality of library services
- The study shows that 90% of libraries are completely automated, with the exception of the GFGC, KGF initial stage of automation [Table 2]. The majority of the libraries are completely automated. The main reason behind this seems to be a lack of space and staff
- Of the librarians, 75% believe that automation has improved their library's services [Table 3]. Automation saved a lot of time per user as well as staff for providing the information. The librarians in the informal interview expressed their views that automation has reduced their workload, saving them time and labor. Users also accepted that automation has improved the quality of library services and saved them time
- All eight librarians surveyed expressed a need of greater space, while 50% said they lack adequate funding and need additional staff [Table 5]
- Of the surveyed libraries, 75% have fully automated acquisition section and only 50% have fully automated technical section [Table 4]. This indicates that there may be a lack of skilled staff. Most of the library staff members are older and not technically astute in automation processes
- Of the surveyed library users, 85% realized that an automated library system is better than the traditional manual system [Table 7]. Hence, we can say that automation has helped library users to get the right information at the right time
- 75% of the users are satisfied with the overall function of government first grade college libraries [Table 8]. Thus, these automated libraries are able to serve users' educational needs satisfactorily and also provide good reference and referral services through cooperative staff members.
- Of the eight libraries, three have a shortage of general staff and three also lack qualified specialized staff to deal with automation [Table 9]. These institutions are avoiding hiring qualified staff to save money
- Two of the librarians are satisfied with the speed and connectivity of Internet services available in their libraries, while six of them are not satisfied [Table 10]. Internet connectivity can play a major role in providing the right information to the right user.

SUGGESTIONS

Some suggestions for libraries, based on the study's results, include:

1. GFGC, KGF should complete the automation process of their libraries as soon as possible to provide users with a higher quality of service
2. User training/orientation programs should be generalship methodically to habituate users on the different stamp of up-to-date notice avail and how to put the library resort to optimal use
3. Users should be made more watchful of the novel facilities profitable in the conduct libraries
4. A full count of qualified library personnel should be available to betroth that the recent system service effectively and to stipulate material guidance to users.

5. Libraries should immolate Internet office so that users can admittance enlightenment around the beetle.

CONCLUSION

The ponder sought to investigate the Appulse of automation on library avail of government first slope college libraries of Kolar division by taking try from control first graduate colleges who are prosecute grade succession and by Sagamore librarians of eight regulation first rank colleges of Kolar circuit.

The contemplation demonstrated how automation of libraries of state first brand colleges are the duty in and stimulate to equal at least the least requirements requirement to facilitate the users' widespread and involved informational necessarily and claim. Overall, it is a well-established incident that the library and intelligence system is the being of any founded and indispensably to be established through completely

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Effect of yogic exercises and aerobic exercises on anxiety of secondary schoolchildren

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ABSTRACT

The purpose of the present study was to find out the effect of yogic exercises and aerobic exercises on anxiety of secondary schoolchildren. To achieve this purpose 150 students studying in various classes of Morarji Desai Residential School of Vijayapura, City in Karnataka. Their age ranged from 14 to 16 years; the selected subjects were divided into three equal groups. Each group consists of 50 subjects, in which Group-I underwent yogic exercises, Group-II underwent aerobic exercises, and act as Group-III control group. The subjects underwent 16 weeks morning session training. The data were collected before and after the training, these experimental data were statically analyzed to find out the significant. Was statistically significant imprudent by using Annas Group I and Group II underwent for the training for training peered of 16-week. The data collected from the three groups. Emulate data were collected after the experimental period was collected data was a statistically significant improvement in using analysis of covariation and "F" ratio was found to be significant; Scheffe's test was used as a post-test to determine which of the paired means differed significantly. In all cases, the criteria for statistical significance were set at 0.05 level of confidence ($P < 0.05$).

Keywords: Yogic exercises and aerobic exercises an anxiety

INTRODUCTION

Like many arts and sciences that are profound, beautiful, and powerful, yoga has suffered from the spiritual poverty of the modern world – it has been trivialized, watered down, or reduced to clichés. The deep and eternal essence of yoga has been misrepresented and packaged for personal profit by clever people. At the hands of some, yoga has been reduced to the status of just another exercise program available on videotape.

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In other contexts, yoga has been presented as a cult religion, aimed at attracting "devotees." Such a haze of confusion has been created around the clear and pure concept of yoga that it is now necessary to redefine yoga and clarify its meaning and purpose.

Yoga defines itself as a science, that is, as a practical, methodical, and systematic discipline or set of techniques that have the lofty goal of helping human beings to become aware of their deepest nature. The goal of seeking to experience this deepest potential is not part of a religious process, but an experiential science of self-study. Practical science such as meditation is based on the concrete experience of those

teachers and yogis who have previously used these techniques to experience the deepest self. Yoga does not contradict or interfere with any religion and may be practiced by everyone, whether they regard themselves as agnostics or members of a particular faith.

Asana is the Sanskrit word for a physical posture. Expressed in general terms Asana denotes a specific position which can be held in a relaxed and comfortable manner for a long period of time. Asanas are beneficial for the muscles, joints, cardiovascular system, nervous system, and lymphatic system, as well as the mind, psyche, and chakras. They are psychosomatic exercises, which strengthen and balance the entire nervous system and harmonize and stabilize the practitioner's state of mind. The effects of these exercises are a sense of contentment, clarity of mind, relaxation, and a feeling of inner freedom and peace beginning and end of each Yoga class, as well as between the individual exercises. By developing the ability e.

The system "Yoga in Daily Life" is designed in such a way that the body is gradually and systematically prepared, leading from simple preparatory exercises toward the more advanced and difficult Asanas. Periods of relaxation are included at the b to relax; the feeling for one's own body is deepening. Physical and mental relaxation is prerequisites for the correct performance of all yoga exercises and it is only in this way that the effects of the Asanas completely disclose

Objectives of the Study

The major objective of the study was to determine the anxiety effect of yogic exercises and aerobic exercise training.

Hypotheses

1. It was hypothesized that the effect of yogic exercises and aerobic exercises training may decrease the anxiety of secondary schoolchildren
2. It was hypothesized that the effect of yogic exercise training may better than aerobic exercise training in the decrease selected psychological variables anxiety of the secondary schoolchildren.

Limitations of the Study

The change in climatic conditions such as temperature, atmospheric pressure, humidity, and during the training, as well as the testing period, could not be controlled. By the research, their influence on the results of the study was considered as one of the limitations.

METHODOLOGY

The purpose of the study was to find out the "effect of yogic exercises and aerobic exercise on selected anxiety variables of secondary schoolchildren." "Selection of subjects, experimental design, selection of variables, selection of tests, collection of data, and statistical procedure have been explained in the purpose of the study was to find out the effects of yogic exercises and aerobic exercises on selected anxiety variable of secondary schoolchildren" "the age of the subjects ranged from 14 to 16 year's secondary schoolchildren." The investigator was explaining the purpose, nature, studying in Morarji Desai Residential School of Vijayapura in Karnataka. The research scholar reviewed the various scientific literature pertaining to yogic exercises and aerobic training on selected psychological variables from books, journals, and research papers, taking into consideration the feasibility of criteria, availability of instruments and the relevance of the variable of the present study, the following later, collected data were put into the statistical using analysis of covariance to find out the significant mean differences. The study reveals that yoga training played a key role in decrease anxiety. The questionnaire developed by Dr. Pallavi Bhatnagar; so, it can be concluded that yogic exercises and aerobic exercises made a significant impact on the control group psychological variables of the secondary schoolchildren under study.

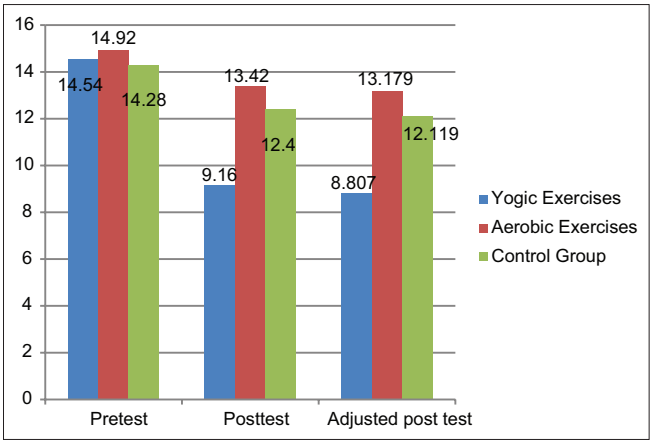
Table 4.1, it was observed that mean scores of pre-tests of yogic exercises, aerobic exercises, and control group of secondary

Table 4.1: Analysis of covariance for pre-test and post-test on anxiety of yogic exercises, aerobic exercises, and control group of secondary schoolchildren

Type of test	Yogic exercises	Aerobic exercises	Control group	Source of variance	Sum of the squares	Df	Mean square	F-ratio
Pre-test mean	14.5400	14.9200	14.2800	Between	10.360	2	5.180	.826
SD	2.266067	2.80553	2.41627	Within	922.180	147	6.273	
Post-test mean	9.1600	13.4200	12.4000	Between	494.760	2	247.380	60.710
SD	1.77695	2.48333	1. 70234	Within	598.900	147	4.074	
Adjusted post-test means	8.807	13.179	12.119	Between	89.053	2	8.096	5.036
SD	1.236	2.587	2.124	Within	509.847	144	3.749	

*Significance at =0.05 table value =4.08

schoolchildren were 14.5400, 14.9200, and 14.2800 and their standard deviation were 2.26067, 2.80553, and 2.41627, respectively. The obtained "F" ratio value is (F = 0.826 2, 147, a = 0.05) at 5% level of significance, which is less than the table value (F = 4.08), hence the null hypothesis is accepted. It indicates that the anxiety among the yogic exercises, aerobic exercises, and control group of secondary schoolchildren is found almost similar.



Further, it shows that the post-test means scores of anxiety of yogic exercises, aerobic exercises, and control group of secondary schoolchildren. It was observed that mean scores of post-tests of yogic exercises, aerobic exercises, and control group of schoolchildren were 9.1600, 13.4200, and 12.4000 and their standard deviation was 1.77695, 2.48333, and 1.70234, respectively. The obtained "F" ratio value is (F = 60.740 2,147, a = 0.05) at 5% level of significance, which is more than the table value (F = 4.08), hence the null hypothesis is rejected. It indicates that the anxiety of yogic exercises, aerobic exercises, and control group of secondary schoolchildren was found different. This indicates that anxiety is less among the yogic exercises and aerobic exercises group when compared to the control group. Finally, it can be concluded that yogic exercises and aerobic exercise treatment given to secondary schoolchildren have made a significant impact on the anxiety of secondary schoolchildren.

The adjusted post-test mean scores on anxiety of yogic exercises, aerobic exercises, and control group were 8.807, 13.179, and 12.119, respectively, and their standard deviation was 1.236, 2.587, and 2.124, respectively. The obtained "F" ratio value is (F5.036, 2,144, a = 0.05) 5.036 at 5% level of significance, which is greater the table value (F = 4.08), hence the null hypothesis is rejected and alternative hypothesis is accepted. It can be concluded that there is a significant difference is found between the yogic exercises, aerobic exercises with respect to anxiety level of secondary schoolchildren.

Table 4.1: Analysis of covariance for pre-test and post-test on anxiety of yogic exercises, aerobic exercises, and control group of secondary schoolchildren

Figure: 4.1 gives a clear picture of the adjusted means of three training groups. Thus, it is inferred that yogic exercises and aerobic exercise training are more effective in increasing the anxiety among the subject's yogic exercises were significantly better than yogic exercises in improving anxiety of the secondary schoolchildren compared to control group.

CONCLUSION

Based on the findings, the following conclusion was draw from the present study.

It is conducted that yogic exercises training and aerobic exercises training mode a significant decrease, anxiety of the seconder schoolchildren, in comparing that the aerobic training and yoga training it is clearly evident that aerobic training helps to develop anxiety in comparing a with yogic exercises training.

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Volume 39 • Issue 1 ISSN 2231-3265

International Virtual Conference on
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22nd and 23rd August 2020

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International Journal of Health, Physical Education and Computer Science in Sports
A Peer Reviewed (Refereed) International Research Journal - ISRA Journal Impact Factor 7.217

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Research Article

Effect of yogic practices on selected physiological variables among trained and untrained high schoolboys

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ABSTRACT

The purpose of the study was to discover the "effects of yogic practices on selected physiological varying among high schoolboys in Warangal." The researcher has divided into two groups. Each group contains 15 subjects. Group I acted as yogic practices and Group II acted as a control group.[1] The experimental group participated in yogic practices program for 6 weeks besides their regular professional activities of the college. The control group did not undergo any training other than their daily routine. The measure of cardiorespiratory and muscular endurance, strength, flexibility, for trained and untrained high schoolboys.[6] Aerobic exercise, the two groups were analyzed using of covariance (ANOVA) with ratio interaction values that are found to be significant at 0.05 level.[2] The result of the study reveals that there was a significant betterment in the experimental group on selected variables when compared to the control group after the completion of 6 weeks of yogic practices.

Keywords: Aerobic workout, Cardiorespiratory endurance, Yogic practices

INTRODUCTION

Twenty-first century has witnessed a remarkable development of science and technology, including space, defense, atomic energy, and internet service. This advanced scientific technology has restricted the physical flexibility of modern men. They started to undergo intense stress and tension due to unhealthy competition. Slowly the modern men became the prey of stress, hypo-kinetic, and psychosomatic diseases. Hence, the time has come that men should realize the importance of physical activities.[8] The ultimate objective of every happy person is good health. Hence, people control their disease such as blood pressure diabetes and acidity by taking medicine regularly. However, such a practice does not completely eliminate health disorders. It leads to several adverse health problems. The continuous, systematic and regular practice of yoga, physical activities is an effective tool to maintain good health. It also helps eliminate dreadful diseases from the human body.[12]

Yoga is sometimes referred to as the science of religion with the human body as a vehicle for the spirit and soul. It offers many tools with which can tune and rebalance the vehicle so that it can attract the appropriate level and quantity of prana and fulfill the human functions. Asana and pranayama techniques "Cleanse the body of tensions, toxins, and impurities and release energy blocks, which impedes the harmonious flow of energy in the body (Sundar, 2009).

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Meditation is a practice where an individual trains the mind or induces a mode of consciousness, either to realize some benefit or for the mind to simply acknowledge it contest without becoming identified with that contest or as an end in itself. The term meditation refers to a broad variety of practices that include the techniques designed to promote the rest, build internal energy or life force, and develop the comparison, love, patience, and generosity no forgiveness. A particularly ambitions form of meditation aims at an effort less in sustained single-pointed concentration which enables its practitioner to enjoy a durable sense of well-being while engaging in any life activity (Swami, 2001).

In the development of physiological variables, yogic and aerobic training proves out to be more effective than the other methods of training. It is a long-lasting process. The yoga practice includes asanas and pranayama. The aerobic exercises include running, walking, swimming, bicycling, and aerobic dance that improves the physiologic variables.[12]

Yoga

Yoga means to "yoke" to "unite;" to bind to "link" to connect or to "merge." As yoke joins two bulls together, the yoga unites body and mind together. The merger of soul with God and the experience of oneness with him is yoga. It is possible only through the control over sense organs and through continued practice and detachment. According to it, the great Sage Pathanjali the withdrawal of sense organs from their worldly objects and their control is Yoga. The aim of man's life is to get rid of the worries, anxieties, and sufferings of the world and to achieve peace and bliss. To get rid of the tempting delusions, sorrows and pains of the world, there are different paths of yoga, namely Bhakti Yoga, Karma Yoga, Dhyana Yoga, Jana Yoga, Hatha Yoga, and other Yogas. The paths may be different, but the ultimate aims are the same. Our body has been called the temple of God. According to Shankaracharya, we can see the image of God in our own body if maintained purity and free from disease. Just as spotless mirror gives clear reflection, the body and mind, if maintained purity and health, can lead up to success. Yoga is a science of physical and mental control. It is a system of self-renewal of mind and body. It is a means of acquiring a slim supple and healthy body. It can be a way to achieve inner tranquility. It is also a path to great spiritual attainment. Our ancient Rishis and sages have given eight stages of Yoga. They are Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana, and Samadhi.

In Patanjali's Yoga Sutra, the eightfold path is called ashtanga, which literally means "eight limbs." These eight steps basically act as guidelines on how to live a meaningful and purposeful life. They serve as a prescription for moral and ethical conduct and self-discipline; they direct attention toward one's health; and they help us to acknowledge the spiritual aspects of our nature.

Significance of the Study

The present study envisages the influence of yogic practices on trained and untrained high schoolboys in Warangal district. Furthermore, the present investigation will focus on the physiologic variables, vital capacity, and muscular endurance.

The significance of the study under-report will benefit the physical education teacher's coaches and sports administrators around the globe.

The results of the study will give a greater impact on trained high schoolboys rather than the untrained high schoolboys.

The striking feature of the study under-report focuses on the impact of yoga on the sports performance high school level in Warangal district.

Objectives of the Study

The experimental study report focuses on the following objectivews.

1. Two discover the influence of yogic practices on trained high schoolboys in Warangal district
2. To find into the influence of yogic practices on untrained high schoolboys in Warangal district
3. Two discover the influence of physiologic variables on trained high schoolboys in Warangal district
4. To find at the influence of physiologic variables on untrained high schoolboys in Warangal district
5. To discover the existing difference b/t yogic practices and physiologic variables on trained high schoolboys in Warangal district
6. To dine out the existing different b/t yogic practice and physiologic variables on untrained high schoolboys in Warangal district.

Hypothesis

The following hypothesis is a set for the present-day study. It hypothesizes that the effects of yogic training on health-related physiological variables will significantly increase during the training period.

1. It was hypothesized that the training effects on variables got good results during the testing period
2. It was hypothesized that the training effects on experimental group among all physiologic variables flexibility got good results during the testing period
3. It was hypothesized that the results on health-related physiologic variables gradually increases during the training cessation periods
4. The duration of the training period was stipulated to 6 weeks for 5 days/week (45 min)
5. The health-related physiologic variables were measured using selected standardized tests.

Selection of Variables

Physiologic variables

1. Muscular strength: The ability to generate enough force to move in the shortest amount of time possible
2. Muscular endurance: The ability to produce and sustain muscle force over a certain period of time
3. Cardiorespiratory endurance: It is the ability of the heart, lungs, and blood vessels to deliver oxygen to working muscles and tissues, as well as the ability of those muscles and tissues to utilize that oxygen
4. It is also frequently called cardiovascular endurance, fitness, aerobic capacity, and aerobic fitness
5. Flexibility: It is the range of movement in or around a joint or a series of joint. It depends on a variety of factors, including the bone and joint structure and the bulk of the muscle close to the joint
6. Body composition: In physical fitness, body composition is used to describe the percentages of fat, bone, water, and muscle in human bodies. Since muscular tissue takes up less space in the body than fat tissue, body compositions, as well as weight, determines leanness.

Tools for the Study

1. Spiro meter: A Spirometer is an apparatus for measuring the volume of air inspired and expired by the lungs
2. Peak flow rate: The peak expiratory flow, also called peak expiratory flow rate, is a person's maximum speed of explanation, as measured with a peak flow meter, a small, hand-held device used to monitor a person's ability to breathe out air. It measures the airflow through the bronchi and thus the degree of airflow through the bronchi and thus the degree of obstruction in the airways
3. Pull-ups: An exercise in which one hangs by the hands from support and pulls oneself up until the chin is level with the support. Such an exercise done with the palms facing outward compare chin up
4. Pushups: A conditioning exercise performed in a prone position by raising and lowering the body with the arms while keeping the back straight and supporting the body on the hands and toes.

METHODOLOGY

The purpose of the study was to investigate the effect of yogic practices on the selected physiological variables among the trained and untrained high school students. Health-related physical fitness variables such as muscular strength, muscular endurance, cardiorespiratory endurance, flexibility, and body composition. The experimental group under yogic practice for 45 min in the evening. The period of training was 6 weeks in a schedule of weekly 5 days. Thirty healthy and untrained students were selected randomly and they were equally divided into two groups of 15 each as experimental and control groups. The control group was not any age were from 12 to 16 years.

Design of the Study

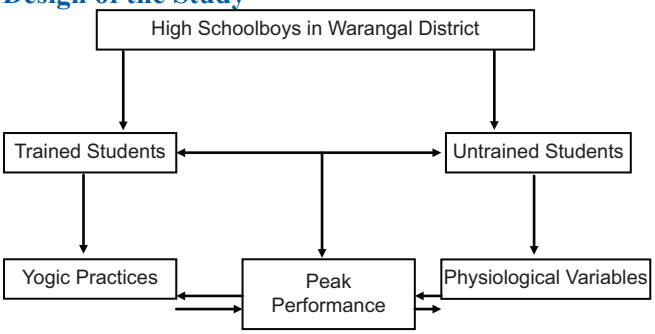

Figure 1: The design of the study

Sample of the Study

The present study under-report requires samples, as shown in Table 1.

RESULTS AND DISCUSSION

The analysis of the data obtained on physiological variables of experimental and control groups tabulated as follows:

DISCUSSION ON HYPOTHESIS

The research hypothesis one stated that the yogic practice related to physiologic variables (muscular, strength, muscular endurance, cardiorespiratory endurance, endurance, flexibility, and body composition) will be significantly increased. Training effects on the experimental group among all physiologic variables flexibility got great results during the testing period. Health-related physiologic variables gradually increase during the training period.

In the first hypothesis, it was mentioned that the effects of yogic training on health-related physiological variables will be significantly increased during the training period.

The result also reveals a significant increase due to the experimental treatment. Therefore, the first hypothesis has been accepted.

In the second hypothesis, it was mentioned that the training effects on the experimental group among all physiological variables flexibility got great results during the testing period.

Therefore, the second hypothesis has been accepted.

Table 1: The sample of the study on high schoolboys at Warangal district

S. No.	Subject selected	Total no. of subjects
1	Trained students	15 (Exp. group)
2.	Untrained students	15 (control group)
Total		30

Variables	Exp-GP			Cont. GP			t-value	
	Pre-test	Post-test	MD	Pre-test	Post-test	MD	Pre-test	Post-test
1. Muscular strength								
a. Mean	16.8	19.13	2.33	16.78	17.07	0.29	2.06	0.078
b. SD	1.69	1.55	0.14	1.67	1.63	0.04	0.02	0.02
2. Muscular endurance								
a. Mean	17.47	23.67	6.2	17.39	17.08	0.31	0.08	6.59
b. SD	7.74	7.89	0.04	7.75	7.74	0.009	0.01	0.04
3. Cardiorespiratory endurance								
a. Mean	2104	2200.67	96.7	2108	2099.33	8.67	0.044	101.34
b. SD	7.74	7.78	0.044	7.73	7.42	0.006	0.009	0.047
4. Flexibility								
a. Mean	32.13	40.4	8.27	32.07	31.6	0.47	0.06	8.8
b. SD	2.03	2.06	0.03	2.04	2.03	0.01	0.01	0.03
5. Body composition								
a. Mean	12.21	10.44	1.77	12.19	12.39	0.2	0.02	1.95
b. SD	1.9	1.57	0.33	1.89	1.89	0.009	0.01	0.32

In the third hypothesis, it was noted that the results on health-related physiological variables gradually increases during the training.

CONCLUSION

From the Analysis of the Data, the following Conclusions

Yogic training reveals significant betterment during pre and post-test period health-related physiologic variables. Muscular strength, endurance, cardiorespiratory endurance, and body composition are giving great results in the yogic training. Inflexibility, the yogic training group, is found to be good results. During the testing periods, namely pre-test and post-test. The pre-test result reveals to be better than post-test period. The yogic training group shows that there is a gradual reduction in health-related physiologic variables during training periods. During the detraining period, the effect of muscular strength, muscular endurance, cardiorespiratory endurance, and body has decreased faster in the yogic training group. However, the flexibility of the yogic training group has decreased slowly.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Yogic management of stress

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ABSTRACT

Stress is defined as a state of physiological or psychological imbalance resulting from the disparity between situational demand and the individual's ability and or motivation to meet those demands.

ETYMOLOGY

- Stress originated from the French word "*Retrecir*," meaning a pressure or the feeling of tightness of any aspect of human personality
- Cause of stress is called stressors
- Yoga helps to release all the muscular knots caused by the stressors
- Asanas, pranayamas, meditation, and relaxation are very effective in eliminating these knots
- Causes of stress include both external and internal lot of health issues are associated with stress
- Body produces various hormones to tackle stress
- Body shows a lot of signs and symptoms of stress.

SIGNS OF TOO MUCH STRESS

Stress can cause many types of physical and emotional symptoms. Sometimes, you may not realize that these symptoms are caused by stress. Here are some signs that stress may be affecting you:

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- Diarrhea or constipation
- Forgetfulness
- Frequent aches and pains
- Headaches
- Lack of energy or focus
- Sexual problems
- Stiff jaw or neck
- Tiredness
- Trouble sleeping or sleeping too much
- Upset stomach
- Use of alcohol or drugs to relax
- Weight loss or gain.

TYPES OF STRESS

Acute Stress

This is short-term stress that goes away quickly. You feel it when you slam on the brakes, have a fight with your partner, or ski down a steep slope. It helps you manage dangerous situations. It also occurs when you do something new or exciting. All people have acute stress at one time or another.

Chronic Stress

This is the stress that lasts for a longer period of time. You may have chronic stress if you have money problems, an unhappy

marriage, or trouble at work. Any type of stress that goes on for weeks or months is chronic stress.

You can become so used to chronic stress that you do not realize that it is a problem. If you do not find ways to manage stress, it may lead to health problems.

When you have chronic stress, your body stays alert, even though there is no danger. Over time, this puts you at risk for health problems, including:

- High blood pressure
- Heart disease
- Diabetes
- Obesity
- Depression or anxiety
- Skin problems, such as acne or eczema
- Menstrual problems.

HOW TO DEAL STRESS

- Avoid the stressor
- Alter the stressor
- Adapt the stressor
- Accept the stressor
- Find time for fun and relaxation
- Adopt a healthy lifestyle.

A lot of asanas and pranayamas are there to deal with stress.

METHODS OF RELAXATION

- Progressive muscle relaxation
- Deep muscle relaxation
- Count down relaxation
- Meditation.

Along with these, we must eat a *Diet* which can reduce stress.

Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Comparison of yoga, physical activity, and isometric status of high school girls

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INTRODUCTION

"Yoga" is derived from the Sanskrit root "Yuj," meaning "to join" or "to yoke" or "to unite." As per yogic scriptures, the practice of yoga leads to the union of individual consciousness with that of the universal consciousness, indicating a perfect harmony between the mind and body, man, and nature.

"Physical fitness" refers to the ability of your body systems to efficiently allow you to be healthy and perform activities of daily living. Being efficient means doing daily activities with the least effort possible.

The term "isometric" combines the Greek words "Isos" (equal) and "metria" (measuring), meaning that in these exercises the length of the muscle and the angle of the joint does not change, though contraction strength may be varied.

Physical activity has very serious implications for the health and well-being all individuals, Adoption of this new lifestyle has resulted in a new category of disease, which is directly or indirectly the result of physical inactivity. Yoga physical actives consider the able yogic physical culture and its contribution in toward physical fitness, the practice of yoga asana had improved various components of physical fitness such as flexibility, strength, speed, balance, and cardiovascular fitness. Isometric exercise could improve the speed of execution of single movements. Researchers have shown that isometrics develop both strength and endurance and improve exercise blood flow. Isometric exercises accelerate the heart rate, and this could be helpful for muscular endurance.

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METHODS

The purpose of this study was to compare the yogic physical activities and isometrics, which are experimental and control groups followed. The subject of randomized cluster sampling was followed. The total 90 subjects selected that there was age 14–16, who were studying VIII, IX, and X higher secondary school, Ramanagara. Subjects were divided into three groups each group 30 subjects, the control groups were not given any type of exercise.

Statistical Analysis

Simple techniques such as Mean and SD were used to see the nature of the variables. Intragroup and intergroup comparisons were made through *t*-test.

RESULTS

All the groups showed significant improvement in explosive strength irrespective of the exercises given to them.

CONCLUSION

Yogic asanas and combination exercises were most effective in the reduction of suprailiac skinfold measurement. In this aspect, the intergroup comparison revealed that the t-ratio comparing isometric with yogic physical culture group was significant.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Exercise training for health-related physical fitness and wellness

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INTRODUCTION

The greatest benefit of a regular exercise program is an improvement in overall fitness. Appropriate exercise improves muscular strength and endurance, body composition, flexibility, and cardiorespiratory endurance, one of the most frequent observations made by individuals who have begun that an exercise program is that feel better, and research studies document an improvement in feelings of general well-being in more active people.

Definition of Physical Fitness

"Physical fitness is defined as being in a general state of health and well-being or specifically the ability to perform aspects of sports or occupations."

"Physical fitness is defined as being in a general state of general well-being, physically sound, and healthy, along with mental stability."

Objectives

The objectives of this study were as follows:

1. To study the meaning of physical fitness
2. To study the components of physical fitness
3. To create awareness of physical fitness.

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METHODOLOGY

This paper is of exploratory research type. This study is based on secondary data from various sources such as web sites, sports news, journals, and publications. This paper gives theoretical information about physical fitness and its components.

Components of Physical Fitness

The 11 components of physical fitness are comprised five components that are considered the "most important" for being healthy and physically fit, and six components that are more skill-related. Components of physical fitness play an important role in once's daily activities.

Components of Health-related Physical Fitness

The following is the components of health-related physical fitness:

- Cardiovascular endurance
- Muscle strength
- Muscle endurance
- Flexibility
- Body composition.

Cardiovascular Endurance

Cardiovascular endurance refers to the ability of your heart and lungs to work together to fuel your body with oxygen.

Muscle Strength

Muscle strength refers to the amount of force a muscle that can exert in a single effort.

Muscle Endurance
Muscle endurance refers to the ability of a muscle a continuous effort without fatigue.

Flexibility
Flexibility refers to the ability of each joint to express its full range of motion.

Body Composition
Body composition refers to the amount of body fat you have, versus the amount of lean muscles, bones, and organs.

Components of skill-related physical fitness:

Agility	Coordination	Reaction time
Balance	Power	Speed

- Agility
  The ability to stop, start, and change directions quickly.
- Balance
  The ability to control body positions while standing at one place or moving.
- Coordination
  The ability to perform different movements smoothly at a time.
- Power
  The ability to use muscle strength quickly.
- Reaction time
  The ability of an individual to respond to stimulus quickly.
- Speed
  The ability performs a movement or covers a distance in a short period of time.

CONCLUSION

It shows an importance of physical exercises and components of physical fitness in our day-to-day life. Incorporating all components of physical fitness into your exercise program, along with a proper nutrition, are a great way to improve your physical fitness level. It will help you to fuel your body for daily activities and to spare some energy for emergencies.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Attitude of Principal Toward Physical Education

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INTRODUCTION

Physical education is an integral part of young people's education in the senior cycle. As a result of their learning in physical education, young people can increase their enjoyment, confidence, and competence in a range of physical activities. They can learn about health-related fitness and to take responsibility for being physically active now and in the future. Overall, they can develop positive attitudes to physical activity and its importance in a healthy and fulfilling lifestyle.

Attitudes, values, and ideals that are propagated by education play significant role in building Personality, individuality, and the entire mental makeup of an individuality. Attitude is the prime movers of the thought and action what a principals thinks and feels and value is reflected in the mind and heart of the taught and this expresses attitudes to the coming generation.

Purpose

The purpose of this study was to estimate the attitude of the principals belonging to high school in Shiggaon Taluk of Haveri district toward physical education.

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METHODOLOGY

With this view, an attempt has been made to study of the attitude of principals of government and private college in Shiggaon Taluk of Haveri district, the questionnaires were administrated to the selected principals of government and private college after tabulation of the scores the attitude scores of each statement that was compared between government principals of government and private colleges, the data collected were treated with the statistical technique "*t*"-test to test the difference in the various aspects of attitude.

RESULTS

The result revels that there is a significant difference in physical aspects, mental-emotional aspect, intellectual aspects, social aspects, and recreational aspects.

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Research Article

Effect of weight training on motor fitness components of college volleyball players

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ABSTRACT

The study was to determine the effects of weight training on the development of the motor fitness components such as speed, agility, flexibility, explosive power, cardiovascular, endurance, and muscular endurance. The subjects for the study were 120 students studying in different colleges of Belagavi district, affiliated to Ranichannamma University, Belagavi. They were from volleyball player's where the above-mentioned motor fitness components play a major roll. The average age was 21 years, ranging from 18 to 28 years. Two groups were formed that one is control group and anther one is experimental group it consisting of 60 subjects each to collect data using random sampling technique. The experimental groups participated in trainings program that is weight training and skill trainings for 12 weeks and the control group performed the routine work. The data were collected in the beginning and at the end of 12 weeks. Experimental period in terms of pre- and post-test.

Keywords: Agility, Cardiovascular, Endurance and muscular endurance, Explosive power, Flexibility, Motor fitness components, Speed, Weight training

INTRODUCTION

Volleyball is a team sport in which two teams of six players are separated by a net each team tries to score points by grounding a ball on the other teams court under organized rules. Played for a 5 set matches, each set consist of 25 set and deciding set can consist of 15 set. Volleyball is a net and team game of maximum strength, endurance, and flexibility. It requires the player to use body efficiently to crease, direct, and produce force to serve the ball, to pass the ball to team mate, and to receive opponent tapping the ball over the net. It is a rebound sport.

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Statement of the Problem

The purpose of this study was to find out the effect of weight training on motor fitness components and skill performance variables of college volleyball players.

- Hypotheses: 1. There is significant difference effect in the motor fitness components variables after 12 weeks of weight training on experimental group
- Hypotheses: 2. There is no significant difference effect in the motor fitness components variables after 12 weeks of weight training on control group.

Review of the Related Literature

Rahaman Rahimi *et al*. (2005) conducted a study on the effect of plyometric, weight, and plyometric-weight training on anaerobic power and muscular strength. The effect of

three different training protocols – plyometric training, weight training, and their combination on the vertical jump performance, anaerobic power, and muscular strength. Based on their training, 48 male college students were divided into four groups (n = 14) and control group (n = 4) the vertical jump, 50-yard run, and maximal leg strength were measured before and after a 6 weeks training period. The subjects of the each training group were trained for 2 days/week, whereas control subjects did not participate in any training activity. The data 68 were analyzed by a one-way analysis of variance (repeated measure design). The results showed that all the training treatments elicited significant ($P < 0.05$) improvement in the entire-tested variable.

METHODOLOGY

The procedure adapted from the selection of the subject, selection of variables, in criterion measures, reliability of the data, conduct of experiment to experiment group, and administration of the statistical technique used for the analysis of the data or described. The present study was conducted on 18–28 years age group, 120 college male volleyball players will be selected from Belagavi district and players will be randomly divided into two groups that one is experimental group and another one is control group. The experimental group will undergo the weight training programmed. The control group will not be engage in any activity. The pre- and post-test will be conducted in the following motor ability variables of speed, agility flexibility, explosive power (leg and arm), cardiovascular endurance, and muscular endurance.

Collection of Data

Data on the selected motor fitness components variables were collected as per the method described above, before the experimental period (pre-tests), and at the end of experimental period of 12 weeks (post-test) effect data that were collected in the all variables for 12 weeks. During this period, the subjects were not allow to participate in any training program.

RESULTS

The data were analyzed with reference to the objectives and hypotheses by applied different kinds of statistical tools in analyzing and establishing the related variables using independent t-test for comparison of control group and experiment group, paired t-test was applied to compare the pre-test and post-test scores and analysis of covariance by considering between pre-test scores is as a covariate (ANCOVA) was performed to assess the differences between control group and experiment group. The one-way ANOVA was applied to see the significant difference between two groups with respect to their variations in pre-test scores for homogeneity.

Table 1: Comparison between pre-test and post-test scores of motor fitness components of college volleyball players in control and experiment group

Groups	Test	Mean	SD	Mean Diff.	SD diff.	Paired t	P-value
Control group	Pre-test	4.02	0.42				
	Post-test	3.99	0.39	0.03	0.16	1.6519	0.1039
Experiment group	Pre-test	4.04	0.26				
	Post-test	3.68	0.30	0.35	0.19	14.1913	0.0001*

*P<0.05

From the results of the above Table 1, it can be seen that:

- No significant difference was observed between pre-test and post-test scores of motor fitness component of college volleyball players in control group (t = 1.6519, $P > 0.05$) at significance level of 5%. Therefore, the null hypothesis is accepted and alternative hypothesis is rejected. It means that the pre-test (4.02 ± 0.42) and post-test (3.99 ± 0.39) scores of motor fitness component of college volleyball players are similar in control group. In another words, the weight training program is not effective in control group
- A significant difference was observed between pre-test and post-test scores of motor fitness component of college volleyball players in experiment group (t = 14.1913, $P < 0.05$) at significance level of 5%. Therefore, the null hypothesis is rejected and alternative hypothesis is accepted. It means that the pre-test (4.04 ± 0.26) scores of motor fitness component of college volleyball players are significantly higher as compared to post-test (3.68 ± 0.30) in experiment group. In another words, the weight training program is more effective in experiment group.

DISCUSSION

The results of the study entreat that weight training is improvement motor fitness component such as speed, agility, flexibility, explosive power, cardiovascular endurance, and muscular endurance. This is because of the fact that systematic weight training program has been proved to be a very fruitful work that has ever been carried out so for there for its becomes imperative on the part of researcher to delve into more details by way of more research and studies at macro level.

CONCLUSION

On the basis of analysis of data within the limitations of present investigation. The pre- and post-test scores of motor

fitness components of college volleyball players are similar in control group and significantly higher as compared to post-test in experimental group.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Yoga for healthy life

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ABSTRACT

Yoga means the experience of oneness or unity with inner being. This unity comes after dissolving the duality of mind and matter into the supreme reality. It is a science by which the individual approaches truth. The aim of all yoga practice is to achieve truth, where the individual soul identifies itself with the supreme soul or god. The yoga is control over the mind. A happy man is who knows how distinguish the real from the unreal, the eternal from transient, and the good from the bad by his discrimination and wisdom. Yoga also performed for curative reasons. By gently stretching the muscles, massaging the internal organs and organs and toning the nerves throughout the body, many disease, even the so called incurable can be eliminated or eased. It has a deeper significance and mental and spiritual personality. Yogasana has been practiced for thousands of physiotherapy. Many incurable and long-standing disease can be cured though yoga. The yoga treatment is perfectly scientific, it is an auto treatment method. Pranayama its use man of control and regulations of breath and its called the soul of yoga. Bathing is necessary for purifying the body and mind. The main of strengthen the nervous system and it also increases the concentration power of the mind.

Keywords: Disease, Health, Mental, Physical, Spirit, Yoga

INTRODUCTION

Yoga is literal meaning of the word yoga is yoke. It means for uniting the individual spirit with the universal spirit, or God. The word yoga is derived from the roots of Sanskrit yuj which means to join, to attach, to bind, and yoke, and to concentrate on one's attention. It also means union. Yoga is the true union of our will with the of god. In Indian culture or thought human benings or everyone, this earth is guided by the supreme universal spirit that is paramatama or god, of which the individual human sprite that is jivatma is a part. Yoga is a way to secure liberation because it is the means by which the jivatma can be united to the paramatma. Yoga is as wisdom is work or skillful living among, harmony and moderation. Yoga is given you positive thinking, discipline, kindness, mental, and spiritual thoughts. Most health to yoga is working for body. All disease avoid to modern era all use to or adapting to yoga.

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Concept of Yoga

Mind is the king of senses. One who has conquered his mind, senses, passions, thought, and reason, is a king among men. That man is fit for raja yoga, the royal union with the universal spirit. Because yoga lights his inner, or he has inner light. One who has conquered his mind has complete mastery of his self. Only the yoga explain the ways to control the mind. Yoga is like a fountain, it brings calmness and tranquility and prepares the mind for absolute unqualified self surrender to god.

There are eight stages of yoga to secure purity of body, mind soul. These are,

- Yama – social discipline
- Niyama – individual discipline
- Asana – posture
- Pranayama – breath control
- Pratyahara – discipline of the sense
- Dharana – concentration
- Dhyana – meditation
- Smadhi – self-realization.

Types of Yoga

- Karama yoga is the yoga of action
- Jnana yoga is the yoga of knowledge and wisdom
- Hatha yoga is the yoga of attaining physical and mental purity
- Raj yoga is the yoga of awakening the psychic awareness and facilities
- Mantra yoga is the yoga of freeing the mind by utilizing a second vibration
- Laya yoga is the yoga of yoga of conscious dissolution of individuality
- Bhakti yoga is the yoga of intense devotion.

Physical Health

The muscles and bones, nervous, glandular, respiratory excretory, and circulatory systems are coordinated so that they help one another. Yoga asana make the body flexible and able to adjust itself easily to change of environment. The sympathetic and parasympathetic systems are brought into a state of balance so that internal organs are nether overactive nor under active. The endocrine system is controlled and regulated to secrete the hormones from the glands in a balance quantities.

Mental Health

Yoga makes the mind strong and able to endure pain and unhappiness. The power of determination and concentration is developed. Equilibrium and vitality become the normal state of mind after regular practice of health yoga. One is able to face the sorrow, anxieties, and problems of the world with peace, without being disturbed. Stability of mind developed life easy and difficulties become stepping stones to perfect mental health. With the yoga man is able to inspire others by his behavior and actions.

Spiritual Health

Yoga the purpose of spiritual health is to make the body steady for the higher techniques of pratyahara, dharana, and dhanya, leading to the culmination, Samadhi. Yoga which is more deeply concerned with preparing the body for higher concerned with preparing the body for higher spiritual techniques. The importance is to purity the body. Asanas are the stages on the spiritual path. Asana is necessity for spiritual aspirants to awaken the psychic faculties. Yoga asana is regarded as forms of meditation and psychic purification.

Importance of Yoga Healthy life

Now days, all disease control and healthy life use to yoga. Hence, main diseases are such as control stress and depression, asthma, mood, diabetes, pain in the eras, eyes and nose, dysentery, chronic constipation, enlargement of the liver and spleen, disorders of digestive system, chronic bronchitis, cough, difficulty in breathing, blood-impurities, loss of blood, leprosy, paralysis, fatness, hernia, heart disease, high blood pressure, throat-trouble, lumber pain, diseases related to the chest, and the lungs. Hence, these are all control for yoga today healthy life.

CONCLUSION

Today, lastly say yoga is most use of human life. Hence, covid-19 disease is most avoid the yoga to power of human. Daily packed yoga during this period can help people to maintain steady mind in all situation. Yoga can give a lot of energy and positive thoughts for fight against covid-19. Yoga can balance between your mind and body. It makes you mentally strong, yoga is boon for in this pandemic period. Yoga is a re-education of one's mental processes , along with the physical ones. Man has made tremendous progress in almost every walk of the life.

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Volume 39 • Issue 1 ISSN 2231-3265

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International Journal of Health, Physical Education and Computer Science in Sports
A Peer Reviewed (Refereed) International Research Journal - ISRA Journal Impact Factor 7.217

Research Article

Nutrition in sports

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ABSTRACT

Sports nutrition is the study and practice of nutrition and diet with regard to improving anyone's athletic performance. Nutrition is an important part of many sports training regimens, being popular in strength sports (such as weightlifting and bodybuilding) and endurance sports (e.g., cycling, running, swimming, and rowing). Sports nutrition focuses its studies on the type, as well as the quantity of fluids and food taken by an athlete. In addition, it deals with the consumption of nutrients such as vitamins, minerals, supplements, and organic substances that include carbohydrates, proteins, and fats.

Keywords: Exercises, Nutrition, Performance, Sports

NUTRITION IS SUPPLEMENTATION OF BODY'S STRUCTURAL AND FUNCTIONAL DEMANDS AS PAR ONE'S AGE, SEX, AND SPORTS ACTIVITY

Nutrition of athletes' engaged in different sports activities

- Aerobic
- Anaerobic
- Strength.

GUIDELINES TO FOLLOW IN PLANNING THE PRE-GAME DIET

Energetic of the Diet

Energy intake should be adequate to ward off any feeling of hunger or weakness during the entire period of the competition.

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Although pre-contest food intakes make only a minor contribution to the immediate energy expenditure, they are essential for the support of an adequate level of blood sugar, and for avoiding the sensations of hunger and weakness.

Timing of the Diet

The diet plan should ensure that the stomach and upper bowel are empty at the time of competition.

Fluid Contents of the Diet

Food and fluid intake before and during prolonged competition should guarantee an optimal state of hydration.

Insipidness of the Diet

The pre-competition diet should offer foods that will minimize upset in the gastrointestinal tract.

Psychological Aspects of the Diet

The diet should include food that the athlete is familiar with and is convinced, which will "make him win."

INGESTION OF LARGE AMOUNTS OF GLUCOSE (SUGAR) BEFORE EXERCISE

Consumption of large amounts of sugar or glucose, particularly in liquid or pill form, less than an hour before exercise is not recommended.

In a study, the following findings should be noted:

The ingestion of glucose at rest caused a 38% increase in blood glucose levels at the start of exercise.

The ingestion of glucose at rest also caused a 3.3-fold increase in blood insulin level at the start of exercise.

As a result of the high insulin levels, blood glucose is progressively reduced throughout the exercise period, leading to hypoglycemia or low blood glucose levels. This causes a feeling of fatigue and reduces the availability of blood-borne glucose as a metabolic fuel. In turn, there was a 17% greater utilization of muscle glycogen.

The conclusion to be drawn from these results is that consumption of large amounts of sugar within an hour of exercise will actually cause blood glucose to be less available, thereby placing greater dependence on muscle glycogen as a metabolic fuel. Consequently, muscle glycogen is depleted faster; in endurance activities, this could lead to early muscular fatigue.

Provide their sugar concentration is not excessive (not >2.5 g/100 ml of liquid), liquids may be imbibed up to 30 min before physical activity without hindering performance.

Water is perhaps the best liquid, but fruit and vegetable juices are suitable, as are un-carbonated and fruit-flavored drinks.

The athlete's diet on the day of competition should not be drastically different from that normally consumed (so long as it is remembered that nervousness and tension during intense competition may so affect the digestive system that the foods normally eaten without discomfort may now cause distress). Provided the athlete does not overeat does not eat foods that will cause gastrointestinal discomfort, performance will not be affected parse by the foods consumed at the pregame meal.

Diet during Activity: Replacement of Sugar and Water

When glucose is made available to an athlete during prolonged exercise, it should be provide in small concentrations. The stomach can empty only a limited amount of glucose in a short period of time. If too much glucose is present, the rate of gastric emptying is retarded, and glucose is absorbed into the blood more slowly. Thus ingestion of high concentrations of glucose actually delays its utilization as a metabolic fuel. The recommended concentration of glucose is 2.0–2.5 g/100 ml of water.

Diet during activity: Replacement of sugar and water. With respect to the replacement of fluids, whether it be a liquid glucose solution or just plain water, it is important to remember that it is not possible to ingest fluids as rapidly as they are lost (mainly through sweating) during most endurance events. For example, only about 800 ml/h of fluid can be emptied by the stomach during distance running, whereas losses amount to 2.5 times that or 2 l/h. Therefore, endurance athletes must be careful not to ingest fluids at a greater rate than 100 ml/h. Otherwise, the fluid retained in the stomach may cause discomfort and may possibly hinder performance.

Diet Following Activity

Following endurance events, serious effort should be made to replace fats, proteins, carbohydrates, vitamins, minerals, and water. One will be in better physiological condition if the athlete waits an hour or so after exercising before eating a large meal; however, a liquid nutrient may be consumed a few minutes following exertion to stabilize blood glucose. If competition is to be renewed the next day, care must be taken to replenish the energy stores – muscles and liver glycogen. Easily digestive foods should be selected and may include cream and butter for fat contents carbohydrates in the form of chapatti rice; proteins such as fish, soft-boiled eggs cheese, and other milk products: And fresh fruits and juices which are excellent for Vitamin C, energy, and liquid replacement.

CAN DIET AFFECT PERFORMANCE

Men were administrated three diets, following which they performed on a bicycle ergometer to exhaustion. Time to exhaustion on a normal diet was 114 min: on a high-protein and high-fat diet that it was 57 min: And on high carbohydrates diet, it was 167 min. The glycogen contents of the quadriceps femoris muscle following the mixed diet were 17.5 g/kg of wet muscle before exercise, following 3 days of a carbohydrate-free diet, it was only 6.3 g, whereas, after the same period of time on a high-carbohydrate diet, it was 35.1 g/kg of muscle.

Muscle Glycogen – Loading or Super Compensation

- Endurance athletes who consume a high-carbohydrate diet for 3 or 4 days after several days on a normal mixed diet may increase their glycogen stores from the normal 15 grams to around 25 g/kg of muscle. During the period of the high-carbohydrates diet, no exhausting exercise should be performed
- In this procedure, the muscles that are to be loaded are first exhausted of their glycogen stores through exercise: The individual then follows a high carbohydrates diet for

a few days. This routine has been shown to double the glycogen stores

- A third procedure for glycogen loading calls for exercise and two special diets. Exercise in once again used to induce glycogen depletion. The individuals then follow a diet very low in carbohydrates but high in fat and protein for 3 days, after which a high-carbohydrates diets are followed for an additional 3 days. Exhausting exercise may be performed during the period of the diet that is high in fat and protein but not during the high-carbohydrate diet. This procedure has been shown to increase to glycogen stores (in the depleted muscles) to levels approaching 50 g/kg of muscle.

SIDE EFFECTS CARBOHYDRATE LOADING

- May hamper maximal aerobic power
- Possibility of a reduced niacin intake
- Heaviness or stiffness in muscle
- Myoglobinuria
- Chest pain electrographic changes similar to heart patients.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

A study on motor fitness of rural and urban high school boys of Haveri District

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Keywords: Agility, Endurance, Rural-urban, Speed, Strength

INTRODUCTION

Physical fitness is a state of health and well-being and, more specifically, the ability to perform aspects of sports, occupations, and daily activities. Physical fitness is generally achieved through proper moderate-vigorous and sufficient rest. Before the industrial revolution, fitness was defined as the capacity to carry out the day's activities without undue fatigue. However, with automation and changes in lifestyles, physical fitness is now considered a measure of the body's ability to function efficiently and effectively in work and leisure activities, to be healthy, to resist, and to meet emergency situations.

Fitness is defined as the quality or state of being fit. Around 1950, perhaps consistent with the and the treatise of World War II, the term "fitness" increased in western vernacular by a factor of ten. The modern definition of fitness describes either a person or machine's ability to perform a specific function or a holistic definition of human adaptability to cope with various situations. This has led to an interrelation of human fitness and attractiveness that have mobilized global fitness and fitness equipment industries. Regarding specific function, fitness is attributed to persons who possess significant or ability, that is, endurance or strength. A well-rounded fitness program improves a person in all aspects of fitness compared to practicing only one, such as only cardio/respiratory endurance or only weight training.

A comprehensive fitness program tailored to an individual typically focuses on one or more specific skills and on age or health-related needs such as bone health. Many sources also cite mental, social, and emotional health as an important part of overall fitness. This is often presented in textbooks as a triangle made up of three points, which represent physical, emotional, and mental fitness. Physical fitness can also prevent or treat many chronic health conditions brought on by unhealthy lifestyle or aging. Working out can also help some people sleep better and possibly alleviate some mood disorders in certain individuals.

Purpose

The purpose of this study was to assess the motor fitness of rural and urban high school boys of Haveri District.

Procedure

A total of 300 students, 150 from rural high schools, and 150 from urban high school boys were randomly selected as

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subjects for this study. The selected motor fitness variables were speed, strength, agility, and endurance. To measure, these components standardized tests were used. The data collected were analyzed with a statistical test technique which was used.

RESULTS

The statistical analysis shows that there was a significant difference in all the selected motor fitness components between rural and urban boys.

CONCLUSION

It was concluded that rural high school boys are better in speed, endurance, and agility than urban high school boys and urban boys have shown supremacy in strength than rural high school boys.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

An Annotated selection of online resources supporting physical education and sports training continuity during the COVID-19 pandemic

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ABSTRACT

For educators, the COVID-19 pandemic is a quintessential adaptive and transformative challenge, one for which there is no preconfigured playbook that can guide appropriate responses. Education leaders must swiftly design responses – and with specific contexts in mind – as the pandemic runs its course. This paper discusses issues related to the teaching, sports training, and assessment of a series which presents the results of a comparative analysis of emerging physical educational needs and responses as the pandemic unfolds across countries around the world. The overall goal of this virtual session is to facilitate the rapid design process and implementation of adaptive responses to the emerging physical education challenges, and to protect young athletes and people's, physical education, fitness, and sports science opportunities during and following the pandemic. The first virtual published end of April 2020 – *INDIVIDUAL EXERCISE PARTICIPATION DURING COVID-19 PANDEMIC* Prof. Henry C. Daut, DR. Rajesh Kumar, Prof. John N. Tillano, Prof. Mila A. Gallardo – is a tool to support physical education leaders, athletes, and students and based on a cross-national survey conducted in July 2020. The survey assessed educational needs, priorities, implementation challenges, and emerging responses and was the first of a series of surveys to monitor the evolution of responses to emerging needs in the education sector. Subsequent Webinars will include a curated catalogue of Zoom, Facebook, and YouTube live session resources, and a virtual session to guide the implementation of effective physical education, health and wellness management, and sports training responses. I hope these resources help those collaborating across institutions and countries in the important and urgent task of supporting students, coaches, sports nutritionist, and sports psychologists opportunity to learn during this challenging crisis shared among humankind.

INTRODUCTION

As the COVID-19 pandemic runs its course, many governments are implementing measures that limit the number of people congregating in public places. Such measures have disrupted the normal functioning of schools, universities, and sports academies. Because the duration of such measures has been extensive – and is likely to continue in some countries for a certain time until a vaccine becomes available – leaders of public and private education, research institutions have put in place alternative methods for students and teachers to continue with their lessons when attending school, college,

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and university are not possible and are working on methods that will make schools, college, and university fit for working in a safe environment.

Although students, athletes with access to digital devices and Internet may not be the majority in most countries, supporting governments in establishing effective forms of online physical education will free up institutional, Sports academies, capacities, and resources to redirect their focus on delivering alternative learning, sports training, and research methods for those students, athletes who do not have similar opportunities. This annotated selection of online educational resources intended for students, athletes, physical education teachers, and parents aims to support governments and other physical education leaders, coaches, sports nutritionist, and sports psychologists as they research and assess different ways to continue sports training, research, etc., educating students, athletes during the COVID-19 pandemic. It can be used by those designing or improving on a plan for physical education and sports training continuity, by either directly incorporating some of these resources into their plan, or using them as a model to develop their own online physical educational and sports training materials.

Statement of the Problem

The purpose of this study was to investigate the "An annotated selection of online resources supporting Physical education and Sports continuity during the COVID-19 Pandemic."

Significance of the Study

The findings of the study may be helpful for the physical education teachers and coaches, in assessment of the athletes ability to take part in virtual conferences and to guide the implementation of effective physical education and sports training for the athletes continuity during the COVID-19 Pandemic.

Hypothesis

They may be any significant implementation of different ways to continue physical education, sports training, research, educating students, and athletes during the COVID-19 pandemic.

METHODOLOGY

This annotated selection is based on the survey responses from 333 participants from 15 countries, provided a summary, and rated the resources on a scale from one to five, with five being the highest. We asked a range of students, athletes, and professors from the International Advisory Board of International Federation of Physical Education, Fitness and Sports Science Association, and collaboration with Osmania University Hyderabad and various other University in countries, with experience ranging from physical education teachers, coaches, administrators, and researchers that were asked to analyses these resources.

RESULTS

The resources are presented in this document, and in an online searchable database. The resources are grouped into two broad sections, according to their purpose:

1. Curriculum resources: These include lessons, videos, interactive learning, exercises training modules, and any other resources that directly support students, athletes in acquiring knowledge and skills
2. Professional development resources: These are resources which can support physical education teachers, coaches, fitness trainers, or parents in supporting learners, guiding them to content, developing their skills to teach remotely, or more generally augmenting their capacity to support learners now learning, training more independently and at home, rather than at school, colleges, universities, health

Table 1: Curriculum resources

Abstract	Subjects	Cost	Global skills	Cognitive skills	Interpersonal skills	Intrapersonal Skills
Two days international webinar on research in physical education and sports held on June 6, 2020, and June 7, 2020 organized by Anurag University, Hyderabad	Physical Education and sports	Freely available		1.3	2.2	3.3
National Webinar on Health and Wellness Management for Quality of life in Covid-19 organized by Azaan Group of Institutions on June 7, 2020,	Health and physical education	It is a paid program		1.2	2.1	3.1
International webinar on physical education, sports and fitness in embarrassing the New Normal held on June 8, 2020 Organized by Cebu Normal University, Philippines	Physical education, sports	It is a paid program		1.3	2.2	3.2

Table 2: Professional development resources

Abstract	Subjects	Cost	Global skills	cognitive Skills	Interpersonal skills	Intrapersonal skills
"The International Webinar on Physical, Psychological, and Spiritual Disciplines."	Sports psychology	Freely available		1.1	2.1	3.0
Online International Seminar and Workshop – on Concepts of Physical Education and Sports Sciences on May 25– May 28 organized by Sri Shivaji College of Physical Education, Amravati, India	Sports sciences	Freely available		1.2	2.1	3.1
International Webinar on Sports Science held on May 20, 2020 organized by St. Francis College for Women, Hyderabad, T.S. India	Sports science	It is a paid program.		1.1	2.0	3.1
International webinar on cybernetics and sports performance in current scenario:- with special reference to covid-19 Pandemic organized by Shri Shankaracharya Mahavidyalaya, Junwani, Bhilai, Chattisgarh on June 9, 2020	Training in sports	It is a paid program		1.3	2.1	3.2
Online faculty development programme on physical education and sports organized by little flower degree college from June 15, 2020, to June 17, 2020	Physical education and sports	Freely available		1.1	2.0	3.0
International Webinar on Physical Literacy, Yoga and Sports Science organized by Dept. of Physical Education, Govt. Model Degree College, Mahanpur, Kathua UT of J& K on June 21, 2020.	Sports science	It is a paid program.		1.2	2.1	3.1
International Webinar on Current Trends and Development in Physical Education and Sports at Covid – 19 organized by Dept. of Physical Education, Madurai Kamraj University on June 29, 2020, and June 30, 2020	Training in sports	It is a paid program.		1.3	2.2	3.2

and fitness clubs, and sports academy. We present ten professional development resources.

DISCUSSION AND CONCLUSIONS

The present study focuses on "An annotated selection of online resources supporting physical education and sports continuity during the COVID-19 pandemic." Students, athletes, coaches, fitness trainees, and physical education teachers identify online educational resources that they had found helpful in supporting physical education and sports training continuity up to that point. Furthermore, I greatly appreciate the fact that they gave their time for this global public good project. After careful analysis, we retained about half of the resources which had been collected in the survey, which the reviewing team evaluated as being of high quality. They are highly qualified physical education experts whose professional judgment I trust and value.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Yoga and wellness

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ABSTRACT

Yoga is a way of life, art, and science of life. It is an ancient richest culture heritage based on holistic philosophy. These practices, especially asanas, were evolved by our great stages by observing nature, trees, animals, and reptiles. In yoga, there is an importance in training the mind first and body and soul later. It accepts that mind is store house of all energies positives and negatives. Positive energies can help to create surrounding feel-good form such as inside and outside, whereas negatives feelings such as anger, jealously, and fear to win in under all situation cause instability of physical well-being. Yoga is an ancient discipline designed to bring equilibrium and health to the physical, mental, emotional, and spiritual extent of the individual. In today's highly competitive world of advanced technology, it is essential to possess a well-disciplined, balanced, stable, and calm mental state for optimal development of potential and performance in any field, especially in sports.

INTRODUCTION

The Historic Review

A lot of research is being directed towards evolving new technique or methods to disciplined the mind to direct all energies (mental, physical, and emotional) toward the desired goal in expected direction at the right time so that the best performance can be achieved. Yoga practice on physical, mental health, intellectual, emotional, social, and spiritual wellness. Akhilananda (1979), in his book on "Mental health and Hindu psychology," stated that the Indian system (yoga) of health practice has a significant positive effect on stability, balance, and equilibrium of the mental status of the individual.

METHODS

Ashtanga Yoga

Patanjali, the father of modern yoga in his text yogsutra, has advocated ashtanga yoga. The eight steps are Yama, Niyama, asanas, pranayama, pratyahara, Dharana, Dhyana, and Samadhi that these eight limbs are INTR linked with one another? Each limbs have a lot of facts within it.

The first five limbs deal with the individual out word action or external practice, it is called Bahiranga yoga; in his stages, our body and mind are purified and ready for the internal purification. The last three stages are high stages of consciousness produced as a result of spiritual wisdom.

1. Yama – abstinence – code of character
   a. Aahimsa
   b. Satya
   c. Asteya
   d. Brahma
   e. Charya.
2. Niyama – observance – code of conduct
   a. Saucha
   b. Santhosa
   c. Tapas
   d. Svadhyaya
   e. Pranidhana.

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3. Asanas – posture
    a. Standing asanas
    b. Sitting asanas
    c. Lying asanas.
        1. Pronation asanas
        2. Supination asana.
4. Pranayama – breath control
5. Pratyahara – sense withdrawal
    a. Eyes
    b. Nose
    c. Mouth
    d. Body
    e. Ears.
6. Dharana – concentration
    a. Nasal gazing
    b. Frontal gazing
    c. Jyothi
    d. Object.
7. Dhyana – meditation
    a. Silent meditation
    b. Mantra meditation
    c. Objective meditation
    d. Breathing meditation.
8. Samadhi – realization-self.

Pranayama

Pranayama – literally "life – force control" are controlling techniques for shitting your consciousness purifying mind and body and raising your potential. The pranayama is the mind part of Patanjali ashtanga yoga framework. The pranayama is inferred from two Sanskrit word "prana" and "ayama" where "prana" connotes energy "ayam" connotes stretching. Hence, the expression significance of pranayama is the elongation of pranic vigor.

In that event that one practice the pranayama without a doubt, he will get control over unnecessary musings pranayama that has three steps; they are as follows.

1. Pooraka (inhalation)
2. Rechaka (exhalation)
3. Kumbhaka (retention).

The following is safe and very useful types of pranayama for depression, anxiety, and general well-being such as suryabhefana, ujjayi, sitali, sitakari, bhastrika, bharamari, anuloma viloma, and kalpalbhati.

1. Surya Bheda: Right – nostril breathing "navel" considered the place of the sun in our body, we generated heat through right nostril breathing and subtle Nadis network in the body redirects this heat to the navel region
2. Ujjayi Pranayama: "Victory breath" ocean breath "or physchic breath" this breath has several benefits such as anxiety and stress ujjayi soothing nervous system
3. Sheetali pranayama: Also known as cooling breath is a breathing practice that very effectively cools, the body the mind and the emotions
4. Sitakari: It is also known as "harmony" and power is derived from pranayama, an ancient Vedic technique of breathing gymnastic and is the variation of sitali pattern it also "cooling"
5. Bhastrika: "Bellows breath" pranayama for depression and anxiety, detoxifies the body, and purifies the mind internal heat and stimulates metabolism good weight loss; focused state of mind
6. Bharamari: This bharamari pranayama has been reported fee at them are reducing the stress, anxiety, anger, and frustration; reduce the blood pressure providing a good sonorous voice; and removing throat aliments
7. Nadi Shadhana: Alternate nostril breathing
8. Kalpalbhati: "Skull shinning breath" frontal brain cleansing breath (good for claiming the mind diminishing thoughts, refreshing the mind and body.

CONCLUSION

Yoga is extremely essential in our life; it is enhancing our living standards by adapting yoga in our life that we can remain strong by eliminating the danger of general medical issues. Yoga is the best and free treatment for skin digestion, joint torment issues, etc., it can save as from diabetes, pulse issues, and obesity. Thus, yoga is helping us from the antagonistic impact of medications. Competition in sports is expanding day by day. Impacts of these issues can be reduced with assistance of yoga, yoga can be beneficial in the prevention and cure of diseases.

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Volume 39 • Issue 1 ISSN 2231-3265

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Review Article

Digital technology: A new dimension to physical education and sports

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ABSTRACT

In the digital world, technology plays a key role in every field of life. Nowaday, the human being not only using digital technology but also dependent on it. Moreover, it is proved during the COVID-19. This study based on how digital technology useful in physical education and sports. The main aim of the study is to identify the current uses and practices of technology in physical education, learning process, and main factors influencing physical instructors, PE teachers, and coaches during different physical activities. This study is based on purely theoretical with the help of secondary data. The study found that in the past, only on the basis of theory and practical study teaching was imparted both in PE and sports, but now in the modern way of life, it is seen that technology is playing a bigger role as it is convenient both for the teachers and the players. This study also provides to improve training and productivity for PE teachers and coaches.

Keywords: Coaches, COVID-19, Digital world, Physical education teachers, Physical education, Technology

INTRODUCTION

Digital technologies are also known as information communication technology which can be wisely used to enhance thinking, communication, and problem-solving skills in a physical education setting (Thomas and Stratton, 2006). The rapid growth of digital technologies has taken in our daily lives and changes the methods of teaching and learning process. In the field of education, researchers have claimed that the inclusion of technology can enrich teacher's productivity and students' engagement and learning. According to Legrain *et al*. (2015), the positive impact of technology-integrated instruction on student's interest, attention, and activity engagement. The technology-integrated physical education lesson influences student's psychological needs which indirectly increase students' motivation. Sports and physical education are one of the significant measuring factors and most essential part of training in any nation at any point of anytime. Every nation should come forward and take interest to constitute an activity plan for improvement of physical education and sports according to the advancement in the world. Ironically, sports is seeing an overwhelming flash in the media everywhere throughout the world, including India, but while it is in effect genuinely overlooked inside the educational structure. Physical education should be given more prominence and it should be with modernize technical support. However, our system goes about just it as assets for the country and in the development and improvement of physical training in nation less has been done. At present, as compare with prior years, we can see the decay of physical training contrast with present needs to defeat the obstacles and fights to improve the structure and foundation

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status to get nearer to our in and around competitors and to build up the general arrangements in physical education and sports.

However, at present that being the piece of complete training process, physical education and sports have surprising effect on the physical and mental advancement of kids. Many observe that physical education is a less critical field in entire educational modules, yet it is as significant as different subjects such as science and math. Now educational programs should be structured like that so that physical exercises become a part of everyday exercise plan. Sports is among the features of modern print and electronic media nowadays, and it is going to be a major industry on the world. However, larger part of individuals in the public arena, sports have a typical effect on the majority of them, genuinely or by the proposition. Plenty of issues which adversely influence the games should be settled as early as possible. Participation as a whole of nations is required in such a way/manner as to get into the game and sports in the world in a roaring manner. We should set up motivation for activity plan from the grassroots level for the support and improvement of physical education and sports with modernize technological supports with modern equipments.

The rapid development of digital technologies has opened up new possibilities for how physical education and sports are taught. It considers the opportunities that are given by modern and new technologies and how that can be best implemented for enhancement of the quality learning process. Nowadays, contributions from both European and American States, this international collection reflects on how digital innovations are shaping PE and sports in both theory and practice all over the world.

LITERATURE REVIEW

Casey (2011) study entitled "Using digital technology to enhance student engagement in physical education." This paper explored the use of video technology as an aid to student engagement in physical education. The researcher found that the effectiveness of video technology in enhancing engagement and subsequently suggests that such a degree of commitment helped students to develop understanding beyond technical replication and toward rational and reasoned student investigations around their learning.

Acquaviva *et al*. (2013) study entitled "Technology in physical education: Striking a delicate balance." The researchers found a systematical display of pedagogical scenarios with regard to technology integration in physical education. An innovative outlook into possible future pedagogical scenarios is given that may alter traditional perspectives on future physical education developments. The actual effect of physical education teacher's technology skills on the technology integration in physical education.

Zhao and Guo (2015) study entitled "Trend study of educational technology in physical education of colleges and universities." The main aim of the study is to identify important achievements, analyze existing problems, and elaborate on the development trends of physical education in colleges and universities. The application of educational technology in the physical education of colleges and universities has been seen as a reform and innovation of teaching and training methods.

Baek *et al*. (2018) study entitled "Physical Education Teacher's technology practices and challenges." The main aim of this study was to identify the current technology practices in physical education, learning sources for technology integration, and influential factors for PE teacher's use of technology. This study based on both primary and secondary data. Descriptive statics tools used for data analysis. This study indicates the need for quality technology integration training to help PE teachers for successful technology integration for student learning.

Anil and Murty (2019) student entitled "Role of technology to development of physical education and sports in India." Physical instruction and sports are considered as a piece of the educational programs and regularly given significance, it is broadly perceived that physical training makes a situation of an active and sound way of life and the answer for raising weight rate around the world. The administration and sports industry must meet up and strategize how they can build up the physical training in India and settle on games as a lifelong decision.

Objectives of the Study

The objectives of this study were as follows:

1. To identify the current uses and practices of technology in physical education and sports
2. To know the factors influencing physical instructors, PE teachers, and coaches during different physical activities
3. To know about the learning process through technology.

Role of Digital Technology

The field of physical education and sports can make a significant contribution to the role that technologies play in our lives. In modern era, information technology plays a crucial role in the human being, particularly in the field of sports and games. It helps to correct mistake in the organization and administration of various sports and games globally. Information technology in sports has established scientific discipline, research activities, improve learning and coaching, bio-mechanical analysis, and field research which have evolved. The use of computer is now applicable in sports for good quality and best results. World-class sports framework improvement, talent exploring, and the executives at the grassroots dimension. Quality sports training, creating a focal point of greatness, and advancing games as a full-time vocation. Strengthening

and professionalizing the sports federation. Efficient sports occasion association, promoting, and the executives.

Importance of Digital Technology in PE and Sports

The importance of sports is very high and it is having very much persuade worldwide to bring peace and friendship amongst countries. Due to the importance of sports publicity has increased more. It has spread speedily throughout the world. Information technology has become a vital inter-disciplinary associate for sports. These several branches like sports psychology, sports statistics, biochemistry, sports medicine, kinesiology, and bio-mechanics are there of physical education. Taking into consideration its association with other disciplines, computerization in physical education and sports is more nowadays. People play a positive role in the society who are involved in sports, vis-à-vis, it has a great impact on the expressions of human culture and social act. It is said that communication played an important role in the human being on the planets. The Olympic movement is one of the social movements which has a great impact on human society. The athletes of countries from all over the world gathering in one place during Olympic games improve relations and international brotherhood. Sports and communication intersection develop among the players, officials the theme of peaceful coexistence.

This fact shows the importance of the media and the Olympics. The write up will briefly explain the relationship between information technology and sports. The information age was 1970's. The change was brought to society with the creation of world web (the web). As a change in technology, changes channels of communication and message content. In the early 1960's, computer technology establishes protocols which become the internet in 1969. And later development of hypertext mark-up language in 1989 that became the basic for the development of web in 1993. The web was introduced to the public at large. During the shaping days of the web, lot of things was included, such as Email, Blog, Facebook, Twitter, lot of website, journals, and YouTube. Another important fact of information technologies is being used in sports which is seen in the trend analysis done by administrators, coaches in sports, franchises, and leagues, while the most basic functions are storing data, used to determine statistics, disclosing the score of a game, or uploading pictures for fans to view thorough out a game. In the past, a task such as developing rosters (name list) of athletes, managers, officials, timekeepers, drivers, and medical staff was taking too much time to done the work with hand.

However, the association of IT in sports, team administration is now able to not only create detailed roasters of these individuals but can schedule them for proper work. Furthermore, most professional sports venues have very ultra-modern scoreboards that are programmed to update statistics and information directly controlled through a computer system. Hence, with the use of such modern technology, almost every area of sports has become dependent on automation due to relevance that it implies to the lives of spectators all over the world. Through the help of the internet and other web services, live feeds of sports events have become so accessible anywhere on the planet. Most of the professional sports in the world have long used instant replay and other high tech aid to help the referees/umpires to make the right call. Video replay systems to check referees/umpires call for many years. Basketball referees use a replay system to make sure players are shooting within the time allotted by the shot clock. In international cricket, the third umpire has been used for certain situation. The umpires who are out of the field can communicate through wireless technology, that is, through wacky talky. The third umpire is asked to adjudicate on run-out decision. In football/soccer, the replays could be used to decide off-side decisions, whether a ball passes over the goal line or not. Digital technologies are now used in every aspects of games and sports. All coaches are reviewing the action, timing, capacity, breath, mistakes, positioning, through everything of each and every players through video replay after matches or trials, and by that help, they able to guide the players to what corrections they needed. Nowadays, in schools, colleges, and other institutions, students are given more organized and disciplined education through I.T. and computers because it is more authentic advance and forceful. A variety of programmers are available, which help in track-grading, conducting health assessment, monitoring research projects, and analyzing sports performances.

BENEFITS OF DIGITAL TECHNOLOGY

Here are some of the ways technology that can provide or facilitate most of the types of support that someone was trying to become or stay physically active. Nowadays, computer is widely used as a teaching aid. In this era of globalization, blackboard is quit away. Powerpoint presentations, video clips, animation, graphics, and sound have become much more effective and needful, CD, DVD, and MP3, are more useful in teaching. In some way, computer is applied in sports sciences, scoring systems, and computerized test that all evaluation can be largely followed. A coach keeps monitoring the players. A computer helps us if any deficiency is found. Records of the player can be maintained for future plan selection of players for various game and sports is important for this multiple deteriorations helps in many ways. Hence, computer plays a significant role in storing research data and its analysis. Treatments in sports medicine involves cardiovascular, flexibility, and strength building program. Sports medicine is the study, prevention, and treatments of sports and fitness-related injuries.

Technical Support

Technologies such as iPods, dance revolution, and Nintendo Wiki Sports make physical activity fun. Step counters and accelerometers allow us to gauge our activity level at any time and set goals that can be easily tracked. Home and gym fitness equipment make it possible to stay active when weather's back.

ADVANTAGES AND DISADVANTAGES OF DIGITAL TECHNOLOGY

Technology in sports is constantly changing in today's era. This change is making a big impact, whether the technology is a disadvantage to the sport and slows down the speed of the game or uses the technology to an advantage and speeds the game up to help make accurate calls. People are always looking for the technology to be able to get ahead of other opponents. The use of technology has crept into the athletes' games. Technology is more of an advantage or disadvantage. One of the main reasons's through which technology compromises a sports experience is that people are watching the games at home instead of watching the games that are played live. Some people would rather stay at home than spend the money to go to view the game. With the game being shown on television, means fewer supporters in attendance. Fewer supporters mean less money for the teams in terms of income and profits. The enhanced experience of technology has made it easy for teams to know and learn about the opposite teams. Some people believe that it was necessary for technology. Sometimes the referee's decision will be wrong, there will work technology and give accurate result will be given.

CONCLUSION

The application of digital technology in physical education and sports has been seen as a new dimensions and innovation of teaching and training methods. This study focuses to achieve the innovative ideas, innovative practices, and learning process in physical education and sports. Information technology in physical education and sports has established scientific discipline, research activities, improve learning, and coaching. In future digital, technology helps a lot to improve the quality of physical education and sports.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Effect of practicing kho-kho on abdominal adiposity and body composition of schoolchildren

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ABSTRACT

Background: A research project financed by ICSSR on kho-kho as an Indian indigenous game was undertaken to evaluate its impact on the health and fitness of the children. **Objective:** The objective of the present study was to examine the effect of indigenous game kho-kho on abdominal adiposity and body composition of schoolchildren. **Methods:** A total of 40 schoolchildren, 20 boys and 20 girls aged between 6 and 12 years, were randomly chosen for the study. All the subjects were participated in kho-kho game for a period of 44 weeks. Abdominal adiposity and body composition were considered as variables for this study; it was measured in terms of waist to hip ratio (WHR) and body mass index (BMI). To draw, the inferences t-test was used and it was tested at $P < 0.05$ level of significance. **Results:** The significant improvement was observed in WHR and BMI both for boys and girls. **Conclusion:** Practicing indigenous game kho-kho had a significant impact on abdominal adiposity and body composition of schoolchildren.

Keywords: Body mass index, Indigenous game, Kho-Kho, Waist to hip ratio

INTRODUCTION

Physical activity is essential for short- and long-term well-being, including physical and mental health and may improve academic and cognitive performance (Ramova and Paspalovska, 2018). Sedentary behavior and lower levels of physical activity (WHO, 2013) are associated with overweight, obesity, and chronic conditions, including diabetes, hypertension, cardiovascular diseases, and various forms of cancer (Ghatrehsamani *et al*., 2010 and Ramova and Paspalovska, 2018). In this regard, physical activity plays an important role in overcoming this problem. Kho-Kho being a popular indigenous game in India can be considered as a means of physical activity that has several health benefits. In India, this popular indigenous game is played in almost all the states. It needs only two wooden poles and a small ground, thus, easy to organize in the remote villages of the country (Kumar, 2012). Hence, kho-kho was selected while planning a research project on health and fitness of the children. The present research was planned by the researchers to initiate an attempt to find out the effect of practicing indigenous game kho-kho on abdominal adiposity and body of schoolchildren.

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MATERIALS AND METHODS

Subjects

A total of 40 schoolchildren, 20 boys and 20 girls aged between 6 and 12 years, were randomly chosen for the study.

Sl. No.	Name of the Training	Time (minutes)	Remark
1.	Warm-up	15	Every day
2.	a) Developmental Exercises related to Kho-Kho	15-25	2 days in a week
	b) Shadow skill practice of Kho-Kho		3 days in a week
3.	Game Practice	45-60	4days in a Week
	Kho-Kho related recreational games / informal games		1 day in a week (Wednesday)
4.	Cooling Down	15	Every day

Experimental Protocol

All the subjects were involved in following schedule for 1.45–2 h in a day and 5 days in a week for a period of 44 weeks including national holidays. Every day subjects were involved in warm-up at starting time for 15 min. After warm-up, they became engaged in various developmental exercises related to kho-kho for periods of 15–25 min in 2 days in every week and rest 3 days that they become engaged in shadow skill practice of kho-kho. After that, they become engaged in-game practice for 45–60 min for 4 days in each week; however, only 1 day (Wednesday), they were free from compulsory game practice and became engaged in kho-kho-related recreational games/informal games for 45–60 min. After that, they became engaged in compulsory cooling down exercises for 15 min daily.

$$\text{WHR} = \frac{\text{Waist circuference (cm)}}{\text{Hip circumference (cm)}} \qquad \text{BMI} = \frac{\text{Weight (kg)}}{\text{Height}^2\ (\text{m}^2)}$$

Variable Studied

Abdominal adiposity and body composition were considered as the dependent variables for this study, and it was measured in terms of waist to hip ratio (WHR) and body mass index (BMI).

Procedure of Data Collection

The data of WHR were measured through waist circumference divided hip circumference by anthropometric steel tape and BMI was measured through subject weight in kg divided height in meter square. The data were collected both in pre- as well as post-test condition with the help of standard tools.

Statistical Analysis

To draw, the inferences independent t-test was used between the pre- and post-treatment data of WHR and BMI of schoolchildren, and it was tested at $P < 0.05$ level of significance. For the statistical calculations, the Social Science Research software package was used.

RESULTS AND DISCUSSION

From Table 1, it was found that the *t*-value of WHR and BMI for boys group was 6.30 and 7.41, respectively, which was significant at $P < 0.05$ level. It was also found that the t-value of WHR and BMI for girls group was 4.77 and 9.07, respectively, which was also significant at $p < 0.05$ level. It indicated that there was a significant improvement of BMI and WHR both

Table 1: Mean, standard deviation, mean difference, % of improvement, *t*-value, and *P*-value of WHR and BMI for boys and girls groups in pre-treatment and post-treatment

Group	WHR							
	Pre-treatment		Post-treatment		Mean Diff.	% Of improvement	*t*-value	*P*-value
	Mean	SD	Mean	SD		Mean		
Boys	0.88	0.02	0.83	0.02	0.052	5.83	6.39*	<0.0001
Girls	0.85	0.03	0.80	0.04	0.054	6.34	4.77*	<0.0001
	BMI							
Group	Pre-treatment (kg.m^{-2})		Post-treatment (kg.m^{-2})		Mean diff	% Of improvement	*t*-value	*P*-value
	Mean	Mean	Mean	SD		Mean		
Boys	23.90	1.92	19.10	2.07	4.800	20.19	7.41*	<0.0001
Girls	24.85	1.56	20.45	1.43	4.400	17.62	9.07*	<0.0001

Table value of "*t*" at *P*<0.05 level for df (39)=2.02, *sign indicates significant difference. WHP: Waist to hip ratio, BMI: Body mass index

Table 2: Comparison of percentage of improvement in WHR and BMI between boys and girls groups

Name of the variables	% Of improvement boys group		% Of improvement girls group		Mean diff.	*t*-value	*P*-value
	Mean	SD	Mean	SD			
WHR	5.83	1.50	6.34	2.08	0.51	0.89	0.37
BMI	20.19	4.42	17.62	4.49	2.57	1.82	0.08

Table value of "*t*" at *P*<0.05 level for df (39)=2.02, *sign indicates significant difference

for the boys group as well as for girls group due to practicing indigenous game kho-kho.

Table 2 indicated that the *t*-value and *P*-value of WHR of % of improvement were 0.89 and 0.37, which were not significant at 0.05 levels. Again, it also indicated that the *t*-value and *p*-value of BMI of % of improvement were 1.82 and 0.08, which were also not significant at 0.05 levels. It indicated that the improvements of WHR and BMI for boys and girls were similar.

DISCUSSION

The result of the study indicated that due to long-term practicing of Kho-Kho both variables (WHR and BMI) significantly improved for boys as well as girls groups (Gandhi *et al*., 2019). Thus, long-term practice of kho-kho had a positive impact on abdominal adiposity and body composition. Therefore, long-term practice of kho-kho improves the overall health and wellness of the children. This result may be explained by the fact that kho-kho playing on a regular basis for long period of time (44 weeks in this case) can improve the efficiency of aerobic systems that may burn additional storage of fat contents. As a result, the bodyweight of the children reduced. Possibly for a reason, their abdominal adiposity significantly decreased. Again all the subjects were children who were in growing age. As a result, their increase in height and decrease in body weight may reduce the BMI of the children. Thus, it is evident from the result that long-term practicing of kho-kho on regular basis improves the health status of the children.

CONCLUSION

From the above result and discussions of the present study, the following conclusions can be drawn. (1) Practicing indigenous game kho-kho for a long period of time improves WHR and BMI of both boys and girls group. (2) The percentage of improvement in WHR and BMI due to practicing kho-kho of the boys and girls group is almost similar. Thus, it is recommended to adopt kho-kho as a training means and as a means of recreation for the children that improve overall health status and wellness of the children.

ACKNOWLEDGMENT

The authors would like thank to all the students of the kho-kho extension center of University of Kalyani for their enthusiastic participation as subjects of the present project. Authors also extend their heartiest thanks to ICSSR for providing the financial support for the research project. The present research paper is a small part of the ICSSR sponsored research project entitled “IMPACT OF PRACTISING INDIGENOUS GAME KHO-KHO ON HEALTH AND WELLNESS OF SCHOOL CHILDREN” in the domain of health and environment.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Effect of grid games program on physical conditioning and skill performance of young soccer players

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ABSTRACT

Keeping in mind the needs of modern soccer and to make the child ready physically as a whole, the purpose of this study was to design and find the effect of the intervention program in soccer for the development of young soccer players. The intervention program designed was "Grid Game Program." Fifteen students from St. Xavier's School, Pune, who played soccer for at least 1 year were selected using non-random sampling technique. A group of 15 players was made and the program was run for 6 weeks on the group. Scores of soccer skill test formed the data for the study. Paired sample *t*-test and independent-sample t-test were applied to find the difference within the group. The findings of the study revealed that there was no significant difference in the mean scores of 50-yard test (dribbling skill) of the grid game program, $P = 0.063$, $t\,(14) = -2.017$. Similarly, there was no difference in the scores of YYIR1 (anaerobic capacity) program, $P = 0.894$, $t\,(14) = -0.135$, respectively. However, a significant difference was observed in the mean scores of McDonald test (passing and trapping skill) $P = 0.000$, $t\,(14) = -4.880$. From this study, it can be concluded that the program is effective in improving the passing and trapping skills of young soccer players.

Keywords: Grid game program, Individual drill program, Young soccer players

INTRODUCTION

The world is changing, so football is changing. Football is challenging just as fast as, for example, our mobile phones are changing. Top football, nowadays, is very demanding. Technique, speed, decision-making, and pressure, it all requires top athletes, and therefore, we need to prepare our elite players for a game of the future. That can only be done by training always match related (Scott O'Donell and Robert Baan 2013). The training methods practiced in India are old and non-scientific; this needs to improve to improve overall performance in soccer in the country. A soccer coach coaches' soccer, not something else (Footy4kids). Soccer tactics range from the way a player stands or moves to the pace, style, positioning, and movement of the entire team. The drills, games, and activities in this section will help you build a team that can adapt to different playing styles. Dribbling, ball possession, passing the ball, shooting, and communication are some of the things to be introduced through various soccer drills. Tactics are a great way to create team togetherness and promote communication in all areas of the pitch.

There are different types of training and session organization that have developed over the years, such as conditional play, pressure training, shadow play, focus play, phase play, grid training, and so on (Bangsbo and Birger, 2000). Activities

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should fit the developmental levels of the children. Soccer is natural for young children because soccer players experience body awareness, and they use various body parts. How they use balance, agility, coordination, vision, and social interaction can determine how they develop physical and social skills. As players get older, their development is psychomotor, cognitive, and psychosocial levels mature. This growth allows coaches to create more complexities in the training environment. Drills are generally an absence of thought. An individual repeats the same movement or patterns exactly the same way each time. This approach with regard to youth soccer has several limitations.

Winning games are not considered to be a primary objective. Winning is considered to be the result of the application of good ball skills and good tactics. Good ball skills demand the use of both feet with equal ability. Good tactics demand the ability to think and to react quickly, whereas the coach can teach and drill tactics and proper decision-making, it is the players themselves who must achieve a true mental understanding of what is expected. Soccer, therefore, needs to be kept in perspective in the overall development of youth.

Over the years, developing young soccer players will confront hundreds of ideas, notions, questions, commands, assertions, musings, and principles as they learn how to play the game. Some of these abstractions and concepts will deal with techniques, some with tactics, others with physical fitness, or with their psychological approach to the game. Choosing a system play and game strategy are the most important and often the first decision a coach must make for the team. The two main philosophies are as follows: One, the coach insists on a particular system and recruits players who fit that system or trains available players to conform. Second, the coach evaluates the players and their talent, the opposition, and then picks a system that is best suited for the team. Both philosophies are valid. What is important is to recognize the particular situation and choose the appropriate philosophy (Sauder, 2010). Therefore, keeping in mind the needs of modern soccer, the researcher developed two programs, namely, the individual drill program and grid game program, and its effect will be studied.

METHODOLOGY

In the present study, the researcher took a group of 15 young soccer players and implemented "Grid Game Program" on it. Soccer skill tests as well as physical fitness conditioning tests were conducted and the effect was studied. In the given study, the researcher followed true experimental design: 15 students were put into a group after pre-testing their fitness and skill. The independent groups went through 6-week program, 3 times a week. Each session was of 45 min, a common warm-up session was taken for the group. After the completion of the entire program, post-test for fitness and skill was performed. Paired sample test was performed to find if there was a difference between pre-test and post-test for the same group. The data were analyzed for descriptive statistics and inferential statistics such as paired sample "*t*"-test and independent "*t*"-test to know the difference within the groups.

Data Analysis

The descriptive analysis done for pre- and post-treatment effects on grid games program is presented below.

From the above table, the pre-test and post-test mean scores of 50-yard test for a group of young soccer players participating in the grid games program are 10.59 and 11.37, respectively. The standard deviation is 1.28 and 1.94. Pre-test and post-test mean scores of McDonald soccer test for group of young soccer players participating in the grid games program are 14.93 and 20.13, and the standard deviation is 3.99 and 3.62, respectively. The pre-test and post-test mean scores of Yo-Yo intermediate level 1 soccer test for group of young soccer players participating in the grid games program are 35.47 and 35.87, respectively, and the standard deviation is 17.28 and 18.74, respectively.

Pair 1 indicates that there was no significant difference in mean scores of the 50-yard test (dribbling skill) for students performing a grid game program. $P = 0.063$, $t\ (14) = –2.017$

Pair 2 indicates that there is a significant difference in mean scores for McDonald test (passing and trapping skill) students performing grid game program. $P = 0.000$, $t\ (14) = –4.880$

Pair 3 indicates that there was no significant difference in mean scores of YYIRT (anaerobic capacity) for students performing a grid game program. $P = 0.894$, $t\ (14) = –0.135$

DISCUSSION

The purpose of this study was to find out the effect of the grid game program on physical conditioning and skill performance on young soccer players aged below 12 years. A similar study conducted by (Castagna *et al*., 2009) showed effects of intermittent-endurance fitness on match performance in young male soccer players. The purpose of this study was to examine the effect of specific endurance (Yo-Yo intermittent recovery test level 1 and Yo-Yo IR1) on match performance in male youth soccer. Results showed that specific endurance, as determined by Yo-Yo IR1 performance, positively affects physical match performance in male young soccer players, whereas there was no significant difference found in the present study in Yo-Yo intermittent recovery level 1 test conducted on both the intervention groups, as the drills designed for both the programs were more skill-specific. The sample taken was 21 in their study, and in the present study, there were a total 30 students to be monitored at the same time. Factors such as

student's daily busy routine, physical, and psychological stress could influence the players performance during the testing period. Similarly, a study was conducted by (Little *et al*., 2006) on the suitability of soccer training drills for endurance training. Paired *t*-tests showed no significant differences in heart rate on repetition of the drills. Twenty-three professional soccer players were recorded during a range of soccer training drills. Heart rate responses were examined for variability, reliability, and suitability for soccer endurance training. Paired *t*-tests showed no significant differences in heart rate on the repetition of the drills. Certain soccer drills used in their study appear to be an adequate substitute for physical training without the ball and thus provide simultaneous skill and fitness training. In the present study, the researcher has taken only drills with ball, and hence, the result of Yo-Yo test was not significant as Little *et al*., 2006 which states that some drills without the ball are necessary to enhance anaerobic capacity, in which the researcher has not taken into consideration. A similar study was done by (Radziminski *et al*., 2013) on "A Comparison of the Physiological and Technical Effects of High-Intensity Running and Small-Sided Games in Young Soccer Players." Twenty players were divided into two groups and a program was run for 8 weeks. The players were made to play three versus three games. The results of this study suggest that the small-sided games, compared with interval running, are more highly recommended training drills for the coincident development of physical capacity and technical skills in young soccer players. A similar attempt was done in this research and development in both physical conditioning and skill performance was observed. There was an improvement in the mean scores of physical conditioning in both the intervention groups, but no significant difference was seen as the program was conducted for a shorter period of time if it was conducted for a longer period than there would have been a significant difference in the scores. However, in related studies, there was coincidental development of physical capacity and technical skills in young soccer players. In this study, there is more game sense developed in the students practicing the grid game program. It has improved their communication skills within the team, students also knew when and how to move under pressure of opponent team. They were also more aware of a game situation which is actually needed in modern soccer.

Table 1: Descriptive statistical analysis of different skill of subjects for grid game program

	Tests	*n*	Mean	Standard deviation	Standard error mean
50-yard test grid game program	Pre-test	15	10.59	1.28	0.33
	Post-test	15	11.37	1.94	0.50
McDonald grid game program	Pre-test	15	14.93	3.99	1.03
	Post-test	15	20.13	3.62	0.93
YYIR1 grid game program	Pre-test	15	35.47	17.28	4.45
	Post-test	15	35.87	18.74	4.83

Table 2: Summary of paired sample "*t*"-test to compare effect of grid game program

		T	Df	Sig. (2-tailed)
Pair 1	Grid game program 50-yard pre-test – Grid game program 50-yard post-test	–2.017	14	0.063
Pair 2	Grid game program MD pre-test – Grid game program MD post-test	–4.880	14	0.000
Pair 3	Grid game program YYIR1 pre-test – Grid game program YYIR1 post-test	–0.135	14	0.894

CONCLUSION

The intervention groups showed improvements in the McDonald soccer test (passing and trapping skill). Hence, it can be concluded that this program can be used simultaneously to improve passing and trapping skills of young soccer players.

Contribution of the Study and Future Recommendation

- The invention program can be implemented for a longer duration of time
- The research was conducted on boys only it can be conducted on girls as well
- Only students of St. Xavier's school were considered in this program. Other school students can be considered in this program
- The intervention program could have been implemented on higher aged groups that it could have given better results
- If the testing program was conducted on a grass ground that it could have given better results as well
- While practicing this program if video recording is done of the students and analysis is done along with the player more understanding level of the player will be developed by improving their abilities
- Instead of 1 h, practice should be more than 1 h and should be done on daily basis
- The intensity can be increased to make it more strenuous and challenging by reducing the break time or increasing the program time
- The addition of more individual drill and grid game can be explored and practiced for better results.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Study on women participation in modern Olympic – A review

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ABSTRACT

The Olympic is an international sports festival, held every 4 years. Although the modern Olympic started in 1896, but women were not allowed to take part in the competition at the very starting. For the 1st time at 1900s, women were allowed to participate in Olympic. However, Indian women started to take part in Olympic at 1924. The purpose of the present review study was to find out the evaluation of women participation in Olympic with special reference to India. For that purpose, researchers performed sincere review. They presented the data of total participants for men and women, total women participation both for the whole world and India in various Olympics starting from 1900 to 2016. They also tried to search the data of the inclusion of different games and events in Olympic for women and the medal tally of Indian women so far.

Keywords: Olympic, Women participation

INTRODUCTION

The Olympic is an international sports festival, held every 4 years. The ultimate goals are to cultivate international brotherhood, through sport, and contribute to world peace. The ancient Olympic games, held between 776 BC and 393 AC, were a religious sports festival carried out every 4 years, in Olympia, in honor of Zeus. Remembering this prestigious games and the heritage, Baron Pierre De Coubertin, a French educationist and historian, felt the emotions and necessity to introduce the games in world scenario again. Consequent, it was started in the form modern Olympic in 1896, but women were not allowed in the first Olympic. For the 1st time at 1900s, women were allowed in Olympic games and Indian women started to take part in 1924. Thus, the purpose of the present study was to investigate the evaluation of women participation in Olympics.

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HISTORY OF WOMEN PARTICIPATION IN OLYMPIC

In 1900, women took part in Olympic for the 1st time. From that time, the rate of participation of women in the Olympics continuously increased. Hélène de Pourtalès of Switzerland became the first woman to compete at the Olympic games and became the first female Olympic champion, as a member of the winning team and Charlotte Cooper became the first female individual champion by winning the women's singles tennis competition. Nora Polley is the first female athlete who represented India in Olympic game. She was a tennis player.

Table 1: Games introduce in Olympic for women

Year	Game	Year	Game
1900	Tennis, Golf, Sailing	1968	Shooting
1904	Archery	1976	Basketball, Handball, Rowing
1908	Figure skating	1980	Field hockey
1912	Diving, Swimming	1984	Cycling
1924	Fencing	1988	Table tennis
1928	Athletics	1992	Badminton, Biathlon, Judo, Short track speed skating
1936	Alpine skiing, Cross-country skiing	1996	Football, Softball, Soccer
1948	Canoeing	2000	pentathlon, Taekwondo, Triathlon, Water polo, Weightlifting
952	Equestrian	2004	Wrestling
1960	Speed skating	2012	Boxing
1964	Volleyball, Luge	2016	Rugby

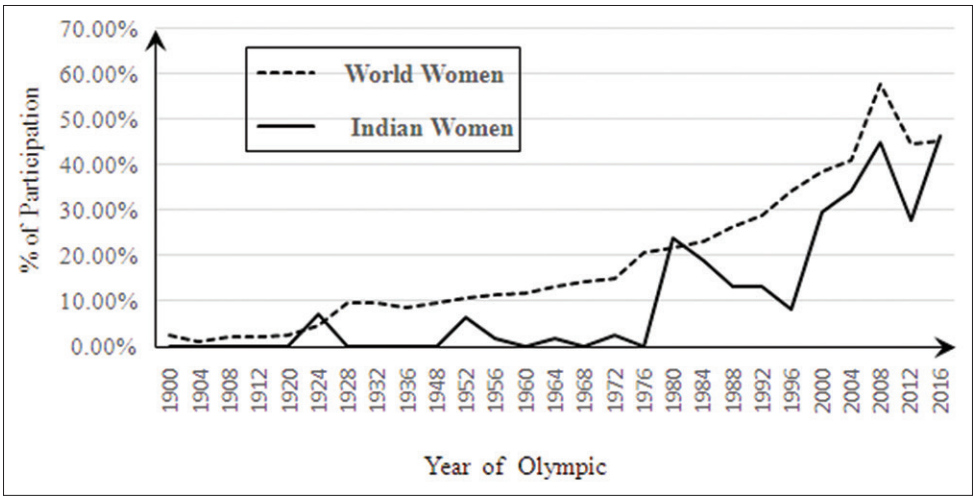

Figure 1: % of participation of women in Olympic

INTRODUCTION OF WOMEN SPORTS

Tennis and golf were the only sports where women could compete in individual disciplines and sailing was the team event for women. Afterwards in several year of Olympic game, so many games and events were added by IOC for women. The year wise list of inclusions of different games in Olympic for women have given below-

EVALUATION OF WOMEN PARTICIPATION

Table 2 shows the number and percentage of participation of women around the world and the statistics of Indian women participation in Olympics. In 1900s, Olympic only 22 (2.2%) women were taking part, but, in 2016, it was 5057 which was 45% and in case of India the increment was for 2–54 in numbers which was 7.14–46.15%. In compare to World versus India, Indian women were 0.74% at beginning and in 2016 the percentage was 1.07 of total women participation. In Figure 1, it was presented the percentage of participation of women in whole world and the respective participation of Indian women. Form the curve; it was evident that women participation in Olympics gradually increased in the world basis as well as in India that indicates the true image of women empowerment in our country. The increasing trend of women participation in Olympics in India will definitely touch the 50% line in coming future.

Table 3 indicates the name of the Indian women medal winner in Olympics – the most prestigious events in the world. Although Indian women are participating in the Olympics from 1924, in the long run only five women have succeeded to secure medal from Olympics. This is an alarming picture for our country regarding the women participation in sports. This medal tally does not reflect a true empowerment of women in our society. Thus, the policymakers should be careful in the

Table 2: Total no of participants in Olympic, total no. of women participants Worldwide and India and respective percentage of women participation

Year of Olympic	Total no. of participants in world (men and women)	Women participation in whole world		Total No. of participants in India (men and women)	Women participation in India		Women participants percentage (World vs. India) (%)
		Total No. of Women Participants	Percentage of women participants (%)		Total no. of women participants	Percentage of women participants (%)	
1900	997	22	2.20	1	NIL	0.00	0.00
1904	651	6	0.92	NIL	NIL	0.00	0.00
1908	2008	37	1.84	NIL	NIL	0.00	0.00
1912	2406	47	1.95	NIL	NIL	0.00	0.00
1920	2626	65	2.48	6	NIL	0.00	0.00
1924	3089	135	4.37	15	1	7.14	0.74
1928	2883	277	9.61	21	NIL	0.00	0.00
1932	1332	126	9.46	30	NIL	0.00	0.00
1936	3963	331	8.35	27	NIL	0.00	0.00
1948	4104	390	9.50	79	NIL	0.00	0.00
1952	4955	519	10.47	64	4	6.25	0.77
1956	3314	376	11.35	59	1	1.69	0.27
1960	5338	611	11.45	45	NIL	0.00	0.00
1964	5151	678	13.16	53	1	1.89	0.15
1968	5516	781	14.16	25	NIL	0.00	0.00
1972	7134	1059	14.84	41	1	2.44	0.09
1976	6084	1260	20.71	20	NIL	0.00	0.00
1980	5179	1115	21.53	76	18	23.68	1.61
1984	6829	1566	22.93	48	9	18.75	0.38
1988	8391	2194	26.15	46	6	13.04	0.27
1992	9356	2704	28.90	53	7	13.20	0.25
1996	10320	3523	34.14	49	4	8.16	0.11
2000	10651	4069	38.20	65	19	29.30	0.47
2004	10625	4329	40.74	73	25	34.25	0.58
2008	10942	6305	57.62	56	25	44.64	0.40
2012	10768	4776	44.35	83	23	27.71	0.48
2016	11238	5057	45.00	117	54	46.15	1.07

Table 3: Olympic wise women medal winner in India

Name	Year	Event/game	Medal
Karnam Malleswari	2000, Sydney	Weightlifting	Bronze
Mary Kom	2012, London	Boxing	Bronze
Saina Nehwal	2012, London	Badminton	Bronze
Sakshi Malik	2016, Rio	Wrestling	Bronze
P. V. Sindhu	2016, Rio	Badminton	Silver

coming future to give modern facilities and financial support to the women of our country so that they can take part in sports with full motivation to uplift the face of our country to the world.

CONCLUSION

i. In 1900, for the 1st time women took part in Olympic competition in three games (Tennis, Golf, Sailing) and total 22 participants were there
ii. In last Olympic, total 5057 women athletes were participated in 36 games
iii. Gradually, the number of women participants increased and more no. of games for the women were included in Olympic, which is a positive indicator of women empowerment as well as gender equality
iv. The number of women participants from India is also increased from 7.14% to 46.15%

v. The number of women medal holder in Olympic from India is not good enough
vi. Special care should be taken by the Government of India regarding the facilities and financial support to prepare the top class women participants from our country
vii. Adequate motivation in this regard is also necessary to make the women devoted in sports.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Fitness, diet, and nutrition

Sandesh

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ABSTRACT

In general the trend, with mechanization, computerization, passive leisure, and urbanization has been for people to produce their levels of physical activity. Nutrition is the basis of energy supply in all forms of physical activity. The main goals are maintaining nutritional health and meet the needs in this situations, nutritional diet should be balanced, especially for supporting disciplines involving mass and body composition.

PHYISCAL FITNESSS

- It is the ability of an individual to carry out daily task with vigor and alertness without getting under fatigue and energy to meet emergency situation
- These days physical fitness is considered a measure of the body's ability to function efficiently and effectively in work and leisure activities to be healthy to resist hypokinetic diseases and to meet emergency situations.

PHYSICAL FITNESS

Health-Related Physical Fitness Performance Related Physical Fitness

- Physical fitness comprises two related concepts; general fitness (a state of health and well-being) and specific fitness (a task-oriented definition based on the ability to perform specific aspects of sports or occupations) physical fitness is generally achieved through exercise.

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Components of Fitness

Physiological	Health related	Skill related	Sports
Metabolic	Body composition	Agility	Team
Morphological	Cardiovascular fitness	Balance	Individual
Bone integrity	Flexibility	Motor coordination	Lifetime
Other	Muscular endurance	Power	Other
	Muscle strength	Speed	
		Reaction time	
		Other	

SPECIFIC FITNESS AND SKILL RELATED FITNESS

- Specific or task-oriented fitness is a person's ability to perform in a specific activity with a reasonable efficiency: For example, sports or military service. Specific training prepares athletes to perform well in their sports
- Examples are:
  - 400 m sprint – in a sprint the athlete must be trained to work anaerobically throughout the race

- Marathon – in this case, the athlete must be trained to work aerobically and their endurance must be built-up to maximum.

HEALTH-RELATED PHYSICAL FITNESS

- Health-related physical fitness is defined as fitness related to some aspect of health. This type of physical fitness is primarily influenced by an individual's exercise habits. Health related physical fitness includes:
  1. Muscular Strength
  2. Muscular endurance
  3. Joint flexibility
  4. Body composition
  5. Cardio respiratory endurance.
- Health related fitness: Is what everyone should have whether they play a sport or not, keeping the body fit for health incorporates the following components
- Cardiovascular fitness: Requires the heart and blood vessels to supply the working muscles with oxygen for long periods
- Strength: Is normally measured by the amount of weight the muscles can lift, or applying a force against a resistance
- Flexibility: Is an important part of fitness that we need to keep into our old age. Babies have a natural suppleness and can suck their toes (not that as teenager you would probably want to do this still), we lose flexibility as we grow older. We should always remember to warm up before competition to stretch our muscles and tendons
- Muscular endurance: Is the ability of the muscle to work for long period without tiring. A marathon runner is an extreme case of a person who has muscular endurance in the leg muscles
- Body composition: Is the amount of muscle, fat, bone, cartilage, etc., that makes up our bodies. It includes fat mass and fat free mass (muscle mass). A healthy amount of fat for a man is between 15 and 18% and for women is higher at 20–25%. It is important to maintain a healthy percentage of body fat.

Components of Motor fitness

1. Speed
2. Agility
3. Power
4. Balance.

Components of Physical Fitness

1. Cardiovascular endurance
2. Body composition
3. Muscular strength
4. Muscular endurance.

DIET

Diets to promote weight loss are generally divided into four categories:

1. Low fat
2. Low carbohydrate
3. Low calorie
4. Very low calorie.

LOW-FAT DIETS

Low-fat diets involve the reduction of the percentage of fat in one's diet. Calorie consumption is reduced but not purposely so. Diets of this type include NCEP, Steps 1 and 2. A Meta- analysis of 16 trails of 2–12 months duration found that low-fat diets resulted in weight loss of 3.2 kg over eating as normal.

LOW-CARBOHYDRATE DIETS

Low-carbohydrate diets such as atkins and protein power are relatively high in fat and protein. They are very popular in the press but are not recommended by the American Heart association. A revive of 107 studies did not find that low-carbohydrate diets cause weight loss, except when calorie are restricted. No adverse effect from low carbohydrate diets is deducted.

LOW-CALORIE DIETS

Low-calorie diets usually produce an energy deficient of 500–1000 calories per day, which can result in a 0.5-kg weight loss per week. They include the DASH diet and weight watchers among others. The National Institutes of Health reviewed randomized controlled trials to determine the effectiveness of low-calorie diets.

VERY LOW-CALORIE DIETS

Very low-calorie diets provide 200–800 kcal/day, maintaining protein intake but limiting calories from both fat and carbohydrates. They subject the body to starvation and produce an average weekly weight loss 1.5–2.5 kg. These diets are not recommended for general use as they associated with adverse side effects such as loss of lean muscle mass, increased risk of gout, and electrolyte imbalances. A physician to prevent complications must monitor people attempting these diets closely.

BALANCED DIET

- A balanced diet must contain carbohydrate, protein, fat, vitamins, salts, and fiber. It must contain these things in the correct proportions

- A balanced diet is defined as one, which contains a variety of foods in such quantities, and proportions that the need for energy, amino, acids, vitamins, minerals, fats, carbohydrate, and other nutrients is adequately meet for maintaining health vitality and general well-being and makes a small provision for extra nutrients to withstand short duration of leanness.

NUTRITION

- Nutrition is the science of food, which deals with all the nutrients, which are required amount for proper growth and development of the human body
- Good nutrition means "maintaining a nutritional status that enables us to grow well, and enjoy good health."
- Food is substance taken in the body that will meet the body's needs for emergency, maintenance of health growth and reproduction.

NUTRIENT

The term nutrient or "food factor" is used for specific dietary constituents such as proteins, minerals. Nutrients are organic and inorganic complex contained in food. About 50 nutrients are normally supplied by the food we eat. Each nutrient has specific functions in the body. Most natural foods contain more than one nutrient.

- Micronutrients: These are vitamins and minerals. They are called micronutrients because they are required in small amounts, which may vary from a fraction of a milligram to several grams
- Energy-yielding foods
- Carbohydrates
- Fats (fats are the richest source of energy for our body).

BODY –BUILDING FOODS

- Proteins.

TYPES OF NUTRIENTS

- Macronutrients: These are proteins, fats, and carbohydrates, which are often called "proximate principles" because they form the bulk of food. In the Indian dietary, they contribute to the total energy intake in the following proportions.
- Proteins - 7–15%
- Fats - 10–30%
- Carbohydrates - 65–80%
- Protective food
- Vitamins
- Some vitamins such as Vitamin B complex and Vitamin C are water-soluble, whereas Vitamins A, DE, and K are fat-soluble
- Minerals
- Calcium, phosphorus, potassium, iodine, and iron.

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Volume 39 • Issue 1 ISSN 2231-3265

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International Journal of Health, Physical Education and Computer Science in Sports
A Peer Reviewed (Refereed) International Research Journal - ISRA Journal Impact Factor 7.217

Research Article

Restricted sugar intake on body weight among college women

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ABSTRACT

Weight reduction programs are mainly focused on reducing intake of fat and sugar. In this study, we have evaluated whether the reducing excessive amount of sugar intake and body weight reduction. The reducing excess amount of sugar intake in diet might result in lower energy intake and reduced body weight. In the long-term, this might be beneficial for weight maintenance. A 2003 World Health Organization technical report provided evidence that high intake of sugary drinks (including fruit juice) increased the risk of obesity by adding to overall energy intake. By itself, sugar is not a factor causing obesity and metabolic syndrome, but rather – when over-consumed – is a component of unhealthy dietary behavior. Meta-analyses showed that excessive consumption of sugar-sweetened beverages increased the risk of developing Type 2 diabetes and metabolic syndrome – including weight gain and obesity – in adults and children. When you reduce or eliminate sugar, storage of fat will decline slowly, and you will lose some weight. However, this takes time, with the effect typically beginning at 1–2 weeks. If you're hoping that omitting sugar from your diet will result in rapid, significant weight loss, however, eating more protein and following a regular exercise routine that includes both cardio and weight training, is key. To clarify, sugar itself does not make you gain weight. Eating an excessive amount of sugar can contribute to weight gain. Just as there are different elements that go into gaining weight, there are few factors that contribute to shedding the extra weight. Cutting back on sugar is just one of those things.

Keywords: Body weight, Diet, Fat, Sugar

INTRODUCTION

Sugars are an important source of energy with glucose being the most important for the body. The brain requires around 130 g of sugar (glucose) per day to keep functioning. Glucose can be found in a range of foods including fruit, vegetables, and honey. Excess sugar's impact on obesity and diabetes is well documented. To clarify, sugar itself does not make you gain weight. Eating an excessive amount of sugar can contribute to weight gain. Just as there are different elements that go into gaining weight, there are a few factors that contribute to shedding the extra weight. Cutting back on sugar is just one of those things.

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Objectives of the Study

- The study would help to identify the relationship between sugar intake and body weight of the college women
- This study would help to improve the awareness of the excess of sugar intake of college women and their body weight.

METHODOLOGY

This study was an experimental research. One group pre-test – post-test method will be used to this experimental study. In

this study, restrict the 70–80% sugar intake of college women in 30 days (1 month) as an experiment. Before the experiment, conduct a pre-test like checking the body weight (using weighing machine) of the subjects and after the experiment (after 30 days) conduct the post-test like check the body weight of the subjects.

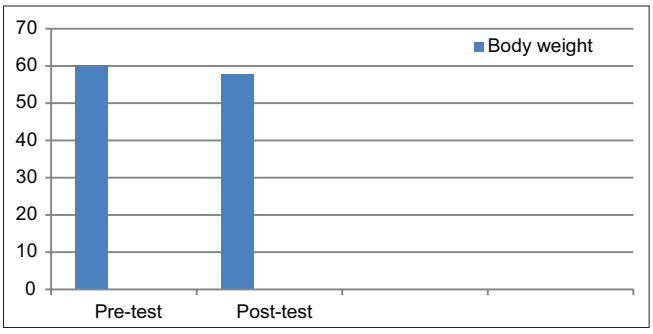
Selection of Subjects

For the purpose of the study 25 college women (N= 25) will be selected from Sree Sankaracharya University of Sanskrit and Sree Sankara College, Kalady, Kerala, as subjects. Their age ranged from 17 to 23 years.

Analysis of Data

Significant differences in the mean scores of pre-test and post-test of body weight

	Pre-test		Post-test		Mean differences	Standard error	t-ratio
	Mean	SD	Mean	SD			
Body weight	60.1	5.72	57.75	5.10	2.35	1.47	1.37



The data were collected and analyzed statistically. The pre- and post-test scores were analyzed using student "*t*" test for significance difference if any; the level of significant was get at 0.10.

The *t*-value is 1.37033. The *P*-value is 0.089312. The result is significant at $P < 0.10$.

FINDINGS AND CONCLUSIONS

- The findings of the study reveal that there will be a significant relationship between restricted sugar intake and body weight of college women
- The findings of the study conclude that the absence of excess of sugar intake will reduce body weight of college women.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Anthropometrical characteristics of Kabaddi players in relation to their playing position

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ABSTRACT

Nowadays, Kabaddi has been altered. Some of the rules were modified to entertainment for society, and it is the passionate to everyone. On the basis of role in the game can be dividing to four groups, namely, Raiders, Corner, Coverer, and All-rounder. The raiders are attackers; corner and coverers are defenders, whereas all-rounder performs both duties of attacking and defending. Kabaddi players of different playing positions performed different specified skill during the competitions which required a specified body shape and capacity. Therefore, the possession of essential anthropometric characteristics provides an edge to player to outperform his opponents. We could not find any study on the anthropometrics parameters of Kabaddi players in relation to their playing positions.

INTRODUCTION

Kabaddi is a contact sport where pushing, pulling, jumping, and throwing are prominent features of performance. All of these features are to some extent affected by the anthropometric characteristics of athletes and it is possible that such characteristics differentiate players of different competitive level. Moreover, only limited information is available on anthropometric differences between Kabaddi players characterized by their playing position. The following anthropometric measurements were considered for the purpose of this study: Height, weight, arm span, arm length, and leg length.

An athlete's anthropometric and physical characteristics may regard as the one of the deciding factors for successful participation in any sports. It can be assumed that an athlete's anthropometric characteristics can in some way influence his level of performance, at the same time helping to determine a suitable physique for a certain sport.

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Purpose of the Study

To purpose of the study is to find out the anthropometric Kabaddi players in relation to their playing position and whether a particular variable gives advantages for particular positions.

METHODOLOGY

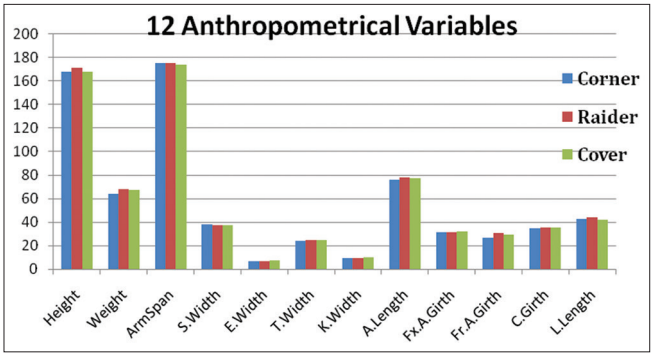
As discussed earlier, the main purpose of the study was to find out the differences of anthropometrical variables among interposition Kabaddi players. To execute the investigation selected 90 male Kabaddi players from Karnataka region include 30 samples from rider position, 30 samples are from

cover position players, and 30 from corner position players. The age of the subject was 18–30 years. Height, weight, arm span, shoulder width, trunk width, elbow width, knee width, flexed arm girth, fore arm girth, calf girth, and leg length of anthropometrics variables before start of the experiment of subject was properly educated to perform the best.

Data Analysis

After the data had been collected, it was processed and tabulated using Microsoft Excel-2010 software and SPSS V.21.0 Software. Then, data were analyzed with reference to the objectives and hypotheses using differential analysis including unpaired one-way ANOVA test y using SPSS 21.0 Software and the results obtained thereby have been interpreted.

RESULTS



In this study, only 1st hypothesis is accepted, null hypothesis rejected and remaining 11 hypothesizes are rejected, null hypothesis accepted. Because in Kabaddi game, all the players need equal participation and somewhere particular variables may give some advantages for particular position player, that is, Raider may get advantages in height, arm length, and leg length. Other position players also need those aspects but raider has more advantages on other position players in Kabaddi game. Even, we can extend this study for international players to get more authentic result of the players.

CONCLUSION

My present study says the raiders were significantly better the coverer corner position players in height and arm length. Moreover, cover position player had better elbow width than the corner position player. The raiders dominated the others players in the most of the variables, although the difference were not found significant. Kabaddi player should have muscular build to increase their performance. In other anthropometrical variables which had taken in this study there is a no more significant difference in relation to their playing position of Kabaddi players. Hence, here, null hypothesis accepted and alternate hypothesis is rejected. Often we can found height, leg length, arm length, and weight variables are most advantage for Raider and also cover positional player need these factors and elbow width which helps in blocking the raider when he passes into center line. Hence, height is essential for raider and it would give more advantage for raider than cover and corner position players. Moreover, finally, the Kabaddi players should have more physically fit to enhance the performance. A raider need more stamina and strength than cover and corner players.

Recommendations

1. This study can be extend with maximum samples
2. This study can serve as a framework for the same or similar types of research
3. Helps to coaches that identifying the particular position player
4. This study can be conduct for international players
5. This study can be describes players body type
6. Coach or teacher can find specific suitable player for particular position
7. We can apply this study for women players and girls players
8. Future researcher can include biological variables such as vital capacity, heart rate, and stamina.
9. Also can include psychological factors such as aggressiveness and anxiety for this same topic
10. This same topic can conduct on different types of games.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

A comparative study on flexibility among different degree of hearing impaired girls of West Bengal

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ABSTRACT

Objective: The objective of the present study was to compare the flexibility among different degree of hearing impaired girls of West Bengal. **Methodology:** A total of 83 (n = 83) hearing impaired girls were selected after testing their hearing ability by audiometer as subjects for this study. They were selected from two separate districts of West Bengal – Burdwan and Hooghly. The age of the subjects for the present study was ranged from 10 to 30 years. All the subjects (n = 83) were divided into five groups according to their hearing impairment, that is, >90–100% profound (n_1 = 17), 71–90% severe (n_2 = 14), 56–70% Md. severe (n_3 = 18), 41–55% moderate (n_4 = 16), and 25–40% mild (n_5 = 18) groups. In the present study, hip and back flexibility were consider as only variable. It was measured by modified sit and reach test. The data were collected for all the subjects in two consecutive days using standard tools and techniques. Mean, standard deviation, and one-way ANOVA were used for the intergroup comparison of flexibility. Significance was tested at $P < 0.05$ level. *Post hoc* comparison was done by Scheffe's test for finding exact location of the difference among the groups. Excel spreadsheet of Windows version 7 was used for statistical calculations. **Results:** Findings of the present study revealed that there was a significant difference in flexibility among the different degree of hearing impaired girls of West Bengal. **Conclusion:** It can be concluded from the findings of the study that the flexibility of the profound group was significantly better than the Md. severe group, moderate group, and mild group. Again, the flexibility of the severe group was significantly better than the Md. severe group, moderate group, and mild group.

Keywords: Flexibility, Hearing impaired, Physical fitness components

INTRODUCTION

American Health Association defines a child with disability as a child who for various reasons cannot fully make use of all his or her physical, mental, and social abilities (Altun *et al*., 2010). As per census 2001, there are about 21 million people with disability in India (Nandini, 2003). Hearing impairment was one type of disability where population could not orally communicate with others and could not response through auditory organ. Their mental as well as physical barriers could not curb their indomitable spirit. The different components of physical fitness created the same impact on their physical ability like the normal persons. Among physical fitness, components flexibility is one of them. Flexibility is the range of motion in a joint or group of joints. In the present study, flexibility of the hearing impaired students was investigated. Therefore, the purpose of the study was to compare the flexibility among different degree of hearing impaired girls of West Bengal.

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MATERIALS AND METHODS

For the above purpose, the present study was planned to initiate research work in the following way –

Subject

A total of 83 (n = 83) hearing impaired girls, aged between 10 and 30 years, were selected as subjects for this study. The subjects were purposively selected from two separate districts of West Bengal, that is, Burdwan and Hooghly. Audiometric technique was used to measure their hearing ability.

Group Division

Depending on the frequency level of hearing ability, all the subjects were divided into five groups, that is, (i) profound group: >90–100% (n_1 = 17), (ii) severe group: 71–90% (n_2 = 14), (iii) moderately severe group: 56–70% (n_3 = 18), (iv) moderate group: 41–55% (n_4 = 16), and (v) mild group: 25–40% (n_5 = 18). Among various physical fitness components, flexibility was considered as only variable for the present study. To measure this variable sit and reach test, technique was used. The subject was asked to remove shoes and place her feet against the testing box while sitting on the floor with straight knees. Now, the subject was asked to place one hand on top of the other so that the middle finger of both hands was together at the same length. The subjects were instructed to lean forward and place their hand over the measuring scale lying on the top of the box with its 10 inch mark coinciding with the front edge of the testing box. Then, the subject was asked to slide her hands along the measuring scale as far as possible without bouncing and to hold the farthest position for at least 1 s. Each subject was given three trials and the highest score nearest to an inch was recorded and 10 inch was subtracted from the recorded reading to obtain the flexibility score. One subject got three chances and the beat performance was recorded. Every one performed one by one.

RESULTS

Table 1 shows that the total number of subjects for all hearing impaired girls group was 83 (n = 83). In this table, age in year, heights in cm, and weight in kg of all the five groups have been presented.

From Table 2, it was found the mean and standard deviation of flexibility of five hearing impaired girls group, that is, profound 9.53 and 4.89, severe 10.21and 6.85, Md. severe 3.38 and 2.60, moderate 1.56 and 0.69, and mild 3.56 and 2.66, respectively. In Figure 1, the mean and standard deviation of flexibility of the subjects of different degree of hearing impaired girls groups have been presented.

From Table 3, it was found that the F-value of flexibility was greater than the table value of "F," 2.49 at 0.05 level of significance with df (4, 78). Thus, there was a significant difference in flexibility among different groups of girls having different degree of hearing impairment. To find out the exact location of the differences in flexibility among various groups of hearing impaired girls, Scheffe's test was performed as *post hoc* test. In Table 4, the results of Scheffe's *post hoc* test have been presented.

In Table 4, *post hoc* comparison of mean difference in flexibility was performed by Scheffe's test and it was found that there was a significance difference in flexibility between profound group and Md. severe group as the mean difference 6.15 which was greater than the value of critical difference 4.25 at 0.05 levels. Significant result was also observed in flexibility between profound group and moderate group as the value of the mean difference 7.97 which was greater than the value of critical difference 4.38 at 0.05 levels. Again, significant difference was also observed between profound group and mild group as the value of mean difference 5.97 which was greater than the value of critical difference 4.25 at 0.05 levels. Significant result was also observed in flexibility between severe group and Md. severe group as the value of the mean difference 6.83 which was greater than the value of the critical difference 4.48 at 0.05 levels of significance. Significant result was also observed in flexibility between severe group and moderate group as the value of the mean difference 8.65 which was greater than the value of the critical difference 4.60 at 0.05 levels of significance. Again, significant difference was also observed between severe group and mild group as the value of mean difference 6.65 which was greater than the value of critical difference 4.48 at 0.05 levels. On the other hand, in rest of the pair of groups, no significant differences were observed.

DISCUSSION

In flexibility, findings of the present study confirmed that there was a significant difference among different degree

Table 1: Descriptive statistics of two groups of subjects in age, height, and weight

S. No.	Name of the group	No. of subjects	Age (years) mean±SD	Height (cm) mean±SD	Weight (kg) mean±SD
1	Profound	17	16.18±4.94	150.12±7.16	44.06±6.84
2	Severe	14	19.14±3.08	154.00±3.94	48.36±3.43
3	Md. severe	18	21.28±3.69	151.78±3.90	45.89±6.88
4	Moderate	16	19.56±5.94	168.63±74.37	47.06±6.69
5	Mild	18	15.17±2.38	147.22 ±5.28	39.44±5.80

Total no. of subjects: (n) = 83

Table 2: Mean and SD of flexibility of five hearing impaired girls' groups

Descriptive statistics	Name of the hearing impairment group				
	Profound	Severe	Md. severe	Moderate	Mild
Mean	9.53	10.21	3.38	1.56	3.56
SD	4.89	6.85	2.60	0.69	2.66

Table value of F (4, 78) at 0.05 = 2.49, *sign indicates significant difference

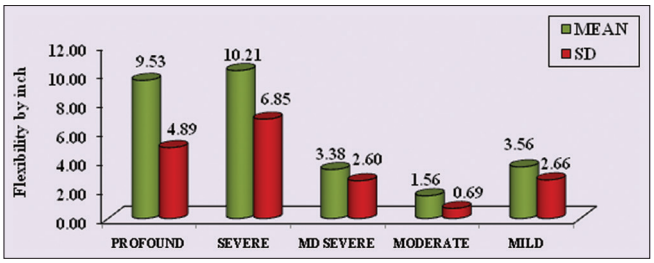

Figure 1: Mean and SD of flexibility of the subjects of different degree of hearing impaired girls groups

of hearing impaired girls groups. The result also confirmed that in flexibility, the profound group significantly superior than the Md. severe group, moderate group, and mild group for the hearing impaired girls. Again, it was observed that the flexibility of the hearing impaired girls for severe group significantly superior than the Md. severe group, moderate group, and mild group. From the above result, it was observed that the flexibility of the higher degree of hearing impaired groups was significantly better than the groups having the less degree of hearing impairment. Thus, from the result, it can be generalized that flexibility directly depends on degree of hearing loss. Again, the significant differences which were observed among the different groups may happen due to sampling error. This may happen due to the selection of small sample group. It may also happen for the error in very fast measurement of the degree of hearing loss by audiometric technique due to lack of measuring time. Thus, there was a chance of group division error in the present study. It needs measurements for more than 1 time in another day for the reliability of degree of hearing loss detection. Thus, it needs further investigation with the inclusion of large number of subjects in each group along with more sophisticated measurement technique and instrumentation that should be used for the detection of hearing impairment before the group division on the degree of hearing loss. Large number of sample may help to generalize the effect of hearing loss, if any, on flexibility.

CONCLUSION

On the basis of the result, the following conclusions can be drawn: The flexibility of the hearing impaired girls for profound group significantly superior than the Md. severe group, moderate group, and mild group. Again, it can be concluded the flexibility of the hearing impaired girls for severe group significantly superior than the Md. severe group, moderate group, and mild group.

Table 3: Analysis of variance of flexibility among different degree of hearing impaired girls groups

Name of the variable	Source of variance	Sum of squares	Mean square variance	df	"F" value
Flexibility (inch)	Between group	983.88	245.97	(K-1)=4	15.52*
	Within group	1236.16	15.85	(N-K)=78	

Table value of F (4, 78) at 0.05=2.49, *sign indicates significant difference

Table 4: *Post hoc* comparison of mean difference in flexibility by Scheffe's test

Group compared	Mean difference	Critical difference at 0.05 level
Profound – Severe	0.68	4.53
Profound – Md. severe	6.15*	4.25
Profound – Moderate	7.97*	4.38
Profound – Mild	5.97*	4.25
Severe – Md. severe	6.83*	4.48
Severe – Moderate	8.65*	4.60
Severe – Mild	6.65*	4.48
Md. severe – Moderate	1.82	4.32
Md. severe – Mild	0.18	4.19
Moderate – Mild	2.00	4.32

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Volume 39 • Issue 1 ISSN 2231-3265

International Virtual Conference on
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Fitness and Sports Science Association

International Journal of Health, Physical Education and Computer Science in Sports
A Peer Reviewed (Refereed) International Research Journal - ISRA Journal Impact Factor 7.217

Research Article

Evolution and deterrence of doping

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ABSTRACT

The European Committee Council provided one of the earliest authenticated definitions of doping as early as 1963 stating, "Doping represents the use of substances or physiological mediators, which are not normally present in the human body, introduced as an external aid to increase the athletes' performance during a competition." The unethical practice of doping is as ancient as the art of sports itself. The dictionary meaning of anti-doping states, "Opposing or prohibiting illegal doping (such as blood doping or the use of anabolic steroids or growth hormones) to improve athletic performance." There are a World Anti-doping Agency and the National Anti-doping Agencies of member countries, which provide the guidelines and resources to combat doping at a global level. In a study on health psychology, Quirk illustrates three psychological aspects that lead one to dope: Social cognition, stress and strain, and addiction.[1] Therefore, awareness regarding comprehensive aspect and doping code is the need of an hour and according to a study done on Japanese university athletes to highlight the importance of anti-doping education in the promotion of it comprehension, the anti-doping education was associated with anti-doping knowledge, and the athletes who received proper education on the subject multiple times had more accurate knowledge than those who did not.[2] The authors of the present paper have made an attempt to illustrate the rise and fall of doping practices while focusing primarily on the history of doping, the necessity of curbing the institution of doping, as well as the challenges presented in the execution of anti-doping regulations.

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INTRODUCTION

There have been multiple attempts at defining the act of doping. In its essence, doping is considered to be ingestion or use of external substances with the intention of enhancing one's performance. This, however, results in an unfair advantage to the athletes who indulge in doping over the ones who believe in the notions of honesty and fair play. Regardless of the ethical issues doping poses, it also displays a crucial risk to the health and lives to those indulged in doping. To some sportspersons, doping might appear to be a necessary evil, thus making them compromise their morals, ethics, and health for the sake of achieving victory. To level the playing ground and thus protect the ideology and spirit of sports along with preserving the lives of gifted sportspersons, the WADA introduced the World Anti-doping Code (2003), which dictates what actions constitute the act of doping as well as provide guidelines regarding the inhibition of doping and its consequences. It imposes heavy

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penalties upon athletes who are involved in consistent violation of the code. Such as held in the arbitration between *World Anti-Doping Agency (WADA) (Montreal, Quebec, Canada) versus Ms. Marzena Karpinska, and Polish Weightlifting Federation (Warsaw, Poland)*, the athlete had tested positive for 19-norandrosterone and was initially banned for 2 years, but the term was reduced by an appeal to the Board of PWF; however, the Court of Arbitration for Sport favoring WADA's appeal and imposed an additional 8-month ban on the first respondent.[3] In another case of *WADA versus Nirupama Devi Laishram, NADA (India)*, the athlete had tested positive for methylhexanamine from her urine samples during an in-competition test. The Anti-doping Disciplinary Panel of India had let her off with just a reprimand. The CAS set aside this order and upheld the appeal of WADA, sanctioning the athlete with a 2-year period of ineligibility from the date of award, and forfeiture of all awards won from date of sample testing.[4]

The consumption of any substance may or may not fall under the concept of doping (in a philosophical stance), depending on the intention of the athlete as well as the vague criterion provided by WADA that constitute the spirit of sports.[5] There has still been a spike in cases of doping regardless of the strict regulations due to poor planning or lack of proper execution. However, with continuous, harmonious effort between the national and international institutions and the public, there is a highly favorable probability that the practice of doping can be predominantly eradicated.

HISTORY OF DOPING

Doping was evident in third century Greece where Olympic players ingested substances to boost their performances and to overcome fatigue and injury. Chinese physicians have proposed the use of Ma Huang (an extract of Ephedra which was used to improve circulation) to enhance performance dating back to 5000 years. The organs of animals and humans were ingested to improve strength, vitality, virility, and bravery by the Huns before engagement in battles. Zulu warriors prepared stimulants of grapes as part of religious practices, called "dope."[6] The Roman Empire foresaw the ingestion of various combinations of performance enhancers by gladiators and racing horses.[7] Doping substances became common during World War II and were also used through the middle ages to the modern era with the consumption of alcoholic beverages and stimulants such as cocaine and caffeine in various combinations. "Elixirs" were introduced as stimulants made from the testosterone extracted from various animals such as dogs, rabbit, and sheep to "embody the essence of animal energy."[8] In the later years, the International Olympic Committee introduced drug testing in the year 1968 during summer and winter Olympic sessions.[9] Anabolic steroids were banned after a reliable testing method was developed and the late 1970s witnessed a huge number of doping-related disqualifications. WADA, NADA, and other authorities have continued to test and detect an increased number of fresh cases of doping in sports. The International Convention Against Doping in Sport was introduced in 2005 (W.E.F 2007, February 1) to make a combined effort to combat doping at an international level. Therefore, there has been an immense tug-of-war between the practice of doping and the efforts to combat it for generations and it does not seem like ending imminently.

CHALLENGES TO COMBAT DOPING

Adding to the concerns, since the stimulants are easily accessible without prescription to the general public, doping is now not only a menace in competitive/professional sports but also to the recreational sports for the aesthetic aspects.[10] We witness a lack of financial resources to implement the current anti-doping policies. Micro-technology should be efficiently deployed to make Athlete Progress Monitoring effective by complementing performance and physiological biometric data with the ABP.[11] There is ambiguity in the anti-doping policies that cause unwarranted hindrances to the athletes which should be addressed. Case in the instance, *WADA, and IAAF versus United States Anti-doping Agency (USADA), and Lindsey Scherf,* where the issue of health and participation was involved. WADA's appeal was dismissed by the CAS considering Ms. Scherf's circumstances, and instead, WADA, IAAF, and the USADA had to contribute a total of $6000 toward her costs.[12]

CONCLUSION

Efforts from multiple organizations and governments worldwide have been provided fruitful in the curbing of doping activities in sport, but just as efficiently, there has been a rise in doping as athletes come up with ways to cheat the system.

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4 CAS 2012/A/2979 WADA v. Nirupama Devi Laishram and NADA

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12 CAS 2007/A/1416 WADA v/ USADA and Scherf

It is a battle that has not ended yet and hence a definitive conclusion cannot be given other than creating awareness of this prevailing evil in the glorious world of sports.

SUGGESTIONS

It is imminent to forge cooperation between the various International Federations, sports physicians, biomedical staff, and National Anti-doping Agencies to come up with out-of-box, cost-efficient ideas to curb doping and for anti-doping testing procedures to be equipped with latest tools and equipment along with frequent updates about the developments in the field of biotechnology. It is also crucial to promote anti-doping education amongst upcoming/aspiring athletes to ensure that they are aware of all the risks and consequences entailing the practice of doping. Athletes should be frequently provided with psychological support to overcome their motivation toward doping.

Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Health and physical education: From the student's perspective!

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ABSTRACT

Health and physical education is a very important subject in the school curriculum. At the same time, the contribution of health and physical education in the overall development of students is great. However, due to the inclusion of various subjects in the school curriculum, various researches have shown that health and physical education are not given much importance by parents and headmasters. However, in order to know the opinion and expectations of the students regarding health and physical education, focus group interviews were conducted with 750 students of class V to VIII in Kataria High School, Pune, Maharashtra. It showed that there are regular classes of physical education in the school, students play games like dodgeball, kabaddi, kho-kho etc. during physical education class, and students expect teachers to teach new games during physical education class.

Keywords: Health and Physical Education, Focus group interview

INTRODUCTION

Physical education is education through physical movements – team spirit, obedience discipline, sportsman spirit, socialism, self-reliance, etc. Physical education contributes to the development of these qualities. Physical education is important not only for psychomotor development but also for cognitive and emotional development. Therefore, physical education is an integral part of the overall education process. Swami Vivekananda has said, "If you want to understand the Gita, you have to play football on the field." Thus, the importance of physical education has been explained by various education experts and through research. However, day by day, new subjects are being introduced in education, the policies of the government are changing, the marks have gained very much importance in the education process; therefore, the subject of physical education is being somewhat neglected.

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Physical education is not one of the priority subjects in the overall education process. Therefore, various surveys have shown that physical education is not given much importance from the point of view of the heads of institutions, headmasters, and parents.

But what do school children think about physical education? What are their expectations? Are there classes of physical education in school? How many are there? Are there physical education exams? Researchers were asked some questions, such as "Do students get equipment for physical education classes?" And a survey was conducted to find out the answers. So that they understand the current state of physical education

in the school, understand the expectations of the students and thus make it easier to plan physical education.

Procedures

Focus group interviewing technique was used to collect information from this research paper. There were 20–25 students in one group. They were asked eight questions about the implementation of physical education, preferences, and expectations. Seven hundred fifty students from Class V to VIII of Kataria High School of Maharashtriya Mandal were selected as the sample in this research paper. These schoolchildren were divided into small groups and for each of these groups, 4–5 second year MPEd students of Chandrashekhar Agashe Physical Education College were assigned to one school group. In it, some students were interacting with school children and asking questions, while some students were taking notes of students' responses.

Findings

1. There are regular classes of physical education in school.
2. Physical education takes 3–4 classes a week.
3. Physical education classes include playing games such as langadi, dodge ball, ten passes, kabaddi, kho kho, football, and volleyball.
4. Asked what kind of game they would like to take during physical education, the students said that they should take football, cricket, kabaddi, volleyball, and football.
5. There are various expectations from the physical education teacher of the students such as teaching new games; take the physical education classes to the field.
6. Physical education classes should be used for physical education only; physical education classes should not be used for subjects.
7. Physical education classes should be daily.
8. Providing information about careers in sports.
9. All the students replied that they do not get equipment for physical education classes.
10. Asked if there were physical education exams, some students said they did, while others said they did not.

DISCUSSION AND INTERPRETATION

In the present age of technology, students can use mobiles, TVs, computers, etc. It is certainly hopeful that students should have an hour of physical education and that it should be done regularly, despite the association of literature. The survey also found that despite the multitude of different subjects involved in the education process, three to 4 h of physical education are regularly taken up in a week. Despite the lack of sports equipment in the school, students play outdoor games such as football, kabaddi, kho kho, and volleyball during their physical education hours. The meticulous planning of the physical education program, effective implementation, innovative initiatives, student-centered teaching style, adequate materials, and enthusiastic physical education teachers all combine to make effective implementation of physical education and contribute to the holistic development of students.

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Volume 39 • Issue 1 ISSN 2231-3265

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International Journal of Health, Physical Education and Computer Science in Sports
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Research Article

Obesity: A perspective study

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ABSTRACT

Obesity means having too much body fat. It is not the same as being overweight, which means weighing too much. A person may be overweight from extra muscle, bone, or water, as well as from having too much fat. Both terms mean that a person's weight is higher than what is thought to be healthy for his / her height. If a person's body weight is at least 25% higher than normal then it should be, considered as obese.

Keywords: Body mass index (BMI) Genetics/Heredity, Metabolism, Dietary fat, Body fat, Medical Complication

INTRODUCTION

What is Obesity?

Obesity is one of those words that you hear used on the news all the time. You have a general idea of what it means. But are you right? Medically, someone who is obese has more fat on his or her body than is considered a healthy average for his or her height and bone structure.

What about Fat?

To understand obesity, you have to understand fat. However, fat is another term that can be confusing because there are two different kinds: Dietary fat and body fat.

Dietary fat is a part of the food. You want to have a little bit of fat in your diet because it serves as a major source of energy for your body. It is used to make cell membranes and compounds in your body that control blood pressure, heart rate, blood clotting, and other body functions. It carries certain vitamins from your food throughout your body. Fat gives you healthy hair, skin, and nails. In infants and toddlers, it helps the brain develop. Fat also helps you to feel full and tells your brain that it is time to stop eating.

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Body fat is a part of the human body and what scientists mean when they refer to a person's weight or body composition. Your body needs to have a certain amount of body fat. It acts like a blanket to keep you warm.

HEALTHY WEIGHT

The key to overcoming obesity is understanding what weight is healthy for you. But how do you find out?

The most common way to determine a healthy weight for a person is using a tool called the body mass index (BMI). The BMI compares your weight to your height to figure out whether you are too heavy for your height.

The BMI does not measure how much of your weight comes from your muscles compared to how much comes from fat, though. If, for instance, you are an athlete taking part in a

sport every day for several hours, the body mass index cannot tell that much of your extra weight is in your muscles. For that reason, some people prefer to use other tools to measure body fat.

Some doctors use body fat percentages to measure body fat. This method uses measurements of weight, height, and the amount of fat on different body parts to estimate body fat percentages. Men and women need different amounts of fat in their body. Women's muscles do not have the same mass as men's, so their body fat percentage is higher.

For the body to work properly, men's body fat should not drop below 2% of their body composition. Women's should not be <10%. If a person's body fat percentage falls below those numbers, the body will not work right, and the person may have health problems, such as heart disease and infertility.

Ideally, people who exercise regularly and eat a balanced diet will have a body fat percentage that is neither too low nor too high. For women, body fat should not be more than 25% of their total body. For men, it should not be more than 17%.

An obese person has a high amount of body fat. Women with more than 32% body fat are considered obese, as are men with more than 25%. Figuring out your body fat percentage uses a complicated math formula. Health-care providers can give you an estimate using calipers or tools that measure body fat in an area. You also can find calculators on the Internet. The use a calculator asks for at least three measurements to get the most accurate number. You may need to know your height, your weight, and the measurement in inches around the widest part of your forearm (the arm between the wrist and elbow), your waist, and your hips. If you are using a computer in a public place to find out your body fat percentage, you may want to take these measurements at home or in a private place like a restroom.

CHILDHOOD OBESITY

Obesity is not just a problem for adults. Teenagers, adolescents, and even preschoolers are beginning to show signs of obesity in greater and greater numbers. Fifteen percent of children and 16% of teens were obese in the year 2000. An additional 15% of children and teens are at risk for becoming overweight.

Childhood obesity has real-time effects in everyday life. Children need exercise and healthy foods to grow and learn. Kids who go without healthy, balanced meals during their growing years, are likely to suffer a number of problems, including fatigue (keeping them from concentrating and learning) and poor cognitive development (affecting their performance in school). Children need a proper diet of nutritious food to stimulate growth and to give them energy. Breakfast is particularly important to sustain a child's ability to concentrate at school.

Unfortunately, children today get much less exercise than in previous generations. While your mother may have walked to school every day, your children now ride the bus or in a car. Your father played stickball or tag after school; now, kids play video games or are on the computer or watch TV. Many schools have tried to avoid cutting lesson time by cutting gym classes or recess instead. Without proper time for exercise, children can become overweight. It can also lead to problems focusing in class, with some kids acting tired and others being hyperactive.

MEDICAL COMPLICATION DUE TO OBESITY

High Blood Pressure

Obesity is a key risk for high blood pressure (also called hypertension).

Every time your heart beats, it pumps blood through arteries, exerting pressure (or force) on the inside of your blood vessels. This is called blood pressure. Normal blood pressure is below 120/80. (the two numbers reflect the measurements of the pressure in the arteries when the heart is pumping and when it is resting)

High Cholesterol

Because overweight and obese people often eat diets high in saturated and trans fats, they often have high cholesterol levels. Roughly a quarter of those who are overweight or obese has high cholesterol.

Stroke

A stroke is what happens when an artery carrying oxygen to the brain bursts or becomes blocked by a blood clot or some other particle. The brain does not get enough oxygen and its nerve cells begin to die. The nerves in the brain control different parts and functions of the body and if the nerves die, then those parts or functions do not work right. Obesity can cause the risk factors for stroke – high blood pressure, diabetes, high cholesterol levels, and heart disease – as well as being a risk factor itself. Stroke is the number three killer among all diseases.

Arthritis

Obesity has been linked to osteoarthritis and gout.

Arthritis is pain, swelling, and stiffness in the body's joints, which causes permanent damage to the joints. Osteoarthritis is the most common kind of arthritis and usually affects older people. Obesity can cause it to happen earlier. Obesity particularly affects osteoarthritis in the hands, hips, back, and knees. It is possible both to keep osteoarthritis in the knees from getting worse and to get rid of symptoms of the condition by losing weight.

Cancer

Obesity is a risk factor for several types of cancer. They include post-menopausal breast cancer, kidney cancer, esophageal cancer, colorectal cancer, and endometrial cancer. Obesity and a lack of physical activity may account for 25–30% of these cancers. Some studies have reported links between obesity and cancers of the gallbladder, ovaries, and pancreas. Other cancers – including the liver, stomach, prostate, and cervix – have a higher death rate for those with a higher BMI.

HOW TO BE HEALTHY

Understanding what causes obesity is key to knowing how to prevent it in the first place. The good news are that obesity is both preventable and treatable. It is much easier, however, to prevent it than it is to treat. If you are not overweight or obese, now is the time to find out how to stay that way. If you are already overweight or obese, and you want to make changes to your lifestyle, there is no miracle cure, no magic pill that will change your weight or body type. However, making changes to your diet and exercise and eating habits will allow you to safely and gradually lose weight.

Exercise

The first step to preventing obesity or losing weight is exercise. Your body works best when the number of calories you eat and the number of calories you use up are nearly the same. The best way to use up lots of calories all at once is to exercise.

Your body will just use up active calories in the first 20 min of working out. To use up stored fuel (or fat), you need to work out for more than 20 min. For this reason, it is better to exercise in larger chunks of time. If, however, you do not have large chunks of time available, exercising in ten-minute bursts is better than nothing at all.

To stay at your current weight, you should do at least 30 min of moderate-intensity physical activity, such as swimming or brisk walking, every day. During moderate-intensity activities, you should be able to talk without a problem. This level of activity will use up the calories in a healthy diet. If you want to prevent gradual weight gain or if you need to lose a little bit of weight, you should do an hour of moderate- to vigorous-intensity activity every day. This level of activity leaves you out of breath at the end.

Good Nutrition

The government has changed its recommendations about food over the years as we learn more about the science of nutrition. An average diet should include 2000 calories a day. Based on your weight, your weight goals, and your physical activity level, you may need fewer or more calories. Do not forget to include any drinks (other than water) that you have when you are figuring out your daily calories. In fact, water is a good place to start when planning a healthy diet, while there is no one number that fits everyone, scientists suggest people aim for 48–64 ounces of water a day (Some scientists suggest that you can find the right amount by dividing your weight in pounds in half and drinking that many ounces). You can consume water in other ways (some fruits and vegetables, fruit juice, coffee, soda, and milk are high in water content), but many of those other drinks are high in calories, caffeine, or sugar. In addition to cutting calories, by drinking more water you can help decrease your appetite. The body's signals that it is hungry or thirsty are very similar, and drinking a glass of water as a first response can be a good step toward limiting the amount of food you eat.

CONCLUSION

Good habit and good nutrition's are key essence to have a good healthy body. Body mass index is not a threshold limit for height-weight indices, but is the marked level to have good healthy body. Obesity elimination will rejuvenate the body and helps us to lead healthy life. Regular physical activities, exercises, positive attitudes, yoga, and good food will serve you to eliminate obesity and makes you healthy.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Women in sports, challenges and the law in India

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ABSTRACT

Will she discontinue her studies to play Kabbadi? Does she have a future in this? When are you going to get your daughter married? Won't she be abused or harassed if she moves on to another city? Where are we going to find money to purchase supplements and fees for training? These are the common questions the Indian society shoot on the women athletes or to their parents directly. Living in the 21st society, where we have devised the technology to go to space, there is still one aspect where we fall grossly short, that is, when it comes to the progress of gender discrimination between men and women. The sex-ratio of India stands as evidence for this. Women, especially in India, are still viewed as the "weaker sex" and this mentality continues to impact women in a big way, especially in the arena of sports. The authors have chosen this particular theme for the reason that Indian women, even today, face challenges which are hindering them to achieve greater feats in pursuit of their goals. The study addresses the constitutional and other legal corners of which are to be effectively implemented to reduce, and in the long run, eliminate these problems from the grass-root level to bring women athletes to equal footing with that of their male counterparts and has concluded with few suggestions.

Keywords: Challenges, Discrimination, Law, Sports, Women

INTRODUCTION

"The public needs to know that female athletics is just as important as male athletics. Without this understanding, the sports world will continue to justify the pay gap and other inequalities." – Marlee Burridge[1]

Gender discrimination is rampant even today and is a deep-rooted belief in our culture. Women, particularly in India, are still viewed as the "weaker sex," and this mentality has continued to impact them in a big way, especially in the arena of sports. Women athletes are not really given the light of day unless they win big. Some people justify it by saying that women's bodies are not really built for sports, or that they are not so much into sports anyway. However, the results speak for itself. Indian women athletes have shown exemplary results in various fields of sporting and have made us proud by exhibiting their talents by bringing home various laurels and titles. Their podium finishes have inspired the budding athletes all over the world. Athletes such as Saina Nehwal, Deepika Kumari, Manu Bhakar, Smriti Mandanna, M.C Mary Kom, Mira Bhai Chanu, Sania Mirza, P.T. Usha, Vinesh Phoghat, and Manika Batra are undoubtedly our pride!

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CHALLENGES FACED BY WOMEN IN SPORTS

1. Women athletes are objectified on the field and subject to sexual harassment. The value of the female athlete is often

determined in terms of her body, attractiveness, and sex appeal, rather than in terms of qualities that define her as an athlete. *Kaveri Prakash*, a young, bright female athlete, is a prime example of women who faced adversities related to participating in sports in India due to a lack of finances and instances of sexual harassment[2].

2. Family, cultural, and religion background of Indian society, where the families discourage and assert that arena has no future and has stereotypic perceptions on how an "ideal" woman should be. Female athletes are frequently questioned on when they will start a family or will be forced to retire so that they can be married off and have secured a future.
3. Women athletes are paid less and do not have job security. Once they have passed their prime, or retire, they do not know how they will support their families.
4. Economic constraints are considered the most important factor that hinders the women participation in sports. Lack of sponsorship and poor financial background hinders them to actively engage and compete in competitions. Further, women sporting events receive less coverage from the media when compared with that of the men category.

III. WOMEN IN SPORTS AND THE INDIAN LAW

- In India, laws with specific focus on sports are still not formulated. However, the Indian constitution guarantees certain rights which are fundamental in nature – Articles 14[3], 15, 16[4], and 21[5].
- In the case of Vishaka V. State of Rajasthan[6], the Hon'ble apex Court has highlighted the guidelines to prevent and address the issue of sexual harassment at the workplace**.**
- The National Policy for Empowerment of Women, 2001's – The objective of this policy is to include development of women, enjoyment of all fundamental freedoms, equal access to participation, and decision making in healthcare, quality education, employment, and elimination of all forms of discrimination against women, changing societal attitudes, and elimination of all forms of violence against women India is also a signatory to CEDAW[7] –

1. Article 10(g) of CEDAW states that: "Each party shall take all appropriate measures to eliminate discrimination against women and to ensure to women equal rights with men in the field of education and in particular to ensure, on the basis of equality of men and women.....the same opportunities to participate actively in sports and physical education."
2. Article 13 of CEDAW states that: "States parties shall take all appropriate measures to eliminate discrimination against women in other areas of economic and social life in order to ensure, on a basis of equality of women and men, the same rights in particular.....the rights to participate in recreational activities, sports, and all aspects of cultural life."

CONCLUSION

Specific and effective legislation and formulation of new policies are the need of the hour through which the government must ensure the compulsory participation of women in sports at all levels, especially schools, colleges, etc., which effectively paves the way for tackling discrimination. Holistic approaches, such as sexual harassment prevention, and health issues, must be taken into consideration and must not be limited only to ensure and promote equality.

SUGGESTIONS

1. A "women-centric" approach is to be adopted. An atmosphere should be created where women feel physically and emotionally safe, which has freedom of expression which is not subdued by male dominance. Female coaches, trainers, and referee pool to be developed so that families feel secure to allow their daughters to be a part in National and International athletics meet and events.
2. Job security is one such issue which is to be addressed properly. Women must be recruited in important positions of authority in sports governing bodies to set examples.
3. Students and parents must be educated that the restrictions of physical attributes should not be made a barrier to women participating in sports and they must be actively encouraged to engage in sporting activities from the school level.
4. Guidelines of sexual harassment, as laid down in the *Vishaka* judgment and other laws to reduce gender discrimination, must be implemented effectively to fulfill the goals envisaged in the preamble of the constitution.

To conclude, we must ensure that nothing stands in their way, whether it is a handicap, motherhood, or failure. Success will always be ours if we persevere and push them with all our might because the reward is not so great without the struggle.

ENDNOTES

1 Columnist of The Michigan Daily
2 http://www.playthegame.org/upload/magzine2007/pdf/pages/playthegamemagzine07pg30to31pdf - K.Sparre 'India lacks structure to nurture athletes',
3 State shall not deny to any person, equality before law and equal protection of laws within the territory of India.
4 Prohibits discrimination on the basis of gender
5 Right to life and personal liberty
6 (1997) 6 SCC 241 - The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013
7 Convention for Elimination of all kinds of Discrimination against Women

Volume 39 • Issue 1 ISSN 2231-3265

International Virtual Conference on
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Fitness and Sports Science Association

International Journal of Health, Physical Education and Computer Science in Sports
A Peer Reviewed (Refereed) International Research Journal - ISRA Journal Impact Factor 7.217

Research Article

The influence of psychological skill training program to enhance the self-esteem

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ABSTRACT

The present study aims to examined the influence of psychological skills training (PST) program to enhance the self-esteem ($n = 50$), aged ranged 12–16 years. PST program was administered for 12 months, the total of 48 sessions was conducted for each student, 4 sessions in month and 1 session a week of 30–40 min. Pre-data were collected before administration of PST program and post-data were collected completion of 12 months training program using self-esteem scale (Rosenberg, 1965).[6] Statistically analyzed by employing descriptive statistics, paired *t*-test at the level of significance 0.05. The obtained result indicated that students have improved their self-esteem after undergoing the planned PST.

Keywords: Psychological skill training, Self-esteem

INTRODUCTION

Psychological skills training (PST) also called a mental training it's referring to well-planned and regular practice of mental skills to achieve advance performance, enjoyment, and physical activity. The specific skills of a psychological training differ in some of these skills indulge imagery, setting of goal, attention, self-talk, anxiety, and confidence.

PST interventions predominantly emphasis on the single psychological skill (Wann, 1998). Last 20 years composite PST package programs enlarge, execute, and evaluated. This program focuses to improve many psychological skills and offer optimal training (Macdougall, 2001) (Wann, 1998).

Self-esteem is a person's inner appreciation or assessment of himself or herself. It matters because people who do not value themselves – who have low self-esteem – treat themselves and others badly. Thus, low self-esteem can be seen as a major factor in abuse, addiction, crime, depression, loneliness, low educational achievement, mental illness, and unhappiness. People high in self-esteem are often creative, joyful, and fun to be with and productive.

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METHODOLOGY

Participants

A total of 60 students from Jawahar Navodaya Vidyalaya, age ranged 12–16 years were randomly selected for the study from

Table 1: Descriptive statistics of paired self-esteem

Performance	Mean	*n*	Std. deviation	Std. error mean
Pre	19.11	50	1.32	.19
Post	27.35	50	1.31	.19

Table 2: Analysis of paired *t*-test of self-esteem within pre and post scores

Performance	Paired differences					*t*	Df	Sig. (two tailed)
	Mean	Std. deviation	Std. error mean	95% confidence interval of the difference				
				Lower	Upper			
Pre-post	−8.25	1.44	0.21	−8.65	−7.84	−40.56	49	0.001*

*P<0.05

those who have voluntary participated and written consent was taken from them.

Criterion Measure

Self-esteem scale (RSE) developed by Rosenberg, 1965[6] is a 10 items scale to be answered on five Likert-type scales from 1 (strongly disagree) to 5 (strongly agree). Example of items: "On the whole, I am satisfied with myself". The scores range from 10 to 50, with higher scores indicating higher self-esteem to be filled by students who were used to measure the self-esteem.

Preparation of PST Program

PST program was designed with the help of various experts. Sequence of training was changed after completion of 2 months to avoid carry over effect. Different specific exercise was selected for each variable and implemented to see the progressive effect of training for 12 months. The selected training items were planned and specifically designed to improve the PST of these subjects.

Administration of the PST Program

PST program on various factors was administered for 12 months, the total of 48 sessions was conducted for each student, 4 sessions in month and 1 session/week of 30–40 min to develop the self-esteem of the student. The PST was planned 1 session/week in between the session's students provide sufficient recovery.

Self-esteem questionnaire was filled at two stages pre-data were collected before begin the PS program and post-data were collected after finishing the 12 months training program.

Collection of Data

Pre-data

Pre-data were collected before administration of PST program, questionnaire was circulated around the participants. For gather the accurate response, mentor was described all the questions to the students. Collected the pre-data evolution, on the basis of random sampling, participants was selected.

Training program

During the 12 months of PST program, we were prepared monthly recording for the performance of the students.

Post-data

After successfully complete of 12 months psychological training program, again the questionnaire was filled up by the students for assessments of post-test performance of all selected students for assessments of psychological skills.

Statistical Analysis

In this study, paired *t*-test was used to the effect of 12 months PST program for the development of self-esteem. The level of significance at 0.05.

RESULTS

Table 1 explains the descriptive analysis of the self-esteem score of pre- and post-training program. It represents pre-test mean is 19.11 (standard deviation [SD] 1.32), whereas the post mean shows 27.35 (SD 1.31), respectively.

The paired *t*-test analysis was computed to check whether there was any statistically significant difference between pre and post self-esteem scores. Result is shown in Table 2.

Table 2 shows that the obtained paired value of self-esteem scores in pre- and post-training. As the calculated *t*-value (−40.56) was noted to be higher than the tabulated *P* value (0.001), the pre-test and post-test show statistically significant differences at 0.05 level of significance.

DISCUSSION AND CONCLUSION

The present study concludes that there was a significance difference found due to 12 months PST program on self-esteem. The obtained result indicated that when students go through specific PST program to get better results in self-esteem. Since SPSS provides significance value of two-

tailed testing, no more conclusions can be drawn about PST of self-esteem. However, to conclude, the PST program was effective or not, one-tailed test should be used. Where null hypothesis may be rejected and it can be concluded that PST program was effective to enhance the self-esteem.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Stress and personality in female adolescents

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ABSTRACT

Background: A state of physical and emotional tension is termed as stress. Moreover, perceived stress is the feeling when an individual has thoughts on how much stress is he or she under at a point of time. In adolescents, a person goes through many changes such as neurological, hormonal, psychological, and social. Adolescents have to deal with various stresses; therefore, adolescence is a time of stress and storm. Personality refers to individual differences in characteristic patterns of thought process, feeling, and behavior. **Aim:** The purpose of this study was to examine the level of perceived stress in different big five personality traits. **Design:** A descriptive correlation design was used in this study. **Subject:** Thirty female students, age ranges from 16 to 18 years from humanities of class 12th from a Senior Secondary Govt. School, Delhi, were randomly selected as the sample of this study. **Tool:** Perceived stress scale and big five personality test were used in this study. **Result:** Correlation shows that all the personality traits have a negative relation with stress, which means higher the personality trait lower the stress. Neuroticism personality trait has a negative correlation with the minimum difference among all, whereas agreeableness personality trait has a negative correlation with the greatest difference score, which reflects higher the agreeableness trait lower the perceived stress. Conscientiousness personality trait also has a negative correlation with the second maximum greatest score and very close to agreeableness, which also shows that higher the conscientiousness trait lowers the stress. Finally, openness to experience and extroversion personality traits are on third and fourth position to negatively correlate with stress. In this study, correlation is significant at the 0.05 level. **Conclusion:** Higher the agreeableness, conscientiousness, openness to experience, and extroversion may lead to lower stress, whereas neuroticism personality trait leads to higher stress.

Keywords: Stress, Personality, Female, Adolescents

INTRODUCTION

Stress

A state of physical and emotional tension is termed as stress. Any thought or event that causes frustration, anger, or nervousness can cause stress. It can broadly be classified into two categories:

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Acute stress

This type of stress is usually short term and goes away soon. It may occur when you have a fight with your partner, when you slam on the brakes or when you ski down a slope. It helps you tackle different situations. Something exciting or new may also result in the same. In general, all people of all ages experience this type of stress.

Chronic stress

This type of stress is lasting for a longer period of time, chronic stress may be experienced when you have financial problems,

an unsatisfactory marriage, or having trouble at work. This usually lasts for weeks or months. This lasts so long that you get used to it. You do not even get to know that it is a problem. If not found a solution, chronic stress can lead to many health issues (Midline plus U.S. National Library of Medicine, 2020).

We all experience both good and bad stress – an optimal amount of stress needed for motivation and encouragement is good stress, which makes us energized. It helps to develop coping strategies which help us face our challenges, which in turn adds to our resilience. When our coping strategies are overwhelmed, be stress, bad stress occurs. We are not at our best at this time. It may affect both children and adults. A carnival ride may be thrilling for a person and a stressful for the other. Stress turns into distress when we are unable to pace up with the situation or we think that we do not have the caliber to meet the needs of the challenge. All we need to do is to adapt, change, and develop methods to turn bad stress into a good one (Bradley Hospital).

The feeling when an individual has thoughts on how much stress is he/she under at a point of time. It brings uncontrollability and unpredictability in one's life, how a person needs to deal with the circumstances or the change in one's life. It is all about how a person feels about stress and his/her ability to deal with it. People may suffer from parallel negative thoughts but appraise the impact of severity of these as a result of factors including personality, support, and coping mechanisms (Phillips, 2013).[19]

Stress and Your Body

Hormones are released by your body under stress. They make your brain more alert, increase your pulse rate, and cause tension in your muscles. In the short term, these are good as it is your body trying to protect itself. However, when you have chronic stress, your body stays alert, and over a period of time, it puts your health at risk and may cause problems such as:

- Heart disease
- High blood pressure
- Depression or anxiety
- Obesity
- Diabetes
- Menstrual problems
- Skin problems, such as acne or eczema.

If you are already suffering from some health condition, chronic stress can make it worse. (Midline plus U S National Library of Medicine, July 2020).

Stresses in Adolescents

There is no denying that stress occurs, though its types and our responses to it changes throughout. Adolescence is a period when both of these aspects are in flux. Although we appreciate that stress changes in adolescence, we fail to appreciate how we respond to it (Russell, 2013). This is an important stage in the developmental period. A person goes through many changes such as neurological, hormonal, psychological, and social. Adolescents have to deal with various stresses such as physical and sexual changes, demands, friendships and problems, career, and work. Some teenagers have to also deal with unusual stress such as the death of a loved one, alcohol abuse, and divorce. Therefore, adolescence is a time of stress and storm, a period where children are often at conflict with their parents (Krapic *et al.,* 2015).[14] Some reasons for stress in adolescence are:

- Pressure to wear a certain type of jewelry, clothing, or hairstyles
- Career decision and school
- Friendships and dating
- Pressure to experiment with alcohol, drugs, or sex
- Peer and family conflicts
- What to do after school or to find summer jobs
- Sexual harassment or exposed to violence or being bullied
- Hectic schedules, school juggling, after school activities, sports, family, and social life responsibilities.
- To deal with cognitive and physical changes during puberty
- Pressure to achieve a particular body shape or size with girls, major focus is usually to have desired weight; and in boys, it is often to have an athletic body or certain muscular physique (Bradley Hospital).

Personality

To describe one's overall character is to describe one's personality. According to the American Psychological Association (2015),[3] "It refers to individual differences in characteristic patterns of thought process, feeling, and behavior." The mood describes emotions that stay comparatively stable across a period of a few days, while the emotions may fluctuate overtime (Hill, 2012). Personality is said to remain even more stable and is usually believed to remain consistent after adults reach a certain age (McCrae and Costa, 2003).[16] Especially, neuroticism, extroversion, and openness to experience tend to deteriorate over the lifespan, while agreeableness and conscientiousness tend to develop more. It implies that these changes are not because of cultural influences, but it is because of the process of aging instead (McCrae and Costa, 2003).[16]

Personality and Stress

As McCrae and Costa (2003)[16] emphasized, personality for how an individual experiences his/her life and he handle his stressors has strong implications of personality measures. For example, according to Abbasi (2011),[2] neuroticism "means a predisposition toward experiencing tension, self-pity, anxiety, hostility, self-consciousness, impulsivity, irrational thinking, depression, and low self-esteem." Moreover, it is associated with "inefficient ways of coping with stress" (Abbasi, 2011).[2] Neuroticism includes two poles of a single

dimension: Emotional stability and negative emotionality" (Abbasi, 2011).[2] Therefore, individuals with higher levels of neuroticism are likely to experience anxiety, stress, and negative emotionality. Hence, personality traits are embedded into a person's inner personhood and deeply affect how he/she experiences the world. Furthermore, this implies that personality influences how people perceive and experience stress.

Klimstra *et al*. (2010)[13] observed and examined the relationships between the big five personality factors and depression. While depression is not equivalent to stress, but stress definitely plays a crucial role in the experience of depression. This author also found negative connections between agreeableness, conscientiousness, emotional stability, and depression. However, he found no association between openness to experience and depression. This research implies that people with higher levels of agreeableness, conscientiousness, and emotional stability (therefore, lower levels of neuroticism) are less likely to experience depression.

It is apparent that there is a relationship between personality and stress. Furthermore, many researchers have concluded that certain personality factors, how often people are to experience stress, and how, in reality, they actually experience it. Moreover, as everyone has a different personality trait, that's why stress works differently on each individual.

This study will also take into account a more general experience of perceived stress and big five personality trait in particular.

Aim of the Study

The purpose of this study was to examine the level of perceived stress in different big five personality traits of female adolescents.

METHODOLOGY

Sample

A total 30 female students enrolled at the session 2019–2020 age ranges from 16 to 18 years from the humanities of class 12th from a Senior Secondary Govt. School, Delhi, were randomly selected as the sample of this study.

Measures

Two tools were used for this study

Tool I: Perceived stress scale (PSS)

The PSS was established by Cohen *et al.* (1983) and it was then revised by Cohen and Williamson in year 1988 and included only 10 items. The answers are assessed on a five-point Likert Scale where (0) represents "never" to "4" represents "very often." In this scale, four statements are negatively stated, therefore reversely scored and by adding all item scores, the aggregate score is obtained. It ranges from 0 to 40, with lower scores showing lesser perceived stress. Total scores from 0 to 7 referred to a very low level of perceived stress, scores from 8 to 11 are considered as having a low level of perceived stress, scores from 12 to 15 reflect the average level of perceived stress, scores from 16 to 20 referred as a high level of perceived stress, and scores from 21 and more represents a very high level of perceived stress. By the original authors, the PSS has been verified for its reliability and internal consistency. A coefficient cornelian for the entire instrument was 0.85 and Cronbach's alpha was 0.87.

Tool II: Big five personality test

The big five personality test was developed by Goldberg (1992). This scale comprises total 50 statements (10 statements for each personality trait) to measure the level of different traits of individual's personality. Extroversion (E) describing the personality trait of seeking success from sources outside the self. The one who score low in this trait gives preference to complete his task alone while the one who score high tends to be a very social person. Agreeableness (A) personality traits measuring individuals' behavior suitable to adjust with others behavior. People who scores low in this are tend to "tell it like it is" type while people who score high are quite well-mannered and like ones. Conscientiousness (C) reflects the personality trait of being hardworking and truthful. Low scorer people in this are fraud to others and disorganized people while high scorers are prefer to follow the rules and keep their homes clean. Personality trait neuroticism (N) related to the personality trait of being emotionally unstable. Openness to others (O) describes the personality trait of people who are intellectual chasers and seeking a new experience. Low scorer people are quite down to earth, while high scorers are daydreamer people.

The responses of this scale are rated on a five-point scale from (1) indicating "disagree" (3) indicating "neutral" to (5) indicating "agree" in which 24 statements are negatively stated and reversely scored. The total score of each personality trait is measured by summing up all the scores obtained into that particular trait. Every trait denotes a range and an individual can lie anywhere in the range for each trait. The internal reliability of extroversion, agreeableness, openness to experience, and conscientiousness was moderate and Cronbach's alpha = 0.63, 0.58, 0.54, and 0.6,9 respectively, but neuroticism represents low internal reliability and Cronbach's alpha = 0.31.

Procedure

Of 154 enrolled students in academic session, 2019–2020 in arts stream for 12th class, Govt. Girls Senior Secondary School, after the completion of their final practical exams and just before their final board exams, a representative sample of 30 students (10 from each section) were selected through systematic random sampling method. The researcher collected the data by meeting them in their classrooms after clearly

explaining them about the purpose of the study, how to answer and way to fill up the tools. The researcher ensured them about the confidentiality and anonymity of their responses. Then, the researcher distributed both the tools to all the participants and asked them to fill up the tools from the best of their knowledge, simultaneously explaining the statements which were difficult for them to understand. The questionnaires were filled up within ½ h, after which the researcher collected both the questionnaires.

Statistical Analysis

The collected data were reviewed, arranged, aggregated, coded, computerized, and then analyzed using SPSS program version 23. Following statistical analyses were done:

1. Descriptive statistics included mean, standard deviation (SD), range, minimum, and maximum were used to describe the data.
2. Pearson correlation between the variables which are stress and different personality traits were used to test the strength (perfect positive or perfect negative correlation for r = +1 or −1, for weak correlation r is <0.25, for intermediate correlation the value of r lies between 0.25 and 0.74, and for strong correlation, the value of r lies between 0.75 and 0.99) and nature (positive or negative) of relation.

RESULTS

Table 1 shows the descriptive analysis of all the variables, including mean, SD, min, and max values. All participants are female and their age ranges between 16 and 18 years, with a mean age of 17.43 years. It is also illustrated that the mean (SD) of PSS, extroversion, agreeableness, consciousness, neuroticism, and openness to experience is 23.47 (5.7), 32.23 (5.3), 33.57 (5.9), 32.83 (4.2), 25.50 (5.2), and 35.47 (3.5), respectively. It also appears that in personality traits, the maximum score is achieved in extroversion, that is, 50 and the minimum score is in agreeableness, that is,18 whereas, in PSS the maximum score is 33 and minimum is 9.

Table 2 explains the relationship between perceived stress and all the big five personality traits. Correlation shows that all the personality traits have a negative relation with stress which means higher the personality trait lower the stress. Few things are very clear from this table. First, the neuroticism personality trait has a negative correlation with the minimum difference among all which shows higher the neuroticism trait higher the stress, whereas agreeableness personality trait has a negative correlation with greatest difference score, which reflects higher the agreeableness trait lower the perceived stress. Second, conscientiousness personality trait also has a negative correlation with the second maximum greatest score and very close to agreeableness, which also shows that higher the conscientiousness trait lowers the stress. Finally, openness to experience and extroversion are on third and fourth position to negatively correlate with stress. In this study, correlation is significant at the 0.05 level.

The correlation between the variables is graphically represented in Figure 1

This graph represents the relationship between perceived stress and big five personality traits. It is very clear from this graphical representation that agreeableness personality trait has the minimum stress, that is, A = −0.1 which is nearer to the "X Axis," then conscientiousness has the second lowest, that is, C = −0.13, third and middle one is openness to experience, that is, O = 0.24, fourth is extroversion, that is, E = −0.27, and last and maximum stress belongs to neuroticism, that is, N = −0.36.

DISCUSSION OF FINDINGS

The purpose of this study was to examine the level of perceived stress in different big five personality traits. The current study supported previous studies related to stress

Table 1: Description of sample (mean, SD, min, and max) *n*=30

	Mean	Standard deviation	Minimum	Maximum
PSS	23.47	5.7	9	33
E	32.23	5.3	20	50
A	33.57	5.9	18	44
C	32.83	4.2	27	41
N	25.50	5.2	19	39
O	35.47	3.5	29	44
Age	17.43	.6	16	18

E: Extroversion, A: Agreeableness, C: Conscientiousness, N: Neuroticism, O: Openness to experience, PSS: Perceived stress scale

Table 2: Correlation table showing relationship between stress and big five personality traits (extroversion, agreeableness, conscientiousness, neuroticism, and openness to experience)

	PSS	E	A	C	N	O
PSS	1	−0.27	−0.10	−0.13	−0.36	−0.24
E	−0.27	1	0.19	−0.03	0.82	0.08
A	−0.10	0.19	1	−0.10	0.48	0.26
C	−0.13	−0.03	−0.10	1	0.39	−0.15
N	−0.36	0.08	0.48	0.39	1	0.10
O	−0.24	0.08	0.26	−0.15	0.10	1

E: Extroversion, A: Agreeableness, C: Conscientiousness, N: Neuroticism, O: Openness to Experience, PSS: Perceived stress scale. *Correlation is significant at 0.05 level (*P<0.05). *n=30

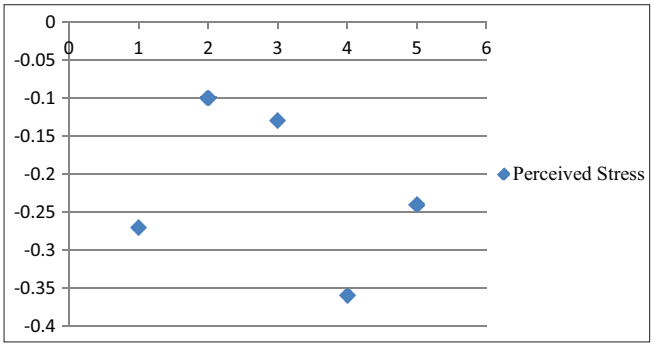

Figure 1: Graphical representation of correlation between stress and personality. 1: Extraversion, 2: Agreeableness, 3: Conscientiousness, 4: Neuroticism, 5: Openness to experience

and personality traits. According to (Jeanette *et al.*, 2011) study, negative correlation was found between the perceived stress and all the big five personality traits (agreeableness, conscientiousness, openness to experience, and extroversion) except neuroticism. Another study in which the author identifies the relationship between big five personality traits and hardiness to perceived stress and depression found that personality trait neuroticism anticipated more perceived stress (Mohamadi *et al*., 2013).[17]

In most of the studies, it is found that neuroticism is positively correlated to stress, but in present study results indicating that neuroticism is also negatively related to stress even if it is the minimum negative one, but it is. Therefore, one of the major reason the researcher found behind this is the mood of participants. An author (Abbasi, 2011)[2] in his study reported that high neuroticism participants group had significantly higher negative effects and higher base level stress as well, as compared to low neuroticism participants group. However, when they give positive stimuli exposure to all the participants, the high neuroticism group's negative affect and mean stress were equivalent to its base level negative effect and mean stress score. Means positive stimuli may lower the high neuroticism group's mean stress.

In addition, in another study author (Yuanyuan *et al*., 2017) investigated that participants who scored higher in neuroticism indicated reduced heart rate responses, less controllability, and decreased cortisol. All these findings suggest that people with more neuroticism have lowered physiological reactions to acute stress and people with higher neuroticism trait may also experience a higher level of chronic stress. Author also investigated that extroversion was negatively correlate with stress response, which indicating that individual with higher extroverted trait had lower stress response. Further, openness to experience was correlated with reduced cortisol stress reaction, which indicating that openness to experience trait perhaps reduced HPA reaction to acute stress and played a major role in reducing the slower physiological stress reactions.

The present study was conducted to found female adolescents' stress, so according to author (Schraml, 2011)[21] study, it is examined that the students of senior secondary school reported serious symptoms of stress more than 30%. Very high degree of stress was felt by every second girl, and the sign of chronic stress, which were identified by severe stress symptoms, were also found in 8.2% females. Overall low level of self-esteem, perception of high demands, very poor social support, and their sleep disturbance were found as their stress symptoms. Another study (Aanesen, 2017)[1] shows that girls reported more health-related problems than their male classmates. They identified that girls have more physical and psychological issues and reported that one out of three girls having a headache, they have poorer self-esteem and likewise have a negative frame of mind about their figure, more stress or pressure of school work, and they try live up to beauty standards and want to do good in school as well.

Further, in another study author (Nidhi, 2019)[18] identified that government school adolescent students are in less stress in comparison to private school adolescent students. In addition author (Ghosh, 2016)[9] also examined that adolescent students in government schools have less academic stress than the students in private schools, the further author explained that female students are in more academic stress than male students.

CONCLUSION

This study concludes that all the big five personality traits are negatively correlated with stress. However, it is also found that there is a significant negative correlation between the perceived stress and big five personality traits mean higher the score of personality trait lower the stress. Moreover, when we talk about the different levels of perceived stress, then it is observed that neuroticism has the negative correlation with the lowest score among all which indicating that Personality trait neuroticism perceived maximum stress whereas agreeableness has a negative correlation with maximum difference which shows that personality trait agreeableness has minimum perceived stress. Same as conscientiousness is also very close to agreeableness and achieves negative correlation with the second highest score, which shows higher this trait lowers the stress. Openness to experience and extroversion are also negatively correlated with stress and negatively score more than neuroticism. In most of the previous studies, it is found that neuroticism positively correlates with stress, but in the present study, it is also negative, even it is with the minimum difference, but it is, reason found behind this is good mood of the participants, their age, gender, govt. school, and many more.

It is concluded that higher the agreeableness, conscientiousness, openness to experience, and extroversion may lead to lower stress, whereas higher neuroticism personality trait leads to higher stress.

Recommendation

- It is recommended that a similar study may be conducted with male subjects.
- Similar study may be conducted with different age groups.
- Similar study may be conducted with a larger population.
- Similar study can also be done on private and public sectors schools' population.
- Further research is required on personality enhancements sessions, stress reduction sessions of the girls.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Effects of skill-based plyometric training on explosive power of school level volleyball players

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ABSTRACT

The purpose of the study is to investigate the effect of plyometric training on different age group boys on coach rated volleyball skills in relation to the selected variable of explosive power. To achieve the purpose of the present study, 60 volleyball players were selected (20 schoolboys in the age group of 14–16 years, 20 pre-university college boys in the age group of 17–19 years, and 20 first grade college boys in the age group of 20–22 years) as subjects from Karnataka state at random. The selected variable was explosive power. The collected data on criterion measures were treated by standing broad jump apparatus, score sheet, sliding marker, and measuring scale for explosive power. The collected data were statistically analyzed by one-way analysis of variance; the results revealed that there was a significant difference in the explosive power of volleyball players. There exists a significant difference in their interaction effect in explosive power levels among different age groups of volleyball players.

Keywords: Explosive power, First grade college boys, Pre-university college boys, Schoolboys, Volleyball players

INTRODUCTION

Volleyball is a multidirectional sport. The movements in volleyball are not always linear. The players find themselves changing directions rapidly during a heated rally and this means forcing their body to change direction and speed to keep up with the uneven pace of the game. Workouts in volleyball are important for success in volleyball. Plyometrics is a type of exercise that is designed specifically to improve powerful movements. They are also referred to as jump training which improves the function of the nervous system. The intensity of plyometric volleyball exercises or jumping drills refers to how much stress is placed on muscles, joints, and connective tissue. Plyometric exercises are valuable to volleyball players. They enhance muscle elasticity and help the players to maximize power production.

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Concerning illustration it should use those terms of plyometrics to show polishes utilizing those shock technique, it could have a chance to be alluring through the use of those term flimsy alternately certified plyometrics which camwood may see as the same likewise those plyometrics at first made eventually by Tom's perusing Verkhoshansky. Those shock system that he constructed might have been the delayed consequence for the exercises that happen in running and bobbing. He found that the arrivals and departures to these two aptitudes included high German reaction forces that were executed did an incredible

level smart, also unstable route. For instance, occasion when for the execution of the landing and flight for hopping might have been close to 0.20 s What's more for dashing, it might have been approximately 0.10 s.

Since a standout among the basic destinations of the soviet exploration makes sensible strategies to get ready on upgrade physical execution, of the end of the activities, for example, the profundity hop, that a person made, those rival might overhaul as much ability in the flight which is much resultant execution in the running or hopping event. Verkhoshansky investigated different parkways on the different activities, yet the profundity jump required every last one of earmarks from claiming continuously the best will copy the forces in the landing furthermore flight.

Those second type for plyometrics, seen, similarly as it were, in the United States, identifies with completing whatever kind of jump paying little regard to execution run through. Such jumps cannot chance to be recognized truly plyometric (as portrayed by Verkhoshansky) since the force of execution is a great part easier and the time needed to start with those unpredictable of the concentric layering may be altogether a greater amount foremost. The expression plyometrics turned out on a chance to be greatly referred to with those handling from claiming a lot of people books on the theme. It presently appears challenging with a retreat to its interesting essentialness and technobabble to execution.

Accordingly, it is indispensable to distinguish which sort of "plyometric" act will be used concerning illustration and only solicitation choose its sufficiency Furthermore, possibility will give to those communicated favorable circumstances. In spite of those ways, the sake plyometrics will be provided with the sum hops, not constantly on bounces. Potach furthermore Chu (2000) offer the going with proposals for a single guidelines meeting: Low-force get ready 400-foot contacts; regulate control get ready 350-foot contacts; high-potential get ready 300-foot contacts, and high-potential get ready 200-foot contacts. Background ought to be similarly on endorsing plyometric. Rivals with inconsequential knowledge using plyometric ought further bolstering stay with the ground contacts on under 100 maximal endeavors for each session, same time the individuals for far-reaching knowledge might bring upward about 120–140 maximal effort ground contacts for every session.

REVIEWS OF RELATED LITERATURE

Khlifa *et al*. (2010) said that the furnishings of plyometric training affairs with and after added amount on jumping adeptness in basketball players. Rahman *et al*. (1990) compared the furnishings of three altered training protocols-plyometric training, weight training, and their aggregate on the vertical jump performance, anaerobic adeptness, and able-bodied strength. Hubert *et al*. (2010) analyzed the bent aftereffect of plyometric contest performed with minimum arena acquaintance time on the acute adeptness achievement of the legs and jumping ability. Toplica *et al*. (2002) advised the furnishings of the plyometric action training archetypal on the development of the vertical jump of volleyball players. Mayur *et al*. (2013) advised the aftereffect of plyometric contest for the development of acceleration amid football players. Baljinder *et al*. (2011) advised the furnishings of an abbreviate appellation plyometric training affairs of activity in adolescent basketball players.

Objective of the Study

The objective of the study was to make an overall analysis of the effect of plyometric training on different age group boys on coach rated volleyball skills in relation to the selected variable of explosive power

Hypotheses

It was hypothesized that there will be a significant influence of plyometric training in different age levels of coach rated skill performance.

METHODS AND MATERIALS

The purpose of the study is to investigate the effect of plyometric training on different age group boys on coach rated volleyball skills in relation to the selected variable of explosive power. To achieve the purpose of the present study, 60 volleyball players are selected (20 schoolboys in the age group of 12–14 years, 20 pre-university college boys in the age group of 17–19 years, and 20 first grade college boys in the age group of 20–22 years) as subjects from Karnataka state at random. The selected variable is explosive power. The collected data on criterion measures are treated by standing broad jump apparatus, score sheet, sliding marker, and measuring scale for explosive power. The collected data are statistically analyzed by *t* ratio, one-way analysis of variance test is applied, and the level of significance for the study is 0.05 level. The collected data are statistically analyzed by one-way analysis of variance test.

ANALYSIS AND INTERPRETATIONS OF DATA

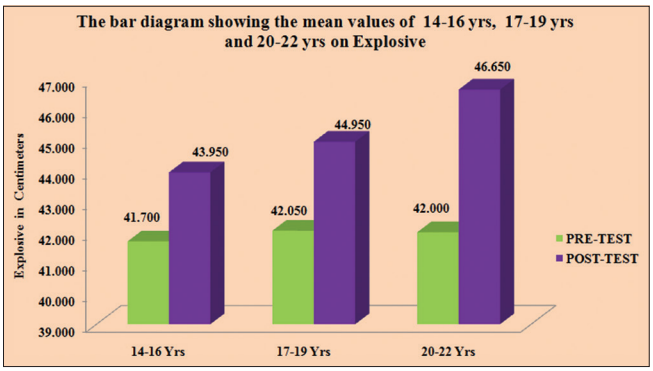
Analysis of covariance on pre- and post-test mean values among the plyometric training with skill training on the development of explosive power among 14–16 years, 17–19 years, and 20–22 years age group of volleyball players.

Variables	Source of Variance	Sum of Squares	DF	Mean Square	F	Sig.
Explosive power in Centimeters	Between	63.401	2	31.700	45.411	0.000
	Within	39.093	56	0.698		

Table shows that the obtained "F" value for the 14–16 years, 17–19 years, and 20–22 years age group of volleyball players on explosive power (45.411). The obtained tabulated f value is 3.16 statistically has significant differences at the 95% confidential level and the degrees of freedom (2, 57). It is found that the value is statistically insignificant which indicates that the treatment is successful.

RESULTS AND DISCUSSION

This study confirms the improvement in selected plyometric training with skill training on the development of explosive power among 14–16 years, 17–19 years, and 20–22 years of different age groups of volleyball players.



The explosive power increased in the 14–16 years group from pre-test (41.70 ± 3.04) to post-test (43.95 ± 2.83); 17–19 years group from pre-test (42.05 ± 2.56) to post-test (44.95 ± 2.32); and 20–22 years group from pre-test (42.00 ± 1.65) to post-test (46.50 ± 1.30). The explosive power significantly showed improvement from pre-test to post-test in all the three treatment groups.

The study demonstrated an increase in the explosive power of 5.40%, 6.90%, and 11.07% was estimated with standing broad jump test for 14–16 years, 17–19 years, and 20–22 years different age groups of volleyball players, respectively. 20–22 years group significantly showed improvement in the explosive power by 11.07% better than the 17–19 years group 6.90% and 14–16 years group 5.40%. The 17–19 years group improved the explosive power by 6.90% better than the 14–16 years group.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Analysis of the psychological variable among high schoolboys of different ethnic groups

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ABSTRACT

In psychology, confidence reflects a man's general subjective energetic evaluation of his or her own esteem. Psychological elements of the body enhance with utilization and decrease with abandonment and self-esteem is an imperative part of a person's personality. Students belonging to different ethnic groups vary in their psychological behavior due to their life styles, physical activities, culture, food intake and heredity factors. In this article, the researcher Analyses and compares the selected psychological variable of high school boys studying in Government secondary schools belonging to different ethnic groups in Tumkur District, Karnataka. One hundred and Eighty high school boys of government secondary schools from different ethnic groups (each ethnic group of 50 subjects) of Tumkur District with the age ranging from 13 to 15 years were selected randomly. The psychological variable Self Esteem by Ken Williams were selected. The result concludes that there was significant difference in Self Esteem among high school boys of Hindu, Muslim and Christian religion. Sports are very important for the physical, physiological as well as psychological development of the individual of any religion. It is very important for psychological development of any individual.

Keywords: Psychological, Self Esteem, High School Boys, Ethnic groups

INTRODUCTION

Sports psychology is the scientific study of the athletes and their behaviors in the context of sports and the practical application of that knowledge. Sports psychology deals with the increase of performance by the management of emotions and the minimization of psychological effects of injury and poor performance. Self-esteem is an imperative part of a person's own personality. Self-esteem is characterized by the level of worth and skill that we credit to ourselves. Self-esteem mirrors a man's general subjective enthusiastic assessment of his or her own value. It is a judgment of oneself and, additionally, a state of mind toward the self. Various research demonstrated that investment in recreations and games and exercise (Vealey, 1992) is generally emphatically improves the level of self-esteem work out, yet in the meantime, it is additionally found that this level is the most steady and hard to change (Marsh *et al*., 1997).

George *et al*. (2012) analyzed psychological variables in relation to playing ability among handball groups at various levels and the outcome uncovered that there is a critical distinction on self-esteem among the four levels of handball groups. Nigam (2011) analyzed the impacts of self-efficacy on sports competition

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anxiety and stated that private and open self-awareness and social anxiety are all contributing elements in foreseeing focused characteristic anxiety. From these studies, it was cleared that physiological and self-esteem are important factors for higher sports achievement and these are essential for an individual as well as sportsmen. Students belonging to different ethnic groups vary in their fitness due to their lifestyles, physical activities, culture, food intake, and heredity. In the article, the researcher compares the selected psychological variable of high schoolboys studying in Government Secondary Schools belonging to different ethnic groups in Tumkur District, Karnataka.

PURPOSE AND OBJECTIVE

The purpose of the study is to know the psychological variable and also to compare the said variable among high schoolboys of different ethnic groups.

STATEMENT OF HYPOTHESES

It is hypothesized that there is no significant difference in the selected psychological variable (self-esteem) of the high schoolboys of different ethnic groups.

METHODOLOGY

Selection of Subjects

One hundred and eighty high schoolboys of government secondary schools from different ethnic groups (each ethnic group of 60 subjects) of Tumkur district with age ranging from 13 to 15 years were selected randomly.

Selection of Variable

The following variable was selected for the study.

3. Self-esteem: Ken Williams (In scores)

Statistical Technique

The one-way analysis of variance (ANOVA) was used to find the significant difference in the psychological variable among the different ethnic groups. The Scheffe's *post hoc* test was used to find the significant difference in the paired means.

RESULTS OF THE STUDY

The "F" test results on the selected psychological variable scores of the high schoolboys of different ethnic groups are interpreted in the following tables.

From Table 1, it is also shown that the obtained "F" values of 79.38 for the self-esteem are greater than the table value of 4.75 for df "2 and 179" required for the significance at 0.01 level of confidence. The results of the study indicated that "there is a significant difference in the self-esteem among high schoolboys of different ethnic groups."

To determine the significant difference in the criterion variables among these paired means, the "Scheffe's test was applied as the *post hoc* analysis and the results were presented in Table 2."

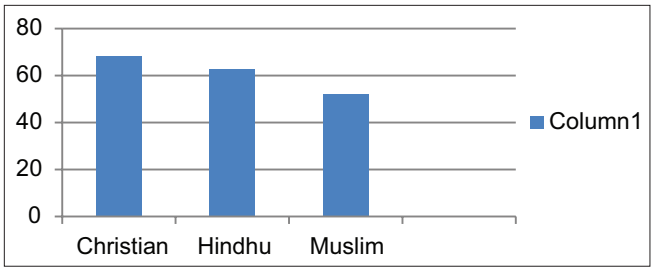

Figure 1: Self-esteem of high schoolboys of different ethnic groups

Table 1: One-way ANOVA analysis on the psychological of the high schoolboys of different ethnic groups

Variables	Groups	Sum of squares	df	Mean squares	F-value	Level of sig.
Self-esteem (in scores)	Between groups	5857.752	2	2928.876	79.38	Significant at 0.01
	Within groups	5434.832	177	30.705		
	Total	11292.584	179			

Groups: Hindu, Muslim, and Christian (n=180). Table value at 0.05 (3.06); Table value at 0.01 (4.75)

Table 2: Scheffe's *post hoc* analysis on the psychological scores of the high schoolboys of different ethnic groups

Variables	Ethnic groups			Mean difference (MD)	Critical difference (CD)
	Hindu	Muslim	Christian		
Self-esteem	63.356	52.560	-	10.796*	3.424
	-	52.560	68.432	15.872*	
	63.356	-	68.432	5.076*	

*Significant at 0.05 level of confidence

Table 2 also shows significant paired mean differences on the self-esteem between Hindu and Muslim groups; Muslim and Christian groups; and Hindu and Christian groups of high schoolboys and the MD values are 10.796, 15.872, and 5.076, respectively, which are greater than the CD values at 0.05 level of confidence. It is concluded that there is a significant difference in the self-esteem between Hindu and Muslim; Muslim and Christian; and Hindu and Christian groups of high schoolboys. The high schoolboys belonging to Christian religion had more self-esteem when compared with students from Hindu and Muslim religions.

The following bar graph shows the comparison of mean scores of the self-esteem of the high schoolboys of different ethnic groups.

DISCUSSION OF FINDINGS

From the "F" test, it was found that there exists a significant difference in the self-esteem among high schoolboys of different ethnic groups. The high schoolboys have a place with Christian (M = 68.432) would be advised to self-esteem when contrasted and Hindu (M = 63.356) and Muslim (M = 52.560). This might be because of the way of life among the children. This finding is contrary to studies by Iqbal (2013) and Cramer and Anderson (2003), which has detailed that minority group slant toward a lower level of self-esteem.

CONCLUSION

The outcome concludes that there was a significant difference in self-esteem among high schoolboys of Hindu, Muslim, and Christian religions. Sports activities are play a very important for the physical, physiological, as well as psychological development of the individual of any religion.

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Research Article

Media and sports

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MEDIA – AN INTRODUCTION

- A form of mass communication usually comprising the press, television, and radio
- The media have a direct influence on the values and morals of a society because it reaches such a large proportion of the population
- In media, the image becomes the product
- Sport becomes a product only as much as it can deliver a brand
- Professional sport has been turned into entertainment
- Professional sports (including brands and celebrities) are now part of the experience economy and need to be marketed as such
- As a media-driven product, sports, and sport products are increasingly marketed to a global audience, for example, kabaddi, kho-kho, and other regional games.

Can Media Survive without Sports?

- NO, not when they are organized by and for the players themselves
- Most media do not depend on sports for content or sales
- Daily newspapers have depended on "sports sections" to increase circulation and advertising revenues
- Many television companies have depended on sports to fill programming schedules, attract male viewers, and the sponsors that want to reach them

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- YES, when they are organized as forms of commercial entertainment
- Media coverage attracts attention to sports and provides news of results
- Television coverage remains a key factor in the growth and expansion of commercial sports.

Advantages of Media to Promote Sports

- Rights fees have increased escalated rapidly since the 1980s (for example, cricket and football in India)
- Sports programming has increased dramatically (for example, pro kabaddi and badminton)
- As more events are covered, ratings for some particular events have decreased
- Television companies use sports events to promote another programming
- Television companies are parts of conglomerates (corporation and company) that now own teams, sport events, and other businesses.

Disadvantages of Media for Sports

- Places athletes under pressure to perform more regularly than is good for them
- Crisis management and stressful work environment
- Sportspersons considered part of sports marketing
- Negative portrayal of the profession
- Players become public figures where their every move is scrutinized
- Over dramatizes problems in the sports world. Sensationalism sells paper
- Focus is often on the critical element of the sport.

INFLUENCE OF TECHNOLOGY ON SPORTS

- With cameras being placed in goals, underwater, and in racing cars, the viewer at home gets a more detailed coverage than a live spectator
- Action replays and freeze frames mean a detailed analysis can take place even minutes after the goal
- Satellite communication means international events can be screened live to all homes
- The broadcasting act of 1990 declared all rights to the broadcast sport could be sold to the highest bidder.

INFLUENCE OF MEDIA ON SPORTS FUNDING

- TV companies pay huge sums to cover sports and the advertisers and sponsors back the sport due to the exposure they will get in the media
- Individuals train for sport because the media give them the stage on which to demonstrate their talents
- Media coverage brings in the sponsors and advertising to sports (essential for sports to be viable)
- Sponsorship funds the sport
- Sport attracts paying customers to the media's presentation

TOGETHER MEDIA AND SPORTS

- In many ways, both today's sport and the media are classic outcomes and, indeed, icons of the far-reaching social, economic, and technological change that characterized the 20th century
- Each has developed extensively and rapidly as a major global industry. Each plays a significant part in structuring and informing people's lives
- Each has a global as well as more local scope of operation and has the structures and practices to reflect this. Importantly, they are two industries tied together in complex networks of relationships
- Their respective histories of development have been fuelled and influenced by the dynamics of this partnership. The evidence of the partnership is all too apparent
- The well-being of particular sports or, indeed, sport as a whole has become linked to income generated directly or indirectly from the media.

Volume 39 • Issue 1 ISSN 2231-3265

International Virtual Conference on
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International Journal of Health, Physical Education and Computer Science in Sports
A Peer Reviewed (Refereed) International Research Journal - ISRA Journal Impact Factor 7.217

Research Article

Anthropometric characteristics of netball players in relation to their playing

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ABSTRACT

Netball is ball game played between two teams, each team consist of seven players. Its development, derived from early version of basketball, started in England in the year of derived from early versions of basketball, started in the year of 1890. On the basis of role in game can be divided in to four groups namely GA/GD, WA /WD, GS/GK and Centre Player. Netball players of different playing positions performed different specified skill during the competitions which required a specified body shape and ability. The possession of essential anthropometric characteristics provides an edge to player to outperform of essential anthropometric parameters of netball players in relation to their playing positions. To execute the investigation the investigator selected 111 male Netball players. Height, weight, Chest Circumference, Arm Length, Leg Length, Flexed arm Girth, fore arm girth, of anthropometrics variables. Prior to start of the experiment of subject were properly educated to perform the best. After the data had been collected, it was processed and tabulated using Microsoft excel-2010 software and SPSS V.21.0 Software. My present study says the different position players were significantly deferent from each other. And most of the variables difference was not found significant. Netball players should have more stamina to increase their performance. In other anthropometrical variables which had taken in this study there is a no more significant difference in relation to their playing position of Netball players. So here Alternative and Null hypothesis somewhere accepted and rejected.

Keywords: Netball Players, Anthropometrical variables and measuring variables

INTRODUCTION

Netball is ball game played between two teams; each team consists of seven players. Its development, derived from early version of basketball, started in England in the year of derived from early versions of basketball, started in the year of 1890. On the basis of role in game can be divided into four groups, namely Goal Attacker/Goal Defender, Wing Attacker/Wing Defender, Goal Shooter/Goal Keeper, and Centre Player. Netball players of different playing positions performed different specified skill during the competitions which required specified body shape and ability. The possession of essential anthropometric characteristics provides an edge to players to outperform of essential anthropometric parameters of netball players in relation to their playing positions.

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Purpose of the Study

The statement of the problem is to find out the difference of selected anthropometric variable measurements in relation to their playing positions of Netball Players.

METHODOLOGY

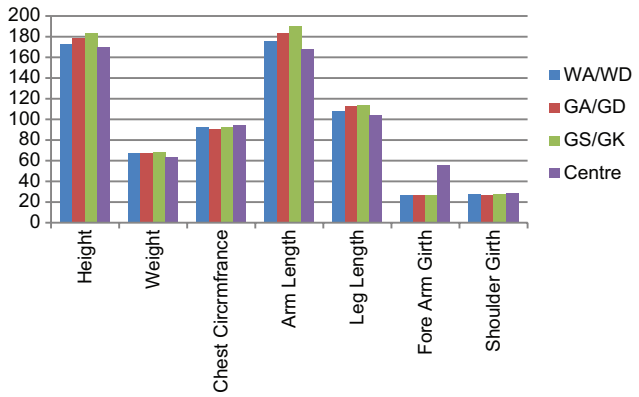
As discussed earlier, the main purpose of the study was to find out the differences of anthropometrical variables in relation to their position of netball players. To execute the investigation, the investigator selected 111 male netball players from Inter University All India Netball Championship. Include 27 samples from GS/GK position, 30 samples are from GA/GD position players, and 24 from center position players and 30 samples from WA/WD position players. The age of the subject was 18–25 years. Height, weight, chest circumference, arm length, leg length, flexed arm girth, forearm girth, of anthropometric variables. Before the start of the experiment of the subject were properly educated to perform the best.

RESULTS AND ANALYSIS

However valid, reliable, and adequate the data, maybe it does not serve any useful purpose unless it is carefully processed, systematically classified and tabulated, scientifically analyzed, intelligently interpreted, and rationally concluded.

After the data had been collected, it was processed and tabulated using Microsoft excel-2010 software and SPSS V.21.0 Software.

In this study, 2nd, 5th, and 6th hypothesis were accepted and remaining four hypotheses rejected and null hypothesis accepted. Since in netball all the players need more height and literally short height players may get disadvantages to play the game in front of height players and everyone's need more speed ability to perform in a well manner so GA/GD and GS/Gk were both acts as the same playing area so they need same abilities and equal capabilities' and remaining players also be a major part in the game within their areas so we could not get more difference between the players.



CONCLUSION

My present study says the different position players were significantly deferent from each other. Moreover, most of the variables difference was not found significant. Netball players should have more stamina to increase their performance. In other anthropometrical variables which had taken in this study, there is no more significant difference in relation to their playing position of Netball players. So here alternative and null hypothesis somewhere accepted and rejected. And finally, the netball players should have more physically fit to enhance the performance and need more height for every player.

Recommendations

1. This study can be extended with maximum samples.
2. This study can serve as a framework for the same or similar types of research.
3. Helps to coaches that identifying the particular position player.
4. This study can be conducted for International players.
5. This study can be described players body type.
6. Coach or teacher can find a specific suitable player for a particular position.
7. We can apply this study for women players and girls players.
8. Future researchers can include biological variables such as vital capacity, heart rate, and stamina.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Physiological dimensions of sports performance, exercise, and fitness

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INTRODUCTION

The work physical activity refers to active bodily movements, games sports, and other physical exercises is considered to be the tools of physical activity. Health of the people is as important as heart and soul in one's life healthy and physically fit individual is recognized in all walks of life. By improving the physique and fitness of body, even the mental health can be improved. Participation in physical activity is necessary in one form of the other for every individual.

NEW APPROACH FOR ENHANCING THE QUALITY OF HEALTH – "E-HEALTH"

What is e-health? Everybody talks about e-health these days, but few people come up with the clear information of this comparatively newer term. The term first used by industrialists and marketing people rather than academics. They created and used this term on line with other "e-words" such as e-commerce, e-business, e-solution, and so on in an attempt to convey the promises, principles, excitement, and hype around – e-commerce to the health arena and to give an account of the possibilities, internet is opening up to the area of health care.

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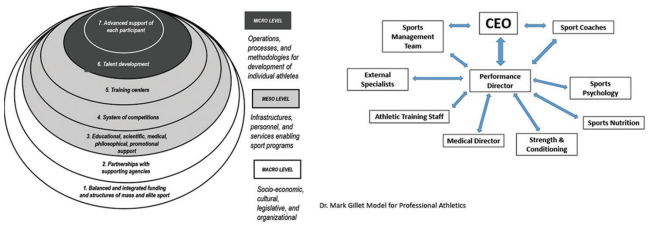
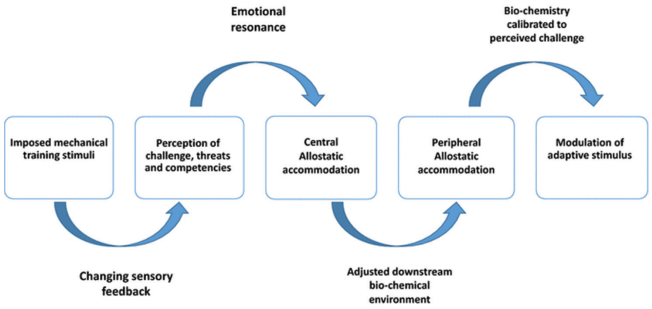


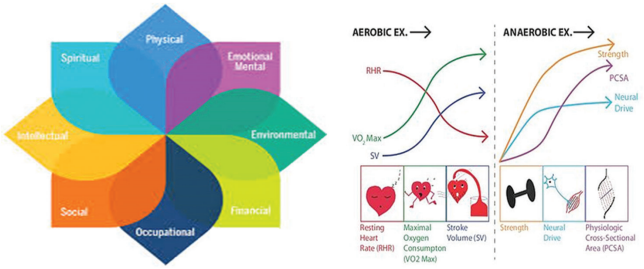


IMPORTANCE OF EXERCISE IN PRESENT HEALTH SCENARIO

"Exercise may be defined as voluntary movement entailing deep and hurried respiration." Exercise hardens the organs and renders them fit for their functions. By increasing the innate hear, exercise improves nutrition. It removes effete substances and strengthens the physique.

PHYSICAL ACTIVITY, HEALTH, AND FITNESS

Physical activity has been increasingly noted as a major health behavior with a positive potential impact on public health. During the 1980s, several studies provided a scientific foundation for the assertion that levels of moderate physical activity and moderate physical fitness and associated with both decreased cardiovascular and all-cause mortality.



MAINTENANCE AND IMPROVEMENT OF HEALTH BY PHYSICAL EXERCISE

There are certain antecedents related to the physiology of human beings.

Aging and Physical Activity

Old age is a natural, inevitable biological phenomenon. Advancement in the medical sciences and improved social conditions in the past few decades have increased the average life span of human beings. It is assumed that of all the people who have ever lived to age 65, more than half are now alive.

PHYSICAL ACTIVITY – KEY TO GOOD PHYSICAL AND MENTAL HEALTH

Physical education gives the knowledge and skills to make most of the physical and mental abilities of a person. It gives them building blocks for good health, physical fitness and skill, coordination, and good sportsmanship.

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Research Article

Concept of sports and physical education in Indian society

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ABSTRACT

Physical Education and Sports form an important part of the educational system even when it never received the importance it deserves. Even though it is included as art of the curriculum from the early stages of education, it has never been taken seriously by the educational administrators, the academicians, and the students. Physical education is the only profession where you talk as well as play/perform. The concept of physical education in the mind of the general public is big round, play and play, and no work. Abraham Lincoln quoted in one of his addresses, "Sportsman is the best Ambassador of the Nation." Hence, the Physical Education Director/Teacher can also be the best Ambassador of our Institution/University. At present, compare to earlier years and now we can come across the decline of physical education in education compare to the present is, one needs to overcome the hurdles and battles to improve the structure and infrastructure status in around to develop the overall discipline in physical education and sports.

Keywords: Concept, Indian society, Physical education, Sports

INTRODUCTION

Physical Education and Sports is one of the important yardsticks and also an integral part of education in any country at any point of time. Thus, each country should try to set out a framework of action plan for promotion and development of Physical Education and Sports paradoxically, sports is witnessing a spectacular boom in the media spotlight all over the world, including India, while it is being seriously neglected within the educational system. Physical education acts as well as the provision of resources for the nation and in the construction of evaluation system in education developments and it proms the development of physical education in a country. At present, compare to earlier years and now we can come across the decline of physical education in education compare to present is one need to overcome the hurdles and battles to improve the structure and infrastructure status in around to develop the overall discipline in physical education and sports.

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PRESENT STATUS OF PHYSICAL EDUCATION AND SPORTS IN NEW ERA

Despite efforts by member States to promote and develop Physical Education and Sports with international cooperation, its distinctive nature and importance to education remain a constant source of concern. Physical Education and Sports proved alarming (particularly, within educational system), which, given the social importance and media coverage of sports. Its impact may be seen in the shift by Physical Education and Sport public authorities toward high performance and high media-friendly sports (at a national level, across the public and private system). A significant example in the absence of clear separation between the

Ministries of Youth Affairs and Sports and Ministries of Education. The status of Physical Education and Sports convened the Physical Education World Summit in Berlin this initiative was prompted by reports revealing the increasing critical situation of Physical Education and Sports in many countries. A worldwide comparative study collects data and literature for nearly 120 countries came out with the following significant findings.

a. Reduced time devoted to Physical Education in Educational Programmed.
b. Reduced budgets plus inadequate financial, material, and staff resources.
c. The subject suffers from low status.
d. In many countries, teachers are not properly trained.
e. Existing Physical Education guidelines are not properly applied.

CREATIVE MIND AND THOUGHTS WHICH BRING OUT THE ROLE OF PHYSICAL EDUCATION AND SPORTS IN THE PRESENT GLOBALIZATION

The Physical Education and Sports preserve the vital clue that exists between Physical Education and Sports. The reciprocal guarantee highlighted the provisions of, as such, it is necessary to consider Physical Education and Sports as an intrinsic part of education in all schools and colleges in a country where sports should be compulsory right from elementary school level to till college level. In fact, quality education involves dispensing the essential requirements of life skills, that is, learning to:

i. Self-motivation, creativity, and problem solving
ii. Use interactive tools (communication, physical, and IT)
iii. To join and live within socialist diverse groups.

All these boards – based life skills are precisely what Physical Education and Sports can develop. Therefore, it goes without saying that Physical Education and Sports must be actively promoted by International organizations, state governments, and local authorities. The field of education must coordinate and streamline these efforts to defend the cause of Physical Education and Sports. This will include helping to redress the balance of Physical Education and Sport in Education in its drive to improve the situation of Physical Education and Sports worldwide.

PHYSICAL EDUCATION AND SPORTS IN INDIAN SOCIETY

Physical Education and Sports form an important part of the educational system even when it never received the importance it deserves. Even though it is included as part of the curriculum from the early stages of education, it has never been taken seriously by the educational administrators, the academicians, and the students. Physical education is the only profession where you talk as well as play/perform. The concept of physical education in the mind of the general public is big round, play and play, and no work. Abraham Lincoln quoted in one of his addresses, "Sportsman is the best Ambassador of the Nation." Hence, the Physical Education Director/Teacher can also be the best Ambassador of our Institution/University.

PHYSICAL EDUCATION DEFINED

The problem of defining physical education is not only that the term is broad-based and complex, including so many kinds of phenomena, but also it means different things to different people. Someone has suggested that physical education is whatever Physical Educators do. J P Thomas sums up that physical education is education through physical activities for the development of the total personality of the child and its fulfillment and perfection in body, mind, and spirit. Even though these definitions differ significantly with regards to emphasis on different aspects, they still have many common elements. Some of them may be noted as: Physical education is a phase of the total education process. It is the sum of total experience and their related responses. Experience grown and responses developed out of participation in big muscular activities. All-round development of individual' – physical, mental, social, and moral is the real aim of physical education. It is the same as in general education. In the Indian context, physical education is perhaps the only aspect of education which has not been given due attention. That is due, most probably to the fact that we have remained satisfied with that the British have handed over to us, with no sincere efforts on our part to prepare any concrete and far-reaching programmed for physical education especially suited to our conditions. We have ever-stressed the academic aspects, the physical one being relatively untouched. This has resulted in an increasingly large number of Indians who are neglecting their bodies, to whom physical education is similar to physical training, whose physical fitness is not what it should be; they are getting "soft." One of the main objectives of any physical education activity is to maintain and improve the health of youngsters in our school and colleges. Moreover, the school has the responsibility to see that all students achieve and maintain optimum health not only from a moral point of view but from the standard point that educational experience will be much more meaningful if optimum health exists. A child learns easier and better when he is in a state of good health. Even ones' values have much to do with health building and destroying activities. Unfortunately, a large number of people suffer from "value illnesses," that is, they know what they are supposed to do to keep well, yet they fail to do so. They know that tobacco smoking can use death

from Lung Cancer; even then they do not give up smoking. They understand how alcohol affects the driving ability, yet they drive in a state of drunkenness. They appreciate the role of regular exercise in weight control, yet they do little to alter their sedentary way of living. Education and health and medical authorities have, therefore, long recognized the need for a programmed of director physical education activities in school curriculum. It is during the formative and rapidly growing period of elementary school-age that foundation of proper habits, attitudes, and appreciations toward all physical activities, including play is laid and desirable citizenship traits acquired so that in adulthood, he will be equipped with the knowledge, sound thinking processes, physical stamina, and emotional maturity live effectively in an ever-changing and highly complex society. In that respect, teachers bear a major responsibility in answering that challenge effectively. It is said, "An idle mind is the devil's workshop."

SUGGESTIONS AND RECOMMENDATION

1. Revision and reconstruction of physical education syllabus in context with the need of society.
2. Periodical refresher course for physical educational personnel with a unified agency.
3. Updating and upgrading of the subject and related area in collaboration with top educational and physical education bodies. Strict implementation and follow-up of the prescribed physical education standard.
4. An honest and sincere appraisal system for total evaluation and feedback.
5. The academic study of physical education and sports maybe as stimulating and fun as an experience as one's actual participation in sports.
6. Once the rule, subject matter, and "spirit" of both games are understood, they may be equally rewarding. General education is for the masses, so also physical education.
7. "Recreation" is important as "reading," "writing," and "arithmetic," in the life of common man. Physical activities do the garb of "Physical Education" when the focus is on the means used, namely big muscles, "Recreation" when the focus is on "life is worth living" (joyful) attitude or use is leisure time.

CONCLUSION

In our profession, we should follow the concept of 3 "D" discipline, dedication, and extermination. Young people are the real wealth of the nation. No programmed is successful without the participation of youth. Therefore, to enable an individual to lead happy, enjoyable, and healthy life as a member of society, he should regularly engage in games and sports and different exercise programmers to ensure the development of physical fitness and learn skills in sports and games which have a carryover value. Society, on the other hand, should provide enough opportunities to its members so that they may engage themselves in activities of their own choice and thus develop or maintain the level of physical fitness. Unless there is an improvement in the General Standard of Health', excellence in sports cannot improve. Physical Education and Sports Activities in Educational Institutions should aim at "Health Related" and "Performance Related" areas so as to ensure "enhancement of performance in competitive sports." Physical education thus consists in promoting systematic all-round development of the human body of scientific technique, and thereby maintaining extraordinary physical fitness to achieve one's cherished goals in life. Hence, any organization of physical education should start with developing a positive attitude and self-confidence among physical educators themselves and make them feel; physical education need not exist in the periphery of the schools/colleges but should extend it to the classrooms and become the focus or central point of the educational system.

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Research Article

A comparative study on selected motor fitness variables among badminton and lawn tennis players

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ABSTRACT

Motor fitness is a state of health and well-being, more specifically, the ability to form features of human life, professions, and daily activities. Motor fitness is generally achieved through proper nutrition, moderate-vigorous physical exercise, and sufficient rest. The aim of this study was to compare the selected motor fitness variables such as speed, cardiorespiratory endurance, and explosive strength between badminton and lawn tennis players. Sixty $n = 60$ male badminton and lawn tennis players were selected randomly from different colleges of Hyderabad city and divided equally into two groups as BDG – badminton group ($n = 30$) and LTG – lawn tennis group ($n = 30$) whose age was ranged between 18 and 25 years. Motor fitness variables were compared for this study was speed, cardio-respiratory endurance, and explosive strength. Whereas 50 m dash, Cooper's 12 m run/walk and Standing Broad Jump tests were administrated, respectively, for measuring the variables. The data were analyzed and compared with the help of static procedure in which mean standard deviation and Z-ratio were employed.

Keywords: Cardiorespiratory endurance, Explosive strength, Motor fitness, Speed

INTRODUCTION

Physical fitness is a state of health and well-being and, more specifically, the ability to perform aspects of sports, occupations, and daily activities. Physical fitness is generally achieved aspects through proper nutrition, moderate-vigorous physical exercise, and sufficient rest. Before the industrial revolution, fitness was defined as the capacity to carry out the day's activities without undue fatigue. However, with automation and changes in lifestyles, physical fitness is now considered a measure of the body's ability to function efficiently and effectively in work and leisure activities, to be healthy, to resist hypokinetic diseases, and to meet emergency situations. Health-related components of physical fitness include body composition, cardiovascular fitness, flexibility, muscular endurance, and strength skill-related components include agility, balance, coordination, power, reaction time, and speed.

Tennis is a racket sport that can be played individually against a single opponent (singles) or between two teams of two players each (doubles). Each player uses a tennis racket that is strung with cord to strike a hollow rubber ball covered with felt over or around a net and into the opponent's court. The object of the game is to maneuver the ball in such a way that the opponent is not able to play a valid return. The player who

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is unable to return the ball will not gain a point, while the opposite player will.

Badminton is a racquet sport played using racquets to hit a shuttlecock across a net. Although it may be played with larger teams, the most common forms of the game are "singles" (with one player per side) and "doubles" (with two players per side). Badminton is often played as a casual outdoor activity in a yard or on a beach; formal games are played on a rectangular indoor court. Points are scored by striking the shuttlecock with the racquet and landing it within the opposing side's half of the court.

METHODOLOGY

Selection of subject – In the present study, survey method has been used by the investigator. The study was conducted on a sample of badminton and lawn tennis male players. All the selected players were attended the coaching camp of their college team and participated in an inter collegiate tournament of badminton and lawn tennis.

Selection of Variables

The physical fitness variables for the present investigation are speed, cardiorespiratory endurance, and explosive strength.

Administration of Test

For measure the physical fitness variables, different test items employed such as standing broad Jump for explosive strength, 50-yard dash for speed, and 12 min run/walk test for cardiorespiratory endurance.

Collection of Data

The data were collected by survey method from randomly chosen students of various participating colleges. Thirty players of badminton and 30 players of lawn tennis were participated in this study.

Analysis of Data

The data were analyzed through mean, SD, and Z-ratio by applying independent means test of the significance of mean differences.

Table 1: Statistical analysis of physical fitness tests

S. No.	Variables	Lawn tennis		Badminton		Z-ratio
		Mean	SD	Mean	SD	
1	50 years dash	6.34	0.45	6.76	0.47	4.136
2	12 min run/walk	2.39	0.23	2.43	0.29	1.621
3	SBJ	2.30	0.16	2.17	0.16	3.304

RESULTS

Descriptive statistics and Z-ratio results of badminton and lawn tennis players.

The result of descriptive statistics and Z ratio is presented in Table 1. It may be noted that the number of subject being 30 from badminton and 30 from lawn tennis. Z-ratio equal to 1.96 and 2.58 is significant at 0.5 levels, respectively.

CONCLUSIONS

The conclusion could be drawn from the main of the study that the lawn tennis players were found to be better than the badminton players on three components of physical fitness, such as leg power, arm strength, and speed, whereas these groups of players had similar explosive strength and endurance.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Effect of specific fitness training program on ball velocity of footballers

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ABSTRACT

The purpose of the study is to find the effect of a specific training program on ball velocity of footballers (n=20), aged ranged 13–16 years. The fitness training program was administered for 12 weeks. The fitness program consisted of development of various variables such as speed, agility, endurance, and explosive strength of arm, abdomen, and leg. To collect the pre- and post-training data, participants were asked to perform lofted kick skill of football. Later, the data were obtained using Kinovea 0.8.15 software and statistically analyzed by employing paired t-test at the significance level of 0.05. For statistically analyzation, IBM SPSS Statistics Version 22 was used. The obtained result indicated that the subjects have improved ball velocity. As $P < 0.05$ for selected variable therefore can conclude that the structured 12 weeks fitness training program may help to improve in an increase of velocity of ball kicked using lofted kick skill of football.

Keywords: Football, Speed, Agility, Endurance, Explosive strength, Lofted kick, Ball Velocity

INTRODUCTION

Football is one of the most famous game on the planet. It is a body contact game, in which players continually battle to get this possession over the ball. At the point when they get possession, they attempt to invade when they misfortune, they protect their goal. The absolute length of a match is 90 min. The achievement is characterized by the most significant standards scored in 90 min. To keep the ball under possession and key, the players utilize loads of football skills, for example, dribbling, passing among the teammates, lofted kick, and final shoot/instep the score a goal.

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Lofted Kick

One of the most utilized techniques of soccer players, this technique encourages players to pass the above the opponents overhead and clearing off up the air from the congested penalty area. Aside from chip and instep kick, this technique encourages players to lift the ball in the air, this technique is generally utilized by the left-wing and right wings to cross the ball from the corners into the goal area.

A couple of scholars have underlined that kicking is one of the most critical skills in soccer Barfield, 2002, Masuda, 44-52, and Vucetic, 2007. Its sufficiency depends on various components, for instance, maximal strength of the muscles involved in the kicking, speed of power improvement, neuromuscular coordination, linear and angular velocities of

ankle in the kicking leg, and the degree of coordination among agonist and antagonists (Kalapotharakos, 2006). Yet, a couple of journalists perceived an association between the nature of the lower limbs and ball speed in both male and female players (Manolopoulos E. P., 2006), there is a non-appearance of information concerning the effects of a quality planning program on the properties of an endeavor, for instance, kicking. In male players, the effects of solidarity getting ready on kicking execution are questionable (Campo, et al., 2009). Albeit a few written works found that training programs, including explosive strength (Jelusic, 231-238), maximal strength (Taïana, 1993), isokinetic strength (Dutta, 2002), or mixed technical and strength training (Manolopoulos E. P., 2006), prompts an increase in performance, others found the inverse (Trolle M, 1993).

Soccer execution/performance and another athletic kicking ordinarily rely on kicking ball speed and accuracy of kicking (HC, 2011). This speed could be especially significant while kicking toward the goal post, the fact that the odds of scoring increment with a speed-up (accepting that the kick is accurate) on the grounds that the goalkeeper has less an ideal opportunity to respond (Do¨rge HC A. T., 2002). Kicking can be portrayed as a summation of power/force (R, 1993). The movement design is commonly acknowledged as a proximal-to-distal succession, in which the distal portions are permitted to fall behind the proximal fragments as they push ahead (Do¨rge HC A. T.-P., 195-200), in which the foot is the last section to mediate and the quickest fragment in the open kinetic chain (DA., 2011). The planning of muscle initiation can be portrayed with the enactment of hip flexors, for example, the iliopsoas followed by the rectus femoris, which is a hip flexor and knee extensor, and finally by actuation of the knee extensors, for example, the vastus lateralis. In this way, hip flexor and knee extensor muscles are significant for building up a high foot velocity (DeProft E, 1988). In expansion, the knee flexors (hamstrings) and hip extensors (gluteal muscles), which work as antagonists to decelerate the swinging-leg after ball impact are significantly active in a most extreme soccer kick (DeProft E, 1988). In infect, these antagonists require eccentric strength and agonists require concentric strength (DeProft E, 1988). The ball speed after a soccer kick is largely dependent on the foot velocity at the initial phase on the contact phase than any other factors (Ishii H, 2012). Moreover, significant correlation was found between these two factors (V., 1983) and the coefficient of restitution (K, 2013), which is influenced by technique factors, for example, the part of the foot that reaches the ball and the firmness of the foot at contact (DA., 2011). The mass of the shank foot section does not influence the speed of the ball significantly (T., 1999). The job of the supporting leg in the generation of foot speed is not clear; however, it could be estimated that the quality of the helping leg is significant for giving a steady stage to rapidly swing the kicking leg (Bacvarevic BB, 2012). Significant connections between single-leg balance and kicking accuracy, however, not speed were discovered (Chew-Bullock, 2012). Obviously, the quality of the lower appendages' muscles could be identified with the ball speed. Accordingly, a few studies have examined the correlation between the ball speed after a maximal soccer kick and the quality and force estimations of the lower limbs (Billot, 2010). In some studies, it also found out that exercises that do not have the kicking action are not desirable as these exercises do not appear to transfer well to kicking performance (Young, 2010).

There is a need for research to find out any strength which would help in developing ball velocity created by lofted kick.

METHODOLOGY

For this finding, the analyst has deliberately picked 40 football players at that point out of those 20 players were randomly chosen for the analysis. Age running from 13 to 16 years of age has been decided for this examination and were given explicit workout schedule for 12 weeks. The independent variable is the 12 weeks training program and the dependent variables for this study were ball velocity using lofted kick. For the collection of the data, lofted kick was used. The purpose of the study was well explained to the subjects priory and the researcher had also instructed them to give their best during each trail.

Pilot Study

After randomly partitioning the exploratory, the analyst had picked randomly five subjects from the experimental group for the pilot study. The motivation behind the pilot study was to get comparative with the preparation plan, discovering their average target heart rate, and their recovery rates at different sorts of activity.

Target Heart Rate

The Karvonen Formula

Target Heart rate= {(Maximum Heart rate - Resting Heart rate) *Training %} +Resting Heart Rate

For marking out the maximum heart rate, the analyst had taken the average heart rate of the five subjects then subtracted from 220, i.e., MHR= 200 – average age

For marking the resting heart rate, the analyst has taken the average resting heart rate from the five subjects.

To mark the recovery/rest timing of the participants for interval training, the analyst directed the five subjects to run 100 m at their full capabilities. At the stop line, the analyst with the help of 4 other physical educators measures the pulse rates of the subjects for 6 s; then, the score was multiplied by 10 to get the pulse rate of 1 min. The educators waited for few

sec/mins to slow down the pulse rate to 120–130 beats/min as per interval training method (Dr. Hardayal, 1993) to check their recovery time and between 23 s and 26 s were found out. Repeated 100 m runs were conducted to find the participants best capabilities. After 7 rounds, the subjects were fully tired; hence, seven repetitions were fixed for the 4th–6th weeks.

Comparable method was utilized for choosing the quantity of recovery time and number of repetitions for speed and agility. The analyst had taken the normal pulse rate of the subjects and found between 70 and 80 beats/min. It took 2–3 min to come to under 80 beats for every min. Each subject took three repetitions to arrive at 90% to 100% intensity (Dr. Hardayal, 1993). In this way, three repetitions of each drill followed by 2–3 mins rest in the middle of the drill were fixed during the 1st–3rd weeks.

Training Intervention for Speed and Agility

During the 1st–3rd weeks, the subjects performed five cones snake run, proagility run, hopscotch fast foot ladder, and icy shuffle with three repetitions each. The recovery was three minster training of speed and agility was only twice a week (Tuesday and Thursday).

During the 4th–6th weeks, the subjects performed five cones snake run, pro agility run, hopscotch fast foot ladder, and icy shuffle with four repetitions each. The recovery was 3 min. The training of speed and agility was only twice a week (Tuesday and Thursday).

During the first 7th–9th weeks, the subjects performed five cones snake run, pro agility run, hopscotch fast foot ladder, and icy shuffle with five repetitions each. The recovery was 2 min. The training of speed and agility was only twice a week (Tuesday and Thursday).

During the 10th–12th weeks, the subjects performed five cones snake run, pro agility run, hopscotch fast foot ladder, and icy shuffle with six repetitions each. The recovery was 2 min. The training of speed and agility was only twice a week (Tuesday and Thursday).

Training Intervention for Endurance

Endurance training can be given by slow continuous, fartlek, and interevent method. The slow continues were trained at 200 m tracks. For fartlek training various conditioned was placed, the surfaced/condition used by the subjects were sand, concrete surface, grass surface stairs, and synthetic ground. For both slow continuous and fartlek training, the intensity should be 65–70% or heartbeat of 140–180/min (Dr. Hardayal, 1993).

During the 1st–3rd weeks, the subject performed slow continues, fartlek, and circuit training. The training was done on Monday (slow continues), Wednesday (Fartlek), and Friday (circuit training) and the duration was 30 min. The circuit training included all the calisthenic exercises such as step-up, knee push up, lean back squat, sit up (bent knee) triceps extension of arm, hyperextension of back and burpee, and the intensity of the training was set at 65–70%.

During the 4th–6th weeks, the subject performed slow continuous training on 4th week, fartlek training on 5th week, and interval training on the 6th week. The training was done each Friday of each week and the duration was 40 mins for both slow continuous and fartlek training. The intensity of the training was set at 65–70%. For the interval training, the subjects performed 100 m dash with seven repetitions each. The recovery was 23–26 s.

During the 7th–9th weeks, the subject performed slow continuous training on 7th week, fartlek training on 8th week, and interval training on 9th. The training was done on each Friday of each week and the duration was of 50 min for both slow continuous and fartlek training. The intensity of the training was set at 65–70%. For the interval training, the subjects performed 100 m dash with eight repetitions each. The recovery was 22–25 s.

During the 10th–12th weeks, the subject performed slow continuous training on 10th week, interval training on 11th, and fartlek training on 12th week. The training was done each Friday of each week and the duration was 60 mins for both slow continuous and fartlek training. The intensity of the training was set at 65–70%. For the interval training, the subjects performed 100 m dash with nine repetitions each. The recovery was 21–24 s.

Training Intervention for Strength

During the 1st–3rd weeks, the subject did not do any exercise to develop explosive strength for arms, legs, and abdomen.

During the 4th–6th weeks, the subject performed explosive strength for arm, abdomen, and leg. The training was done on each Monday and Wednesday of each week. The exercises are burpees 8–12, floor triceps dips 8–12 rep, triceps dip 8–12 rep, arm circles clockwise 20–30 s, arm circles anti-clockwise 20–30 s, alternate hooks 30 s, leg barbell curl left 8–12 rep, leg barbell curl right 8–12 rep, wall push up 8–12 rep, inchworms, push up and rotation, and incline push up 8–12 rep for explosive arms strength. Side hop 20–30 s, sumo squats 8–12 reps, side-lying leg circle left 8–12 reps, side-lying leg circle right 8–12 reps, backward lunge 8–12 reps, single leg calf hop left 8–12 rep, single leg calf hop right 8–12 rep, wall calf raise 8–12 rep, sumo squat calf raise with wall 8–12 rep, jump for height 8–12 rep, fire hydrant left 8–12 rep, and fire hydrant left 8–12 rep for explosive legs strength. (1) jumping jacks 8–12 rep, abdominal crunches 8–12 rep, Russian twist 8–12 rep, bicycle crunches 8–12 rep, side bridge left 8–12 rep, side bridge right 8–12 rep, leg raises 8–12 rep, plank 20–30 s, left side plank

20–30 s, right side plank 20–30 s, heel touch 8–12 rep, and crossover crunch 8–12 rep for explosive abdomen strength. For each variable, the researcher had taken 12 exercises and each exercise lasted for 30 s/12 repetitions. 10–15 s recovery was given between each exercise and 2 to 3 mins breaks were given between each variables of exercise.

During the 7th–9th weeks, the subject performed explosive strength for arm, abdomen, and leg. The training was done on each Monday and Wednesday of each week. The exercises are burpees 8–12, floor triceps dips 8–12 rep, triceps dip 8–12 rep, arm circles clockwise 20–30 s, arm circles anti-clockwise 20–30 s, alternate hooks 30 s, leg barbell curl left 8–12 rep, leg barbell curl right 8–12 rep, wall push up 8–12 rep, inchworms, push up and rotation, incline push up 8–12 rep, shoulder gators 8–12 reps, and push upholding 20–30 s for explosive arms strength. Side hop 20–30 s, sumo squats 8–12 reps, side-lying leg circle left 8–12 reps, side-lying leg circle right 8–12 reps, backward lunge 8–12 reps, single leg calf hop left 8–12 rep, single leg calf hop right 8–12 rep, wall calf raise 8–12 rep, sumo squat calf raise with wall 8–12 rep, jump for height 8–12 rep, fire hydrant left 8–12 rep, fire hydrant left 8–12 rep, curtsy lunges 8–12 reps, and jumping squats 8–12 reps for explosive legs strength. (1) Jumping jacks 8–12 rep, abdominal crunches 8–12 rep, Russian twist 8–12 rep, bicycle crunches 8–12 rep, side bridge left 8–12 rep, side bridge right 8–12 rep, leg raises 8–12 rep, plank 20–30 s, left side plank 20–30 s, right side plank 20–30 s, heel touch 8–12 rep, crossover crunch 8–12 rep, V up 8–12 reps, and sit up 8–12 reps for explosive abdomen strength. For each variable, the researcher had taken 14 exercises and each exercise lasted for 30 s/12 repetitions. 10–15 s recovery was given between each exercise and 2–3 mins breaks were given between each variables of exercise.

During the 7th–9th weeks, the subject performed explosive strength for arm, abdomen, and leg. The training was done on each Monday and Wednesday of each week. The exercises are burpees 8–12, floor triceps dips 8–12 rep, triceps dip 8–12 rep, arm circles clockwise 20–30 s, arm circles anti-clockwise 20–30 s, alternate hooks 30 s, leg barbell curl left 8–12 rep, leg barbell curl right 8–12 rep, wall push up 8–12 rep, inchworms, push up and rotation, incline push up 8–12 rep, shoulder gators 8–12 reps, push upholding 20–30 s, arm curls crunch right 8–12 reps, and arm curls crunch left 8–12 reps for explosive arms strength. Side hop 20–30 s, sumo squats 8–12 reps side-lying leg circle left 8–12 reps, side-lying leg circle right 8–12 reps, backward lunge 8–12 reps, single leg calf hop left 8–12 rep, single leg calf hop right 8–12 rep, wall calf raise 8–12 rep, sumo squat calf raise with wall 8–12 rep, jump for height 8–12 rep, fire hydrant left 8–12 rep, fire hydrant left 8–12 rep, curtsy lunges 8–12 reps, and jumping squats 8–12 reps for explosive legs strength. (1) Jumping jacks 8–12 rep, abdominal crunches 8–12 rep, Russian twist 8–12 rep, bicycle crunches 8–12 rep, side bridge left 8–12 rep, side bridge right 8–12 rep, leg raises 8–12 rep, plank 20–30 s, left side plank 20–30 s, right side plank 20–30 s, heel touch 8–12 rep, crossover crunch 8–12 rep, V up 8–12 reps, sit up 8–12 reps, combo finisher 8–12 reps and kneeling tuck jump 8–12 reps, leg up and push by panther 8–12 reps, and crunches with ball throw 8–12 reps for explosive abdomen strength. For each variable, the researcher had taken 16 exercises and each exercise lasted for 30 s/12 repetitions. 10–15 s recovery was given between each exercise and 2–3 mins breaks were given between each variables of exercise.

Collection of Data

All the required procedures for collecting pre-data and post-data were followed. For the collection of the data, the lofted kick skill was used. Three qualified physical education teachers helped during the whole data collection process.

Statistical Analysis

To find the result of the study, pair *t*-test was used to see the effect specific fitness training program on ball velocity of lofted kick of footballers. The level of significance was set at 0.05.

RESULTS

To compare, the selected biomechanical variables, namely, the ball velocity of the lofted kick pair *t*-test were used. The results are shown in table below.

The above table shows the descriptive analysis of the ball velocity score of pre- and post-training program. It shows that the ball velocity of lofted kick pre-test mean is 0.3730 (SD 0.26,456), the ball velocity of lofted kick post-test mean is 0.4425 (SD 0.21,645).

The paired t-test analysis was computed on IBM SPSS Statistics 22.0 to check whether there was any statistically significant difference between pre- and post-score.

Analysis of paired *t*-test of fitness variables within pre- and post-scores.

Paired samples statistics					
		Mean	N	Standard deviation	Standard error mean
Pair 1	Pre-data lofted kick	0.3730	20	0.26,456	0.05,916
	Post-data lofted kick	0.4425	20	0.21,645	0.04,840

Paired samples test									
Mean		Paired differences					t	df	Sig. (2-tailed)
		Std. deviation	Std. error mean	95% confidence interval of the difference					
				Lower	Upper				
Pair 1	Pre-data ball velocity – post-data ball velocity	−0.06950	0.06825	0.01526	−0.10144	−0.03756	−4.554	19	0.000

*P<0.05

Table shows that the obtained paired value of selected fitness variables scores in pre- and post-training. $P < 0.05$ for all selected variables such as ball velocity of lofted kick are therefore significant. The pre-test and post-test show statistically significant differences at 0.05 level of significance.

DISCUSSION AND CONCLUSION

Ball Velocity of Lofted Kick

Analysis of paired t-test of a variable within pre- and post-scores shows that there is significant difference between pre-training test and post-training test of ball velocity of lofted kick. The mean difference of pre-experimental ball velocity of lofted kick and post-experimental ball velocity of lofted kick is −0.0695, this tells us that there is an increase in the velocity of the ball at pre-test as compare to post-test. The change may be due to the 12 weeks specific fitness training program on the selected physical fitness variable. Result clearly shows that training for 12 weeks of specific fitness significantly improves in the ball velocity created by lofted kick. A similar study has been conducted by Campo, et al., 2009 in his study effects of lower-limb plyometric training on body composition, explosive strength, and kicking speed in female soccer players. He has also found out that the 12-week plyometric program can improve explosive strength in female soccer players and that these improvements can be transferred to soccer kick performance in terms of ball speed. In another study also by Rodríguez Lorenzo, 2016 in his study strength and kicking performance in soccer, a review found out that plyometric and explosive strength training can be carried out successfully in combination with regular soccer training to improve the maximum kicking velocity.

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Volume 39 • Issue 1 ISSN 2231-3265

International Virtual Conference on
"Digital Teaching, Training & Coaching - An Approach to Physical Education & Sports Sciences"
22nd and 23rd August 2020

Organized by
Government First Grade College, K G F - Kolar - Karnataka. &
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Collaboration with
International Federation of Physical Education,
Fitness and Sports Science Association

International Journal of Health, Physical Education and Computer Science in Sports
A Peer Reviewed (Refereed) International Research Journal - ISRA Journal Impact Factor 7.217

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Research Article

Effects and uses of yoga on bronchial asthma

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INTRODUCTION

The Maharshi Patanjali said that yoga is the suppression of modifications of the mind. We can found eight types of Yoga, in that Raja Yoga popularly known as "Asthanga Yoga" is for all-round development of human beings. These are the Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana, and Samadhi. In this study, we go through with asanas and should know the important and benefits of yogasanas to sports performance. Sage Patanjali says Yoga Sutras as position which is comfortable and steady. Asanas are classified as Supine Posture, Prone Posture, Sitting Posture, and Standing Posture. Physically, the practice of asanas has been claimed to improve flexibility, strength, and balance to reduce stress and anxiety. The body becomes more flexible and able to adjust to environmental changes through asanas. The sympathetic and parasympathetic nervous stems are brought into a state of balance by practicing asanas.

Sports performance is a complex mixture of biomechanical function, an emotional factor, and training techniques, it is the manner in which sport participation is measured. Yogasanas can directly influence on optimization of all kind of sportsman's, yoga can increase our strength, endurance, pure consciousness, calmness, and more sound sleep to sportsmans. Participating in yoga is associated with many positive outcomes in various aspects of physical performance and well-being. The physical practice of yoga consists of maintaining regular and steady breathing while changing the position of the body through asanas. Yoga is an activity that can simultaneously enhance several specific components of fitness.

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Asthma is quite common quite a disease which affects the lungs and makes breathing difficult. It is usually intermittent. In other words, it strikes the sufferer from time to time. Hence, times an attack may come quite suddenly and it may pass quite quickly, but at other times, the breathing problem may be lost for days or even linger for weeks or months is some cases, asthma strikes at a particular time of the year or in particular places. It can also be brought on at times of stress, for instance, when you are worried or excited about something.

Factors that affect your performance in sports

- Psychological Factors
  - Stress
  - Anxiety
  - Calmness
  - Confidence
- Physiological Factors
  - Strength
  - Endurance
  - Coordination
  - Balance
- Personality Factors
  - Honesty
  - Loyalty
  - Responsibility
  - Belief

Effects of Asanas on Sports Performance

Effects on psychological factors

Asanas are reduced stress, it can help to decrease anxiety and stress. By reducing stress levels, we can also lower the risk of depression. Yoga boosts brainpower. Not only do poses such as downward dogs relax and distress but also they may actually increase brain function. This discipline can rewire your brain and improve its chemical composition. At the right time, stress helps you prepare, focus, and perform at your optimal level. At the time, too much stress or bad stress can cause performance anxiety, which hurts your health and does not allow you to play relaxed. Here, many aspects may influence, even yoga practices are a very smart way to get these factors to get in our limits. Hence, some of the asanas are mentioned here to relief from stress and without stress athlete can perform at high level;

1. Garudasana (Eagle Pose) = This pose requires you to concentrate and focus the mind to a single point, which is an excellent stress management tool. It can also help to free uptightness in the shoulders and hips, which are common sports for emotional tension to accumulate.
2. Sukhasana (Easy Pose) = Lengthen your spine and open your lips. It will help you calm down and eliminate anxiety. It will also reduce the mental and physical exhaustion.
3. Balasana (Child Pose) = It is beneficial for your lymphatic system and nervous system. It will calm your mind and release stress. It stretches your thighs, hips, and ankles.
4. Uttanasana (Standing Forward Fold) = It will reduce mild depression and stress. It will calm your brain and stimulate your kidneys and stretch hips.
5. Tadasana (Mountain Pose)
6. AdhoMukhaSvanasana (Downward-Facing Dog)
7. Utkatasana (Awkward Pose)
8. Vrksasana (Tree Pose)
9. ParivrttaTrikonasana (Extended Triangle Pose)
10. Bujangasana (Cobra Pose)

METHODOLOGY

A total of 60 subjects were selected using inclusion and exclusion from various classes of society. Two groups were made in equal number of the subject, that is, 30 each in control and experimental groups. The experimental group was treated with yoga therapy of 1 year to know the effect of 1 year yoga therapy on house dust mite. Pre- and post-tests scores were treated with "*t*"-test statistical technique.

RESULTS

The statistical analysis shows that there was a significant effect only after 1 month yoga therapy, and there is no significant effect from baseline to 1 month therapy.

Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Effect of differential Suryanamaskar program on body posture of women aged 30–40 years

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ABSTRACT

The objective of the current study was to see the effect of the differential Suryanamaskar program on the body posture of women aged 30–40 years. The researcher focused on instructions, breathing pattern, beech mantra, and duration spent on the poses during Suryanamaskar. The researcher selected 40 women from the Indian School of Yoga through a purposive sampling method as a sample for the study. The 40 women were divided into two groups experimental and control group. The Suryanamaskar program was prepared and implemented on the experimental group. The researcher observed the individual subjects and graded them on the basis of rating scale. A pre-test and post-test were conducted and scores were analyzed. From the analysis, it is clear that both the groups showed improvement in Suryanamaskar, but the experimental group showed greater improvement. Positive and better effects can be achieved if the proper technique, breathing pattern, beech mantra, and duration spent on the poses are monitored and followed.

Keywords: Beech mantra and duration spent on the poses, Body posture, Breathing pattern, Suryanamaskar

INTRODUCTION

The recent hectic and strenuous life has made it difficult for individuals to spare time for exercise and fitness. Even though there has been an increase in number of gyms and fitness centers, the individuals are not regularly engaging in fitness activities. The main reason for the same given by individuals is no time or space. Suryanamaskar is the best option for individuals who have less time and space for physical activity. Suryanamaskar can be done at home without any specialized equipment and has seen to have better effects on fitness. This full-body exercise helps individuals to achieve better fitness in minimum time and space. Suryanamaskar is being prevalent in the Indian culture since ages and is used by Indians. The Suryanamaskar has been mentioned in Rigveda and has been preached by the King of Aundh and even Samarth Ramdas in Maharashtra.

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Suryanamaskar (Sun-salutation) was performed in front of the Sun during Sunrise by chanting mantras which also improves immunity. The Suryanamaskar is not a single asana but involves six different asanas in a series. The Suryanamaskar has many benefits and if done with proper technique, posture, breathing, and chanting mantra. To develop internal organs, the specific pose in Suryanamaskar is to be hold for more than 30 s.

Many individuals have already started following Suryanamaskar as a regular activity, but many have failed to follow the proper procedures due to which they are deprived of the real benefits of Suryanamaskar. If Suryanamaskar is done properly using

proper technique, breathing pattern, beech mantra, and duration spent on the poses only, then it will result in better benefits. To identify the effect of proper Suryanamaskar on individuals, this study was performed.

Objective

The objective of the study was to find the effect of Suryanamaskar on body posture.

METHODOLOGY

The current study is an experimental type of research and for this the researcher created two equal groups – the control and experimental group.

Table 1: Training program

S. No.	Week	Program focus
1	One	Instructions and proper positioning
2	Two	Breathing
3	Three	Beech Mantra
4	Four	Increase in duration spent on each pose – 10, 20, and 30 s
5	Five	Different methods of Suryanamaskar – Aundh and Bihar School of Yoga
6	Six	Practice of above methods

Table 2: Analysis of the pre-test and post-test of both control and experimental group

Rating	Experimental		Control	
	Pre-test	Post-test	Pre-test	Post-test
Poor	1	0	1	0
Needs improvement	7	0	8	0
Satisfactory	5	0	5	2
Average	4	7	4	14
Good	2	8	2	2
Excellent	1	5	0	2

Table 3: Comparative analysis of pre-test and post-test of the rating scale of the experimental and control group

	Experimental	Control
Z	−3.64	−3.78
Significance value	0.00	0.00

Table 4: Comparative analysis of post-test of rating scale of the experimental and control group

Mann–Whitney U	106.00
Z	−2.78
Significance value	0.005

Population and Sample

The researcher selected 40 women from the Indian School of Yoga aged 30–40 years through the Purposive Sampling Method as a sample for the study. These selected 40 women were divided into 2 equal groups – experimental and control group.

Tools of the Study

A rating scale was prepared and used to assess the Suryanamaskar performed by the subjects. The subjects were rated according to the rating scale prepared and then each received a score out of 50. A grading scale was prepared and then, according to the scores of the subjects, they were graded. Initial pre-test was conducted on subjects and then the training program was implemented on the experimental group. The control group performed their daily routine activities. After 6 weeks of training, the post-test was conducted.

Analysis of the Study

The scores derived from the rating scale of both pre-test and post-test of both the groups were compared. The comparative analysis and the Mann–Whitney U test were applied and the analysis is presented below in detail.

RESULTS

From the above analysis, it is clear that both the groups showed improvement in the Suryanamaskar. The experimental group showed greater improvement in the Suryanamaskar than the control group. Hence, it can be concluded that the Suryanamaskar program applied on the group showed improvement. If the Suryanamaskar is done with proper poses using proper breathing technique, Beech mantra, and holding the poses for a longer duration will result in better performance and results. It will surely help in attaining better body postures.

CONCLUSION

The Suryanamaskar is being used as a medium for exercise and fitness since long. However, the science behind the breathing pattern, beech mantra, and holding the poses is not meticulously followed by the individuals. From the study, it can be concluded that for better body postures, the Suryanamaskar can be a better medium and breathing pattern, beech mantra, and holding the poses for more than 30 s should be stressed and followed for better results and body posture. The study will also help to provide guidelines to yoga and fitness trainers as well as individuals performing Suryanamaskar. The rating scale prepared through this will prove to be a guideline for many who would like to know the exact way a Suryanamaskar is to be performed.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Nutrition for exercise and health

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ABSTRACT

Carbohydrates are the preferred fuel for physical activities of high intensity and short duration. The importance of fat as an exercise energy source depends on the availability of carbohydrates. Fats are primarily used when the body performs low-intensity muscular work, thus, sparing the store of carbohydrate. The fitter the individual greater is the carbohydrate sparing. Protein is one of the most essential and multi-purpose nutrients. Animal sources such as meat, fish, eggs, and/or dairy products are often referred to as "complete" protein foods, whereas vegetable sources are described as being "incomplete" as protein content is concerned. Vitamins contribute to chemical processes that regulate metabolism, energy release, and tissue repair. No vitamins can be synthesized by the human body. Minerals make up 4% of our body weight. They are involved in many biological functions, including energy production, bone structure, and oxygen carrying. Healthy and physically active people who eat well-balanced meals consume enough of the essential micronutrients to maintain proper physiological functioning

Keywords: Carbohydrates, Fats, Minerals, Nutrition, Proteins, Vitamins

INTRODUCTION

The world is in the midst of an unprecedented "exercise-boom," reflected by the ever-growing number of people engaged in some form of physical activity for pleasure as well as health. Indeed, while for many decades it was almost prohibited in patients with certain medical conditions (e.g., heart disease, rheumatoid arthritis, and diabetes), it has now become apparent that physical activity is an important element of the rehabilitation process in such medical conditions, however, and fundamental to these issues are the nutritional status and dietary intakes of the exercising individuals. It has been established that diet can affect physical performance and health in both athletes and non-athlete. Citizens of industrialized countries tend to regard the intake of food in a rather passive manner. This seems to be the result of a general lack of understanding of what constitutes optimal nutrition and how the latter regulates our bodily functions. Some of the food we eat is used to build, maintain, or repair the body cells, while the majority is processed (i.e., metabolized) for energy (ATP) production. Most of this energy appears as heat and is used to keep the body warm; some are used for work of cells, and some for muscular work. Bodybuilding requirements determine the quality of diet, whereas the energy needs of the individual determine the quantity of diet; therefore, optimal nutrition is a dietary balance of different nutrients to keep the bodily functions at the required levels. In the watery medium of the cell, the delicate blending of carbohydrates, proteins, and fats, along with vitamins and minerals, make it possible. In this chapter, aspects related to these nutrients will be briefly discussed.

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CARBOHYDRATES

Carbohydrate is the body's preferred energy source and the most important fuel for the working muscle. During exercise of high intensity and brief duration, this nutrient provides most of the energy needs. As a practical rule, both men and women should eat 7–10 g of carbohydrate per kg body weight per day each gram of carbohydrate will produce four calories of energy and in the process will use 0.7 L of oxygen. Carbohydrates should constitute around 60% of the total daily energy intake. Carbohydrates are stored as glycogen in the liver (80–100 g) and in the muscle (300–400 g); both stores can be exhausted by hard exercise; the entire store of this fuel in the body will last for about 100 min of strenuous steady-paced cycling, running, dancing, etc. Liver glycogen can be made available to muscle when it is broken down to glucose and then released into the blood. This blood glucose is also taken up and used by many other tissues, including the brain, while liver glycogen content falls rapidly if no food is consumed.

FATS

Fats (or lipids) serve a variety of functions, including all three purposes of nutrition: To form and maintain body structures to regulate metabolism and to provide the second main source of energy. The importance of fat as an energy source depends on the intensity of exercise as well as on the availability of carbohydrates. Fats are used along with carbohydrates when the body performs low intensity/long duration type of work, thus, sparing the store of carbohydrate; the fitter the athlete the greater the carbohydrate sparing. However, if the body starts to run low on carbohydrate, it will increase its use of fat. This may affect physical performance as fat utilization is generally associated with low-intensity muscular activity. For example, that while 142 g baked potato contains 145 calories, the same 142 g of fried potato chips contains 795 calories.

PROTEINS

Protein is one of the most essential and multi-purpose nutrient, as it has a wide variety of physiological functions associated with optimal physical performance and health. Protein forms the structural basis of muscle tissue; it is involved in the growth and repair of damaged tissue and has a role in the metabolic process that converts both carbohydrates and fats into energy. If carbohydrate and fat fail to provide enough energy, protein will be switched on to provide any extra energy. Protein is broken down into amino acids. There are 25 main amino acids; 8 of them (called essential amino acids) cannot be manufactured in the body and have to be found in our food. Animal sources such as meat, fish, eggs, and/or dairy products are often referred to as "complete protein foods" as they contain all of the eight essential amino acids, and therefore, higher biological value. Vegetable sources are described as being "incomplete" as they lack at least one of the essential amino acids. The human body has no protein reserve/store comparable to its large energy stores of fat and moderate stores of glycogen. Hence, optimal levels of protein should be maintained in the dancers' body. The average person needs 0.8 g of protein per kg of his/her body-weight per day, which provides 10–15% of total daily energy intake.

VITAMINS

Thirteen vitamins cannot be synthesized by the human body; they are nevertheless essential for maintaining optimal bodily function. These nutrients contribute to the various chemical processes which regulate metabolism, release energy, and repair tissue. Vitamins are either water-soluble or fat-soluble in nature. The nine water-soluble vitamins (i.e., C, B1, B2, B6, B12, niacin, pantothenic acid, folic acid, and biotin) have an important role in protein metabolism. They are not stored in the body-tissues to any appreciable extent, they are depleted as a result of strenuous exercise, and they are easily destroyed in processing and cooking. These vitamins can be mainly received through fresh fruit and vegetables. Apart from Vitamin C, excess supplementation can aggravate existing medical conditions. The four fat-soluble vitamins are A, D, E, and K. Daily ingestion of these vitamins is not necessary, given that they are normally stored in the liver and in the fat cells of the adipose tissue. As in the case of water-soluble vitamins, excess intake of fat-soluble vitamins can produce toxic effects. Foods that are rich in Vitamins C and E may provide some protection against cancer and heart diseases. These vitamins serve as antioxidants to counter the damaging effects of the reactive chemicals known as free radicals on the cell membranes.

MINERALS

The body is composed of at least 31 known chemical elements. The most abundant non-metal chemical element is oxygen, which amounts to 65% of a person's body weight. Three other non-metal elements constitute 31% of the body mass; these are carbon (18%), hydrogen (10%), and nitrogen (3%). The remaining 4% of our body weight is composed of a group of 22 metallic elements called minerals. These minerals can further be classified into major minerals and trace minerals. Humans obtain their mineral nutrition from both plants and animals. Drinking water is also an excellent source of many minerals.

CONCLUSIONS

In the watery medium of the cell, the delicate blending of carbohydrates, proteins, and fats, along with vitamins and minerals is necessary to keep the bodily functions at the required levels. Healthy individuals who eat well-balanced

meals consume enough of these nutrients and there is no need for supplementation. However, prolonged deficits in any of the nutrients can cause health and physical performance impairments.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Computer science in sports

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ABSTRACT

Computers are a fundamentally important tool in sport science research, sports performance analysis and, increasingly, in coaching and education programmers in sport. This defines the field of sport informatics, explaining how computer science can be used to solve sport-related problems, in both research and applied aspects. Beginning with a clear explanation of the functional principles of hardware and software, the book examines the key functional areas in which computer science is employed in sport, including: Knowledge discovery and database development data acquisition, including devices for measuring performance data motion tracking and analysis systems modeling and simulation match analysis systems e-learning and multimedia in sports education. Bridging the gap between theory and practice, this book is important reading for any student, researcher or practitioner working in sport science, sport performance analysis, research methods in sport, applied computer science, or informatics.

INTRODUCTION

Computer science in sport is an interdisciplinary discipline that has its goal in combining the theoretical as well as practical aspects and methods of the areas of informatics and sport science. The main emphasis of the interdisciplinary is placed on the application and use of computer-based but also mathematical techniques in sport science, aiming in this way at the support and advancement of theory and practice in sports.[1] The reason why computer science has become an important partner for sport science is mainly connected with "the fact that the use of data and media, the design of models, the analysis of systems, etc., increasingly requires the support of suitable tools and concepts which are developed and available in computer science"

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Storing Statistical Data

In the world of sports, statistics are important. Everyone taking part, those watching as well as sports agents need to know exactly how well they are or have been performing at any moment in time. Computers are used in sport to collect and keep track of such data. With the help of a computer a team manager is able to create a spreadsheet database where he will be able to store all the stats for the team. If such records are kept throughout the season, he will be able to use it to help him decide which players to keep and those that are expendable. Media outlets are also able to use the same kind of data when writing and publishing in-depth stories relating to the performance of certain players or teams.

Watching and Storing Video

Athletes make good use of videos, both of their own and others performances. It is critical for studying others reactions, style and a number of other things. A boxer, for example, will use videos to review an opponent's fights and learn his weaknesses, to exploit

them. When it comes to football, a team coach can watch a game tape and look at how his offense could improve their passing attack. Thanks to the computer, huge amounts of video footage can be stored and accessed with the click of a button. Easy access to information is one of the biggest benefits to using computers.

Sports Media

Computers are used every day by sports media outlets. Sports writers are able to do their research using a computer and editors are able to make use of different applications to create different effects. Many of the large sports media outlets have developed improved technology for the benefit of followers. One such development has been the ESPN Axis field view. This is a program that rotates the field of view for different perceptions of the actions.

Developing Equipment

Thanks to computers there have been huge improvements in safety. Over the years, there have been a number of news stories relating to player safety. How many of you can remember the studies that were made regarding concussions on hockey and football players. To deal with this issue equipment developers made use of computers to help them design safer equipment. A new football helmet was designed by Riddell during the NFL 2010 season, using a number of technological programs. These programs helped design a helmet able to adsorb impacts and limits head and neck damage.

Training and Health

The sports industry also uses computers for the training, nutrition, and health of the athletes. By putting an athlete's height, weight, and other body measurements into a computer its possible to get a program that will help trainers to get a competitive advantage.

Sports Video Games

Over a number of years, the popularity of sports video games has increased. Thanks to computers, players can now enjoy a very realistic experience.

Eliminating Human Error

Tennis is the best example of this way of using computers. Hawk-Eye technology is used to minimize the human error in making vital decisions. It is able to do this by tracing the path or trajectory of a moving object. In this case, the tennis ball.

On the Web

The information available on sports teams' Web sites is amazing. Some of it includes Schedules. Game dates and locations are available. Statistics: Up-to-the-minute information on teams and individual players are ready whenever you want it. Team News: Web sites contain coach and player interviews, information on injuries, and so forth. Ticket Purchasing: Rather than stand in line, you can purchase your tickets at home. You can even look at a diagram of the stadium to see exactly where you will be seated. Online Shopping: You can buy cricket bat, caps, ball, and many other items.

Performance Analysis

Another benefit of bio-mechanical studies, in that it allows players and coaches to break down the motions of an athlete – scrutinize golf swings or batting stances, for instance, to maximize the player's performance.

Computers and Sports Training

Computers help gauge an athlete's performance during a specific training regimen. Trainers for sports teams can put a player's height, weight, and body model into a computer and develop a training program that best fits her needs. Trainers can also put sensors and equipment onto a player during training, allowing the computer to register results while the player trains.

Controlling Scoreboards

The pro sports venues of today are managed by a large array of computers which will update player stats, out-of-town scores, graphic displays, and even weather forecasts in real time.

Biomechanics

By studying the movements of athletes through computerized simulators, manufacturers have been able to develop better training equipment; trainers are able to customize workout regimens for individual athletes, and sports medicine is more capable of assessing, and preventing, sports-related injuries.

CONCLUSION

It is hard to believe, we ever managed without computers in the sports world, and then you consider that, nowadays, we scrutinize every nuance of an athlete's performance, and keep stats on practically everything. For the improvements they have made possible in players' performance, training; equipment, and sports medicine, computers are indeed invaluable to sports.

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Volume 39 • Issue 1 ISSN 2231-3265

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International Journal of Health, Physical Education and Computer Science in Sports
A Peer Reviewed (Refereed) International Research Journal - ISRA Journal Impact Factor 7.217

Research Article

Impact of physical fitness training on endurance and strength among handball players

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ABSTRACT

The present research study based on experimental research method, the circuit training as physical fitness training on motor fitness among the handball players of Gulbarga University. The major objectives of the study – to measure the endurance ability among the handball players, to measure the strength of handball players, and to compare the pre- and post-motor fitness levels among handball players before and after the training session. The research hypothesis stated that there would be influence of circuit training on the endurance and strength levels of the handball players. Fifty handball players were selected for the study and given them the instruction about the circuit training for the development of motor fitness levels. SPSS software used to analysis the research data to find out the result.

Keywords: Circuit training, motor fitness

INTRODUCTION

Physical Fitness Defined

Actually, different definitions have been offered by the educationists, but physical fitness defined by the American Association for Health, Physical Education, and Recreation is "That state which characterizes the degree to which the person is able to function. Fitness is an individual matter. It implies the ability of each person to live most effectively with his potentiality of function and depends on the physical, mental, emotional, social, and spiritual components of fitness which are related to each other and are mutually inter dependent."

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Physical Fitness Training Methods

- Strength training
- Circuit training
- Fartlek training.

Circuit training is a variation of interval training. It is a very old tactic, some might say it is out-dated, but people still practice it and get fantastic results. It is ideal for when you are trying to cut fat while continuing to build muscle. Circuit training is where you do a cardio activity, and then periodically, you do a bodyweight activity. An example would be, jog for 1 min, do 10 push-ups, then jog for again repeating the cycle for 20–40 min. In circuit training, there are not really suggested times or reps you should do, that is, really up to what you are able to endure.

Circuit training is an excellent way to improve mobility, strength, and stamina. The circuit training comprises 6–10 strength exercises that are completed one exercise after another. Each exercise is performed for a specified number of repetitions or for a set time before moving onto the next exercise. The exercises within each circuit are separated by a short rest period, and each circuit is separated by a longer rest period. The total number of circuits performed during a training session may vary from two to six depending on your training level (beginner, intermediate, or advanced), your period of training (preparation or competition), and your training objective.

METHODS

The researcher conduct the circuit training sessions for 15 days to handball players, before conducting the training he measured the endurance and strength abilities of sample and after 15 days again measure and the motor fitness variables and compared with pre- and post-training motor fitness abilities.

The Objectives

The objectives of the study are as follows:

- To measure the endurance and strength of handball players in pre- and post-tests.
- To compare the motor fitness pre- and post-levels among the handball players.

The Hypothesis

- There would be significance impact of circuit training on endurance and strength of handball players.

Sample

Fifty handball players selected for the research study from Gulbarga University.

Research Tools

Twelve minutes copper tests for endurance and pull up test for strength abilities used in this research study.

Data Analysis and Interpretation

The table shows the impact of circuit training on the endurance and strength abilities of handball players.

Motor fitness		Pre test	Post test	T value
Endurance	Mean	1904.94	2114.96	5.163**
	SD	223.24	196.13	
Strength	Mean	13.02	16.580	9.059**
	SD	1.518	2.441	

**Significance

The table shows the impact of circuit training on the motor fitness among the handball players. In endurance pre and post mean scores are significantly different the t values is 5.163 which significant at 0.01 levels. In the strength tests pre- and post-tests, the mean score are significantly different and the t value is 9.059, significant at 0.01 levels.

CONCLUSION

- There is significance impact of circuit training on the endurance of handball players.
- There is significant impact of circuit training on the strength of handball players.
- The study showing the impact of circuit training on the motor fitness and also developing the sports performance among the handball players.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Sports injuries and rehabilitation

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ABSTRACT

The ever growing popularity of sports worldwide has made the "sports industry" extremely competitive and financially lucrative for athletes, with many striving for elite professionalism. This has consequently intensified the physical and emotional burden of sports, increased the training and practice regimens required, and exposed those involved in this quest to a higher risk of injury. In modern competitive sport, injured athletes are under pressure to return to competition as early as possible, which is often a demand for both the sportsperson and the team management. Athletes also stand a chance of losing their place in the team due to the highly competitive scenario and naturally come under higher pressures to return. Thus, rehabilitation is needful for everyone and it is very helpful for athletics to come back to their form or its helpful to come out from the disabilities of the every athlete and the common people can have knowledge about the uses and information of sports injuries and rehabilitation program.

INTRODUCTION

Ever growing popularity of sports worldwide has made the "sports industry "extremely competitive and financially lucrative for athletes, with many striving for elite professionalism. This has consequently intensified the physical and emotional burden of sports, increased the training and practice regimens required, and exposed those involved in this quest to a higher risk of injury. In modern competitive sport, injured athletes are under pressure to return to competition as early as possible, which is often a demand, both the sports person and the team management. Athletes also stand a chance of losing their place in the team due to the high competitive scenario and naturally come under higher pressures to return.

Sports Injuries

- Sports injuries are injuries that occur during sport, athletic activities, Or exercising.

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- Sports injuries result from acute trauma or repetitive stress associated with athletic activities. Sports injuries can affect bones Or soft-tissue such as ligaments, muscles, and tendons.

Types of Sports Injuries

The eight most common sports injuries are:

- Head injury
- Neck injury
- Spine injury
- Upper limb injury
- Thorax injury
- Abdomen injury
- Lower limb injury
- Hip injury.

Rehabilitation

The process of helping a person has suffered an illness or injury restore lost skills and so regain maximum self-sufficiency. For example, rehabilitation work after a stroke may help the patient walk and speak clearly again.

Principles of Rehabilitation

Principles are the foundation on which rehabilitation is based. Here are seven principles of rehabilitation, which can be remembered by the mnemonic: ATC IS IT.

A: Avoid aggravation

It is important not to aggravate the injury during the rehabilitation process. Therapeutic exercise, if administered incorrectly or without Good judgment has the potential to exacerbate the injury, that is, make it worse.

T: Timing

The therapeutic exercise portion of the rehabilitation program should Begin as soon as possible – that is, as soon as it can occur without causing.

Aggravation: The sooner patients can begin the exercise portion of the rehabilitation.

Program, the sooner they can return to full activity. Following injury, rest is sometimes necessary, but too much rest can actually be detrimental to recovery.

C: Compliance

Without a compliant patient, the rehabilitation program will not be successful. To ensure compliance, it is important to inform the patient of the content of the program and the expected course of rehabilitation.

I: Individualization

Each person responds differently to an injury and to the subsequent rehabilitation program. Even though an injury may seem the same in type and severity as another, undetectable differences can change an individual's response to it. Individual physiological and chemical differences profoundly affect a patient's specific responses to an injury.

S: Specific sequencing

A therapeutic exercise program should follow a specific sequence of events. This specific sequence is determined by the body's physiological healing response.

I: Intensity

The intensity level of the therapeutic exercise program must challenge the patient and the injured area but, at the same time, must not cause aggravation. Knowing when to increase intensity without overtaxing the injury requires observation of the patient's response and consideration of the healing process.

T: Total patient

It must be considered the total patient in the rehabilitation process. It is important for the unaffected areas of the body to stay finely tuned. This means keeping the cardiovascular system at a reinjure level and maintaining range of motion, strength, coordination, and muscle endurance of the uninjured limbs and joints. The whole body must be the focus of the rehabilitation program, not just the injured area. Providing the patient with a program to keep the uninvolved areas in peak condition, rather than just rehabilitating the injured area, will help to better prepare the patient physically and psychologically for when the injured area is completely rehabilitated.

Goals of Rehabilitation

1. Provide correct immediate first aid management
2. following the injury to limit/control swelling
3. Reduce/minimize pain
4. Restore full range of motion
5. Increase muscular strength, endurance, and power
6. Improve balance
7. Maintain cardio respiratory fitness.

CONCLUSION

Thus, compared to traditional rehabilitation after injury, sports Injuries rehabilitation requires more care, a highly structured, and sports-specific approach, which should prepare both the athlete. Moreover, the injured tissue for the following physical and psychological demands at the highest level of sport.

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Volume 39 • Issue 1 ISSN 2231-3265

International Virtual Conference on
"Digital Teaching, Training & Coaching - An Approach to Physical Education & Sports Sciences"
22nd and 23rd August 2020

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International Journal of Health, Physical Education and Computer Science in Sports
A Peer Reviewed (Refereed) International Research Journal - ISRA Journal Impact Factor 7.217

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Research Article

Physical activity healthy status and chronic diseases in women

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ABSTRACT

The World Health Organization (WHO) defines health as a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity (WHO, 2017). Mental health is defined as a state of well-being, in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community (World Health Organization and Calouste Gulbenkian Foundation, 2014). There is consensus that regular physical activity (PA) can improve physical fitness (PF) and health and assist in the prevention of disease. Several studies have shown that physically active adults are healthier and have a higher PF than inactive adults throughout different nations and populations groups.

Keywords: Community health promotion, Intervention, Physical activity, Public health psychology, Well-being

ORIGIN OF THE PROBLEM

The present study conducted on various women groups under the age of 18–30 and 30–50 within one of the city in Hyderabad. As Marc Ashley Harris, Department of Sociology and Philosophy of sports said relationship between mental and physical activity. However, in this study analyzed that there will be no relationship between mental and physically but not totally, its depend up on the daily activity levels of physical fitness.

INTERDISCIPLINARY

Lack of physical awareness and health related issues are present in the taken study due to lack of health awareness and fitness, this can may lead and harm the next generation like through genetic disorders, recent studies that assess work related activity fail in finding a positive influence on body composition and health factors and, especially in the elderly, injuries and physical wear and tear caused by PA are not uncommon. Therefore, the aim of this study is to examine the longitudinal women health and related diseases from different aspects and their daily life PA and PF and HS in adults and to assess the influence of age, and sex.

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Objectives of the Study

The purpose of the present research project is to acquire new data and train the students and society so they can use different types of physical activity to fit and reduce and prevention of the cases such as chronic diseases, cardiac decease, and obesity and diabetes in the women, so we can plan to reduce the various cases and diseases using daily physical activities.

MEASURE

Physical Activity

Weekly sports activity, habitual activity, and work related activity were assessed through questionnaire. An estimation of the weekly energy expenditure in MET-hours per week for SA, HA, and fitness was calculated according to their stamina, as a product of weekly frequency, duration, and intensity of the type of activity.

Chronic Disorders (CD)

The WHO World Health Survey (WHS) studied adults aged 18 years and older to obtain data for health, health-related outcomes, and their determinants. The prevalence values for chronic physical diseases diabetes and obesity.

Findings

Observations were available for 250 participants from all regions of the Hyderabad. Overall, 2-year prevalence for obesity, diabetes, and cardiac disorders was 51% of participants with one or more chronic physical disease. This result was significantly higher than the likelihood of having a chronic physical disease.

Data analysis 2019			
Variable	**All participants**	**Females (18–30)**	**Female (30–50)**
n	250	120	130
Number of observations	500	225	250
Physical activity	26%	10%	16%
Chronic disorders	51%	22%	26%
Healthy stat	23%	9%	14%

Physical Health Status (HS)

Physical health status was assessed during a laborious health examination conducted by a practicing physician. After a detailed analysis the obesity, diabetes, and cardiovascular diseases with less physical activity and health status the following results: 0 = "no limitations, and minor limitations, not impacting daily life, the physical health status of the analysis is 23%."

RESEARCH METHODS

Study Sample and Design

The data were drawn during a community-based, longitudinal study in Hyderabad, with measurement 2019–2020. Participants were randomly selected from the local residents and women welfare associations in Hyderabad. Participation was voluntary. Subjects provided their written consent to participate in the study. The applied protocols were approved by a St. Pious x Degree and PG College for Women.

A total of 250 different subjects (women from both the age group 120 and 130) aged 18–30 and 30–50 participated times over the course of the study (2 years). The response rate of the initial sample in 2019 was 26%. For the initial sample, two groups of 18–30 and 30–50 years old were invited. A study showed that there are significant differences in selected parameters (e.g., physical fitness, physical health status, and physical activity) between participants and invited nonparticipants except migration background.

Figure 1 shows the descriptive statistics of the sample in the year 2019.

1. Physical activity levels are very less compare to healthy status,
2. Chronic disorders are maximum occupied more than physical activity and healthy status,
3. Healthy status is low compare to the chronic disorders.

RESULTS

Descriptive Statistics

Descriptive statistics of PA, HS, chronic diseases, and data by their physical activity and daily activities refers to the total number of observations during the two measurement points among the 250 participants.

Physical data analysis for the year 2019–20	**Status: 1**	**Status: 2**	**Status: 3**
Analysis	Physical activity/ fitness levels	Chronic disorders	Healthy status
Mean	1.2168	5.1488	2.551
Median	1	5.3	2.1
Standard deviation	0.74427	1.62601	1.14914

Year plan of work and target to be achieved in 2020–2021: The prevalence of recommended physical activity by the WHO. In the WHS, the prevalence of physical inactivity in India was in the present study (54.4%; 41.7%).

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Effect of yogic intervention on body mass index of overweight school children

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ABSTRACT

Yoga is an ancient system of Indian philosophy. It has been practiced for health and well-being. Several researches have shown that regular practice of yoga improves health and well-being. The purpose of the present investigation was to look for the effect of yogic exercise on body mass index (BMI) of overweight school children. A total of sixty (n = 60) subjects were involved for this study. The subjects were randomly selected from the two schools, namely, Ghoshpara Saraswati Trust Estate Vidyapith and Ramnagar Milan Bagan Siksha Niketan of the district of Nadia, West Bengal. The age of the subjects for the study was ranged from 12 to 15 years. All the subjects were divided into two equal groups, one was the experimental group (n = 30) and control group (n = 30). Yogic training was intervened for 12 weeks for 4 days per weeks. However, the control group was not involved in the treatment program. Height was measured by stadiometer and weight was measured by Digital Weighing Machine. BMI was calculated by Weight/Height^2 (kg/m^2). The analysis of covariance was used to analyze the data. The significance of means was tested at $P < 0.05$ level of confidence. For statistical calculations, Excel Spread Sheet of windows version 7 was used. Significant improvement was observed in BMI due to the intervention of the structured yogic training program.

Keywords: Body mass index, School children, Yogic intervention

INTRODUCTION

Today, overweight is a major problem for children. Excess body fat in children also increases the risk of heart disease, diabetes, liver disease, arthritis, and allied problems. The condition occurs when the amount of calories consumed exceeds the amount of calories expended over a long period of time. Excess calories are stored as fat in the body, and with long-term caloric excess, an individual eventually becomes obese. Practicing yoga exercise regularly and eating a healthy diet are ways to combat obesity.

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Yoga is an ancient scientific system that, in fact, brings harmony in body and mind. Regular yogic exercise can help children to reduce body fat as well as protect against chronic diseases associated with obesity. Various yoga techniques can be practiced effectively to reduce the weight and achieve normal healthy condition of body and mind. Obesity is becoming a global serious health issue. Therefore, the purpose of the present investigation was to look for the effect of yogic exercise on body mass index (BMI) of overweight school children.

MATERIALS AND METHODS

A total of sixty (n = 60) subjects were selected for this study. The subjects were randomly chosen from the two schools, namely,

Ghoshpara Saraswati Trust Estate Vidyapith and Ramnagar Milon Bagan Siksha Niketan of the district of Nadia, West Bengal. They were divided into two equal groups, each group was consisted by thirty (n = 30) students, experimental group (G_E = 30), and control group (G_C = 30). The age of the subjects for the study was ranged from 12 to 15 years. Height was measured by Stadiometer and Weight was measured by Digital Weighing Machine. BMI was calculated by Weight/Height^2 (kg/m^2). The experimental group was intervened through a scientifically structured yogic training program [Table 1] for 12 weeks whereas the control group was free from intervention of yogic training. Both groups were engaged in their regular academic program which was not under the control of the researcher. To find out significant difference in BMI between the pre- and post-intervention of yogic treatment analysis of covariance was used. The significance of means was tested at $P < 0.05$ level of confidence. For statistical calculations, Excel Spread Sheet of windows version 7 was used.

Table 1: Training program and schedule

S. No.	Name	Duration
1	Asanas: (a) Suryanamaskar, (b) Trikonasana, (c) Twisting pose, (d) Dhanurasana, (e) Salabhasana, (f) Pawanmuktasana, (g) Utkatasana, (h) Paschimatanasana Ardha-matsyendrasana, (j) Halasana, (k) Naukasana, (l) Bhujangasana	90 min
2	Pranayama: (a) Kapalavhati, (b) Anulom-Vilom, (c) Bhastrika, (d) Bhramari	

Table 2: Descriptive statistics (height and weight) of the subjects of the experimental group and control group

Name of the variable	Experimental group (Mean±SD)		Control group Mean±SD	
	Pre test	Post test	Pre test	Post test
Height (cm)	149.4±8.85	149.6±8.79	152±9.78	152.2±9.72
Weight (kg)	58.23±8.91	56.33±8.58	59.77±8.40	60.97±8.89

RESULTS

From Tables 2 and 3, it was observed that F-ratio value of adjusted post-test was 138.62, which was higher than the table value 4.01 with df (1, 57) required for significant at 0.05 level. It indicates that there was a significant difference among the adjusted post-test means of BMI of the experimental group and control group. Thus, BMI significantly reduced in the experimental group due to the intervention of structured yogic practices for 12 weeks.

DISCUSSION

It was observed from the above findings that structured yogic intervention for 12 weeks significantly reduces BMI. Kapalbhati pranayama can be practiced regularly to reduce obesity in the BMI. Kekan (2013), weight and BMI were significantly reduced after giving the 6 months of yoga practice. Karak *et al*. (2015), yogic asana alone bring a positive improvement in the BMI. Borman (2016), Hatha Yogic Practices on body weight of the human subjects show a significant reduction in the subjects practicing Yoga Patel and Kumar (2016). Thus, this study suggests that regular yoga practice reduces BMI of overweight school boys. Research on particular set of Yogic exercises like only selected asanas or pranayama is required and also further research with large sample size and for varied age groups is required for applying these results to population in general.

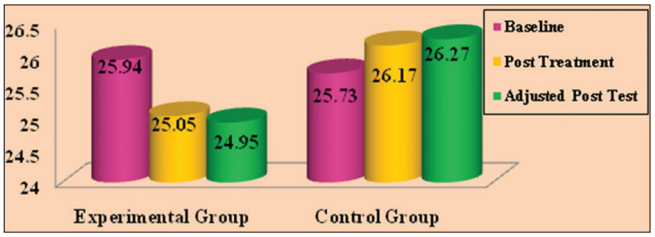

Figure 1: Mean value BMI (kg/m^2) baseline, post-text and adjusted post-text for experimental group and control group

Table 3: Analysis of covariance of body mass index for experimental group and control group

Name of variable	Test	Experimental group	Control group	Source of variance	Sum of squares	df	Mean squares	"F" ratio
Body mass index (kg/m^2)	Baseline							
	Mean±SD	25.94±1.25	25.73±1.07	Between	0.62	1	0.62	0.459
				Within	79	58	1.36	
	Post-treatment							
	Mean±SD	25.05±1.25	26.17±1.21	Between	19.06	1	19.06	12.685
				Within	87.17	58	1.50	
	Adjusted post-test							
	Mean	24.95	26.27	Between	26.25	1	26.25	138.62
				Within	10.79	57	0.19	

F(0.05) (1, 58, and 1, 57) = 4.01, *Significant at 0.05 level of confidence.

CONCLUSION

On the basis of the interpretation of the data, the following conclusions were drawn:

1. There was a significant reduces in BMI of overweight school children.
2. There was a significant reduces in body weight of overweight school children.
3. The improvement happened due to practicing in structured yogic exercises for 12 weeks.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Physical fitness and sports injuries

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ABSTRACT

Physical fitness is a set of attributes that are either health- or skill-related. Exercising is great for improving health, feeling and looking best, and avoiding sports injuries. Physical fitness is an important part of life. It is an indicator which shows whether you have the ability to perform and enjoy day-to-day physical activities with ease. Physical fitness is defined as the state of general well-being, physically sound and healthy, along with mental stability. Previously fitness was commonly defined as the capacity of the person to meet the physical demands of daily life and carry out the day's activities without undue fatigue. However, because of increased leisure time, changes in lifestyles rendered this definition insufficient. These days, physical fitness is considered a measure of the body's ability to function efficiently and effectively in work and leisure activities, to be healthy, to resist hypo-kinetic diseases, and to meet emergency situations. Exercise is a subset of physical activity that is planned, structured, and repetitive and has as a final or an intermediate objective the improvement or maintenance of physical fitness. Most sports injuries happen when the athlete tries to do too much or is unprepared. Under conditioning, poor technique, and improper gear can put athlete risk for injury before even get started. Injuries are often a common occurrence for those participating in sport. It is, therefore, important that those involved in sport gain an appreciation of the main factors that can cause injuries, as well as those that can play a part in preventing them, and how effective treatment and rehabilitation can reduce the amount of time spent out of normal participation. An active lifestyle improves your health and decreases your risk of premature health problems. Total physical fitness to most part of avoiding the sports injuries.

INTRODUCTION

Physical fitness it is important that all athletes be in the appropriate physical condition before participating in their particular sport. In other words, an athlete should not rely solely on the participation in their sport as a means to get into the appropriate shape to effectively participate in their sport. Hence, all athletes should participate in an off-season training routine that facilitates a fitness level suitable to participate in a particular sport. It is always recommended that an athlete participate in an exercise routine that keeps their body in good shape, and thereafter continue with an appropriate fitness routine that supports the specific sport, in which the individual is participating. Being physically ready for sport reduces the chance of being injured. General fitness should be achieved before participating in most sports. For more specificity, physical fitness should be related to the sport, for example, cardiovascular fitness for cross country runners, muscular strength and power for weightlifters, flexibility, and muscular endurance for gymnastics.

A lack of physical fitness places the athlete at risk of injury, for example, participating in gymnastics with a lack of flexibility would increase the likelihood of a muscle tear, participating

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in a marathon with no cardiovascular fitness may result in a calf strain or a rolled ankle.

DEFINITIONS OF PHYSICAL FITNESS

Physical fitness is to the human body what fine-tuning is to an engine. It enables us to perform up to our potential. Fitness can be described as a condition that helps us for better look, pleasant feel, and do our best. More specifically, it is: "The ability to perform daily tasks vigorously and alertly, with energy left over for enjoying leisure-time activities and meeting emergency demands. It is the ability to endure, to bear up, to withstand stress, to carry on in circumstances where an unfit person could not continue, and is a major basis for good health and well-being."

COMPONENTS OF PHYSICAL FITNESS

Exercise scientists have identified nine elements/components that comprise the definition of fitness. The following lists each of the nine elements and an example of how they are used:

Strength
The extent to which muscles can exert force by contracting against resistance (holding or restraining an object or person).

Power
The ability to exert maximum muscular contraction instantly in an explosive burst of movements (jumping or sprint starting).

Speed
The quickness of movement of limb, whether this is the leg of a runner or the arm of the shot putter.

Agility
The ability to perform a series of explosive power movement in rapid succession in opposing direction (Zigzag running or cutting movements).

Balance
The ability to control the body's position, either stationary (e.g., a handstand) or while moving (e.g., a gymnastics stunt).

Flexibility
The ability to achieve an extended range of motion without being impeded by excess tissue, that is, fat or muscles (Executing a leg split).

Local Muscle Endurance
A single muscle's ability to perform sustained work (Rowing or cycling).

Cardiovascular Endurance
The heart ability to deliver blood to working muscles and their ability to use it (Running long distances).

Strength Endurance
A muscle's ability to perform a maximum contracture time after time (Continuous explosive rebounding through an entire basketball game).

Coordination
The ability to integrate the above listed components so that effective movements are achieved.

WARM UP, STRETCHING, AND COOL DOWN

An appropriate warm up should prepare the body for physical activity. Warm up routines need to be specific to the nature of the sport. For example, a warm up for a game of touch needs to include running with changes of direction, forward, and backward running and ball passing. A good warm up gradually prepares the body for the demands that will be faced during participation in the sport.

A cool down eases the body into recovery and reduces the severity of soreness. A cool down should not be as intense as a warm up. Stretching is an essential part of any warm up and cools down. For warm ups, generally dynamic stretching is more effective. It gradually prepares the muscles and joints for activity and ranges of motion they may experience in the sport. Failure to stretch in a warm up may result in a muscular tear or joint sprain by forcing a joint beyond its range of motion. For cool downs, generally static stretching is most effective. Failure to stretch as part of a cool down will increase the incidence of soreness and affect further participation.

Today, there is a growing emphasis on looking good, feeling good and living longer, increasingly, scientific evidence tells us that one of the keys to achieving these ideals is fitness and exercises. Getting moving is a challenge because today physical activity is less a part of our daily lives. There are fewer jobs that require physical exertion. We have become a mechanically mobile society, relying on machines rather than muscles to get around. In addition, we have become a nation of observers with more people (including children) spending their problem leisure time pursuing just that – leisure. Consequently, statistics show that obesity and overweight, the problems that come with high blood pressure, diabetes, cardiac arrest, etc., are on the rise. However, statistics also show that preventive medicine pays off, so one should not wait until his/her doctor gives an ultimatum. Everyone must take the initiative to get active now.

SPORTS INJURIES

Sports injuries not only play a large role in individuals that play sports but also in individuals that are non-athletic as well.

The ability for a physical injury to alter the quality of life can be devastating to the individual and effect their physical and mental capabilities and outlook.

It is important that each individual "listen to" and be "in tune" with their body and understand the difference between "good" pain and "bad" pain. In other words, there can be pain when performing a physical activity that is to be expected and there can be pain that is not normal and is a sign that an injury is occurring or has occurred.

For example, when strength training there is a burning sensation that occurs as the specific muscle group begins to fatigue – this is a normal part of strength training and should be expected. However, if while performing strength training shoulder exercise and a specific pain occurs in the shoulder that is different than the normal burning sensation; it may be a signal that some portion of the shoulder is being overstressed. In addition, individuals that regularly exercise may experience soreness, tightness, or fatigue a day or to after a workout. Again, this can be normal as the body requires time to re-build and replenish itself. However, if an individual feels pain in their ankle for 3 or 4 days after an aggressive run it may be a sign that an injury has occurred. The physical injuries section has been broken down into three sections to allow each individual to rapidly locate a specific injury type that is of interest to them.

Most Common Sports Injuries: Abrasion, Achilles Tendon Rupture, Sprains, Blisters, Clavicle fracture, Muscle Soreness, Knee Pain, Musicale Cramps, Tennis Elbow, and Other.

PREVENTION OF SPORTS INJURY

Avoid training when you are tired. Increase your consumption of carbohydrate during periods of heavy training, increase in training should be matched with increases in resting, any increase in training load should be preceded by an increase in strengthening, treat even seemingly minor injuries very carefully to prevent them becoming a big problem, If you experience pain when training STOP your training session immediately, never train hard if you are stiff from the previous effort, pay attention to hydration and nutrition, use appropriate training surfaces, check training and competition areas are clear of hazards, check equipment is appropriate and safe to use, introduce new activities very gradually, allow lots of time for warming up and cooling off, check over training and competition courses beforehand, train on different surfaces, using the right footwear, shower and change immediately after the cool down, aim for maximum comfort when travelling, stay away from infectious areas when training or competing very hard, be extremely fussy about hygiene in hot weather, monitor daily for signs of fatigue, if in doubt ease off, have regular sports massage.

CONCLUSION

Physical fitness and general procedures include warm-up, stretching and cool-down. Pre-screening of participants before exercise is an important preventative measure. It involves assessing current fitness levels, medical history and conditions, and previous injuries related to exercise. Physical preparation enables the athlete to cope better with the demands of the sport or activity. For optimum physical preparation, an athlete should practice correct skill execution and technique and target the appropriate fitness components during training. Warm-up, stretching, and cool-downs are essential for all types of activity and play an important role in minimizing injury and preventing soreness. Sports injuries can happen because of poor conditioning, trauma, or muscle overuse. Before you begin playing a sport, it is important to start and maintain a basic fitness routine. Once you are fit, you can withstand the often unexpected demands on the body that come with playing sports. To avoid overusing your muscles, take frequent breaks. Or take some time off from your chosen activity and try a different one.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Enhancement of psycho-social well-being through yoga

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ABSTRACT

Psycho-social well-being and happiness have direct effect on optimal effectiveness in individual and in social life. College students especially girl students are facing problem related to psycho-social well-being. Research shows that yogic practices enhance quality of life developing all entities of human. In this study, attempt has been made to compare the effect of yogic practices on the enhancement of psycho-social well-being of undergraduate girl students so far as their psycho-social aspects are concerned. Two hundred undergraduate girl-students from M.U.C Women's college, Burdwan district in West Bengal, India, were divided into to two different groups, namely, general students group (Group A = 100) and yogic students group (Group B = 100) ranging the age between 18 and 22 years. To obtain score on psychological and social well-being standardized questionnaire retrieved by Ryff (1995) and Keys (1998) were used in the study. As a statistical tool descriptive statistics and "*t*" ratio were used. The result of the study revealed that the state of psychological and social well-being of yogic student group was found significantly better than general students group ($P > 0.05$). Hence, it is concluded that the yogic practice has a positive effect on psychological and social well-being on the college going girl students.

Keywords: College, Girl-students, Psycho-social, Well-being, Yogic practices

INTRODUCTION

Yoga is considered to be one of the most important, effective, and valuable tools available for an individual to overcome various physical and psychological problems. Yoga has been with us since time immemorial, but it is only during recent years that it has assumed worldwide importance. Yoga teaches us the knowledge of how to lead a healthy living. It improves our concentration, creativity, and sharpens our memory. To maintain a positive physical and mental health, yoga is a must. Yoga aims at an integrated and harmonious development of all the potentialities of an individual. Another side a balanced psycho-social state of mind is desirable to every human as it leads to a good sense of well-being that enables a person to function effectively within the society. The term psycho-social refers to one's psychological development in an interaction with a social environment. Today, there are many activities that students take initiatives for the betterment of the society. Therefore, their psycho-social well-being status is a capital for society. The purpose of the study was to compare the effect of yogic practices on the enhancement of psycho-social well-being of undergraduate girl students so far as their psycho-social aspects are concerned.

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METHODOLOGY

To achieve the objectives of the study, 200 college girls as subjects were taken conveniently from M.U.C Women's College Burdwan, West Bengal, India; ranging the age between 18 and 22 years was categorized into two distinct groups of having 100 students each, namely, general students group (Group-A) who were not generally participated in a constructed physical activities and yogic students group (Group-B) from the students who have taken as physical education as elective subject. To have a good emphasis on yoga related activities in their syllabus of semester-I only, yoga was introduced where the different as ANAS, pranayama, and meditation were the part of the syllabus. Group-B girl-students were practice only yogic activity 4 days a week up to 2 months and in per day there was 30 min yoga session according to their syllabus. This 2-month yogic students group does not participated any other physical activity except yoga.

Yogic Practices Schedule

Criteria Measure

To measure the psychological well-being status Ryff (1995) and social well-being status, Lee and Keyes (1998) standard questionnaire were used. The tests were taken in 3 consecutive days at the same time.

Statistical Techniques

As statistical tools descriptive statistics (Mean, Standard Deviation, and Standard Error of mean) were computed of selected well-being components of undergraduate girl students and to observe the mean difference between the Groups "*t*" test was used. (Statistical Package for the Social Sciences, version 17.0, SPSS Inc, Chicago, IL, USA). The level of significance was set at 0.05 levels.

RESULTS AND DISCUSSION

Descriptive statistics of data on selected psychological and social well-being parameters of two groups are presented in Table 1.

S. No.	Practices	Name of the practice	Duration (min)
1	Starting	Prayer	30 s
2	Basic yogic jogging and stretching	Neck bending	2 min
		Shoulder movement	
		Trunk Movement	
3	Surya namaskar	12 steps of surya namaskar	2 min
4	Yoga Practices		
	Asanas performed in standing posture	Tadasana (The Palm tree posture)	3 min
		ArdhaChakrasana (The Half wheel posture)	3 min
	Asana performed in sitting posture	Sasakasana (The Hare posture)	3 min
	Asana performed while lying on the stomach	Bhujangasana (The Cobra posture)	3 min
	Asana performed while lying on the back	Pawana Muktasana (The Wind releasing posture)	3 min
4	Pranayama	Anuloma – Viloma, Ujjayi, Bhramari	5 min
5	Dhyana	The Meditation	5 min
6	Closing	Om Shanti patha	30 s
	Total duration		30 min

Table 1: Descriptive statistics of data on selected psychological and social well-being parameters of two groups

Well-being parameter	Group	Mean	SD	Minimum score	Maximum score
Psychological	General students group (Group A)	73.42	10.12	53	94
	Yogic students group (Group B)	76.50	10.93	49	104
Social	General students group (Group A)	105.16	16.41	50	153
	Yogic students group (Group B)	109.47	14.07	49	144

Table 2: Comparison of two groups Group-A and Group-B on selected psychological and social well-being parameters

Wellbeing parameter	General students group (Group A)	Yogic students group (Group B)	MD	df	SED	t-ratio
	Mean	Mean				
Psychological	73.42	76.50	3.08	198	1.49	2.07*
Social	105.16	109.47	4.31	198	2.16	1.99*

t at 0.05 = 1.97, *Sig. at 0.05 level

Table 1 shows the mean and SD of psychological well-being and social well-being of Group A as 73.42 ± 10.12 and 105.16 ± 16.41, respectively, while in case of Group B both the measures were 76.50±10.93 and 109.47±14.07, respectively. It might be mentioned that in selected parameters of psychological and social well-being, higher score represents better status.

Table 2 revealed that there were significant mean difference between general students group (Group-A) and Yogic students group (Group-B) in psychological and social well-being in both the parameters Yogic students group showed superior results to general students.

The reasons for better psychological and social well-being of yogic girls group might be due to positive contribution of yogic activity on psycho-social health. On regular basis yoga practice in the college outside their own family circles might have special contribution to Yogic students related to sociability. Besides, mental harmony through yoga may lead to health promoting behaviors and positive psychological benefits of college girl-students. The findings of this study are supported by the findings of other researchers such as Jessica J Noggle, Naomi J Steiner, Takuya Minami and Sat Bir S Khalsa (2012), Dr. Avanish Kumar, Sween, Partibha Sharma, and Dr. Neelam Sharma (2017).

CONCLUSION

Based on the result, it was concluded that the yogic practices has a positive effect on psychological and social well-being on the college going girl students.

Further, the study observed that exposure to yogic activities may be extremely beneficial to college students especially girl-students for being effective to themselves, their families and the society at large as yogic practice enhance psychological and social well-being. It was also recommended that the yogic practice might be taught to normal participants as it may reduce negative affect and increase the positive affect within few weeks.

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Volume 39 • Issue 1 ISSN 2231-3265

International Virtual Conference on
"Digital Teaching, Training & Coaching - An Approach to Physical Education & Sports Sciences"
22nd and 23rd August 2020

Organized by
Government First Grade College, K G F - Kolar - Karnataka. &
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Collaboration with
International Federation of Physical Education,
Fitness and Sports Science Association

International Journal of Health, Physical Education and Computer Science in Sports
A Peer Reviewed (Refereed) International Research Journal - ISRA Journal Impact Factor 7.217

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Research Article

Impact of aerobic and resistance exercise on health correlated physical fitness modules of overweight working middle aged men's

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ABSTRACT

The purpose of the study was to find out the impact of aerobic and resistance exercise on health correlated physical fitness modules of overweight working men's. To achieve this purpose of the study, 45 working men's were selected as subjects who were from various engineering college, Davangere city. The selected subjects were aged between 40 and 65 years. They were divided into three equal groups of 15 each, Group I underwent aerobic training. Group II underwent resistant exercise and Group III acted as control that did not participate in any activities. The subjects were tested on selected criterion variable such as health correlated physical fitness modules before and immediately after the training period. The analysis of covariance ANCOVA was used to find out the significant difference if any, between the experimental group and control group on selected criterion variable. The result of the present study has revealed that there was a significant among the experimental and control group on health correlated physical fitness modules.

Keywords: Aerobic exercise, Health correlated physical fitness modules, Resistance exercise

INTRODUCTION

Middle age obesity has become a progressively important health problem. One of the causes of increased obesity is the broad shift over the past 20 years to more sedentary leisure activities, that is, television viewing and using the computer and also lack of activities. In adding to a sedentary lifestyle, the diets of today's human consist of more fast and suitability foods and larger portion sizes, resulting in greater overall energy intake.

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According to past works have focused on the increase in human sedentary activities, mainly television, and internet usage and viewing. Overweight middle age tend to watch more television and less activities than their normal persons. For many physically inactive humans who are overweight, any kind of physical activity appears difficult and this often prevents people who are obese from initiating and adhering to a specific form of physical activity. Physical activities are gives a tremendous helping not only developing ones physical fitness ability but also helps in making the body into good physic or body shape.

Obesity

Obesity is defined as an important increase above the pleasant weight caused by the gather of fat so that health

is harmfully affected. Obesity is the term used for extreme overweight. Obesity is a heavy accumulation of fat in the body's fat cells to such a serious degree that it rapidly increases the risk of obesity-associated illnesses and mortality.

AEROBIC EXERCISES

The term "Aerobic" accurately means with oxygen. Throughout aerobic activities the continuous supply of oxygen is maintained to burn carbohydrates and fats for the production of energy for the activities. Aerobic exercise is achieved at an intensity, in which the body can supply adequate oxygen to sustain performance for long periods of time.

RESISTANCE EXERCISE TRAINING

Resistance training is a "training designed to increase the body's strength, power, and muscular endurance through resistance exercise the most common form which is weight training." The person may use strength training as a means to improve muscle size and to simply improve appearance. In addition to the obvious goal of getting stronger, resistance training programs may be undertaken to improve long-term health. Resistance training is an important tool for achieving a complete healthy life.

STATEMENT OF THE PROBLEM

The purpose of the study was to find out the "Impact of aerobic and resistance exercise on health correlated physical fitness modules of overweight working middle aged men's."

HYPOTHESES

The formulated hypotheses of the study are as follows:

1. It was hypothesized that aerobic exercise program and resistance exercise program would significantly develop the health-related physical fitness components and anthropometric measurements of overweight middle aged men's.
2. It was hypothesized that there may be significant difference among the two modalities of training, namely, aerobic exercise program and resistance exercise program was developing the health-related physical fitness components and anthropometric measurements of overweight middle aged men's.
3. It was hypothesized that aerobic and resistance training would produce significant improvements in developing the health-related physical fitness components of overweight middle aged men's than the control group.

METHODOLOGY

Selection of Subjects

To accomplish the purpose of the study, around 400 working staffs including teaching and non-teaching in Bapuji Institute of Technology, Jain Institute of Technology and UBDT Engineering College, GM Institute of Technology, Davangere city, Karnataka State were screened using body composition commonly used to classify obesity, out of the 400 middle age overweight, 85 were found to be overweight (BMI; 32.4 ± 1.5 kg/m^2). Among the 85 only 45 were randomly selected for the purpose of this study.

EXPERIMENTAL DESIGN

Middle ages overweight were randomly assigned into three groups. From the selected subjects ($n = 45$), they were assigned randomly into three groups.

- Experimental Group-I as aerobic exercise training group (AETG)
- Experimental Group-II as resistance exercise training group (RETG)
- Experimental Group-III control group (CG)

The experimental Group-I underwent aerobic training, Experimental Group-II underwent resistance training, Group-III control group did not under go any above mentioned special training program. After assigning the subjects to treatment and control groups, they were tested on selected criterion variables. It was considered as pre-test. After assessing the pre-test performance on variables, the subjects were treated with their respective training program for about 12 weeks.

TRAINING PROGRAM

The training program was carried out in the Bapuji Institute of Technology Davangere. The subjects underwent their respective training program as per the schedule under the supervising of the investigator. Group-I practiced (AETG) aerobic exercises training, Group-II (RETG) resistance exercises training, and Group-III (CTG) control group and training program was 6 days for a week, the training was conducted in morning time, Group-IV (TMTG) practiced there was usual routine practice.

COLLECTION OF DATA

At the end of the treatment period, as pre-test and post-test the subjects belong to the treatment groups, namely, aerobic training, resistance training, and control group were tested on criterion variables of health-related physical fitness

components such as cardiovascular endurance, muscular strength, flexibility, percent body fat, and anthropometric measurements such as standing height, body weight, lean body mass, and waist circumference as such in the pre-test of the same.

STATISTICAL TECHNIQUE

- The group means gains recorded by the various groups during the experimental period of 12 weeks to the criterion measures were tested for significance by applying depended *t*-test.
- Analysis of covariance was applied to determine whether the three programs of training produced significantly different improvements in selected variables after 12 weeks of training. Since the initial means were not matched, comparison between actual could not be made, all means were adjusted by regression to a common mean.
- Further the significance of difference of pair of adjusted final group means was tested for significance by applying Scheffe's *post hoc* test.

RESULTS OF ANALYSIS OF VARIANCE ON PRE- AND POST-TEST MEAN SCORES

VARIABLES	'F' RATIOS OF PRE TEST SCORES	'F' RATIOS OF POST TEST SCORES
Cardiovascular Endurance (In Meters)	0.004^{NS}	3.063*
Muscular Strength and Endurance (In Nos.)	0.443^{NS}	18.583**
Flexibility (In Cms.)	0.062^{NS}	3.013^{NS}
Percent Body Fat (In Percentage)	3.153^{NS}	1.325^{NS}
Body Weight (In Kgs.)	0.639^{NS}	1.019^{NS}
Standing Height (In cms.)	0.661^{NS}	0.660^{NS}
Lean Body Mass (In kgs.)	0.654^{NS}	0.824^{NS}
Waist Circumference (In Cms.)	1.411^{NS}	4.907*
Hip Circumference (In Cms.)	0.438^{NS}	0.858^{NS}
Waist Hip Ratio (WHR) (In Ratio)	1.905^{NS}	0.875^{NS}
Waist Height Ratio (WHtR) (In Ratio)	0.865^{NS}	3.689^{NS}

Discussion on Findings of Aerobic Training

In testing the individualized effect of aerobic exercises training on health-related physical fitness components used in the study, it was observed that the changes made from the base line to post-treatment were statically significant. Thus, the experimental Group-I practiced aerobic training using produce positive impacts by increasing (760.000–715.333 = −44.667). About 6.24% in cardiovascular endurance, (13.266–10.533 = 2.733) 25.94% in muscular strength and endurance, (13.800–10.533 = 3.267) 31.01% in flexibility, and reducing (21.000–23.600 = –2.600) 11.01% in percent body fat.

In testing the individualized effect of aerobic exercise training on selected anthropometric measurements used in the study, it was observed that the changes made from the base line to post-treatment were statically significant. Thus, the experimental Group-I practiced aerobic training using produce positive impacts by reducing (74.533–75.187 = – 0.654) 0.49% in body weight, (153.667–153.667 = 0.000) 0.00% in standing height, reducing (47.037–47.272 = −0.235) 0.11% in lean body mass, (90.933–92.867 = −1.934) 1.80% in waist circumference, (94.000–102.867 = −8.867) 9.12% in hip circumferences, (0.966–0.901 = 0.065) 0.01% in waist hip circumference ratio, and (0.593–0.606 = −0.013) 0.01% in waist circumference height ratio.

Discussion on Findings of Resistance Training

In testing the individualized effect of resistance training on health-related physical fitness components used in the study, it was observed that the changes made from the baseline to post-treatment were statically significant. Thus, the experimental Group-2 practiced resistance exercise training produce positive impacts by increasing (747.333–716.000 = −31.333). About 4.37% in cardiovascular endurance, (12.933–10.733 = 2.200) 20.49% in muscular strength and endurance, (12.866–10.666 = 2.200) 20.72% in flexibility, and reducing (20.666–22.933 = −2.267) 9.88% in percent body fat.

In testing the individualized effect of resistance exercise training on selected anthropometric measurements used in the study, it was observed that the changes made from the baseline to post-treatment were statically significant. Thus, the experimental Group-II practiced resistance training using produce positive impacts by reducing (71.187–72.120 = −0.9334) 0.67% in body weight, (150.667–150.667 = 0.000) 0.00% in standing height, reducing (44.988–45.250 = −0.262) 0.12% in lean body mass, (82.733–85.867 = −3.134) 2.69% in waist circumference, (96.533–102.267 = −3.134) 2.69% in hip circumferences, (0.859–0.841 = 0.018) 0.01% in waist hip circumference ratio, and (0.550–0.571 = −0.021) 0.01% in waist circumference height ratio.

CONCLUSION

On the basis of the findings and within the limitations of the study the following conclusions were drawn:

The aerobic exercise training significantly improved the health-related physical fitness components such as muscular endurance, flexibility, and percent body fat of overweight middle aged men's and also improved in anthropometric measurements such as waist hip circumference ratio (WHR).

The resistance exercise training significantly improved the health-related physical fitness components such as muscular strength and endurance, flexibility, and percent body fat and anthropometric measurement such as hip circumference of overweight middle aged men's.

The aerobic and resistance exercise training significantly improved compare to control group.

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Volume 39 • Issue 1 ISSN 2231-3265

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Fitness and Sports Science Association

International Journal of Health, Physical Education and Computer Science in Sports
A Peer Reviewed (Refereed) International Research Journal - ISRA Journal Impact Factor 7.217

Research Article

Effect of yogic practices on risk factors among hypertensive men

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INTRODUCTION

Modern lifestyle has posed many health challenges making the masses entangle in self-created diseases and disorders such as heart diseases, high blood pressure, type 2 diabetes, and depression. The modern medication deals with symptoms of the disease rather than curing the disease or to strengthen the system. Hence, practicing of yoga has become significant in keeping away from diseases, curing the diseases and also to bring balance between body and mind. Extensive researches are going on incessantly to explore the applicability of yogic practices in keeping away all ailments and to cure them as well.

In this pandemic situation, people have got to know the importance of Yoga in boosting immunity and keeping the mind depression free. This is right time to explore the possibilities of applicability of yoga in our daily life.

Hypertension happens when the pressure in system gets high enough leading to risks in system. It is also commonly known as high blood pressure, which refers to the amount of pressure in arteries. In diagnosing hypertension, several readings must be taken. If the rate of blood pressure reaches to as high as 140/90, and then hypertension is present (Chobanian *et al*., 2003). Yoga helps to keep the heart healthy by lowering the blood pressure. Those who have already heart problems can remain healthy by meditation practice.

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Signs, Symptoms, and Complications of Hypertension

High blood pressure is known as the "silent killer." Left untreated and ignored, hypertension will lead to strokes, kidney failure, heart failure, heart attacks, atherosclerosis, metabolic syndrome, and aneurysms which lead to damage in brain and also death. Some of the other symptoms are headache, being tired all the time, blurred vision, nosebleeds, ringing in the ears, chest pain or irritation, irregular heartbeats, and feeling of confusion on and off.

Objectives of the Study

The objectives of the study were to find out the impact of yogic practices on selected risk factors among hypertensive men.

Hypothesis

It was hypothesized that there would be a significant difference on the selected risk factors due to yogic practices among hypertensive men.

Significance of the Study

The study would bring out the relative effect of yogic practices among hypertensive men.

Delimitations
The study was confined to hypertensive men of 35–45 years with the sample size of 40, in which 20 are in experimental group and 20 are control group. Moreover, they were treated with yogic practices.

Limitations
The socio-economic status was not taken into consideration. Moreover, the dietary and food habits and medication of the subjects will not be controlled.

Meaning of Hypertension
Consistently elevated blood pressure is called hypertension which measures above 140/90.

REVIEW OF RALATED LITERATURE

The reviews show that there is significant positive impact of yogic practices on risk factors. Based on the experience gained the investigator formulated suitable methodology to be applied in this research that is presented here.

METHODOLOGY

For the present investigation, 40 hypertensive men were selected randomly from various hospitals from Bengaluru 6 weeks training were given of yogic practices the subject age between 30 and 40 years. Based on Pilot study investigator adapted suitable training schedule. The study was started after establishing the instrument reliability, tester's competency, and subject reliability.

All the 40 subjects were classified into two groups, each with 20 experimental group and control group. Yoga training was given to experimental group (Yogic practices) after giving proper orientation on the study. No training was provided to control group.

Selection of Variables
Taking into consideration of feasibility criteria, availability of instruments, and the relevance of the variables of the present study, the following variables were selected.

Dependent Variables
Systolic blood pressure, diastolic blood pressure, and stress.

Independent Variables
Six weeks of yogic practices [Table 1].

Test Administration
The administration of the test done in standard method to measure blood pressure using citizen makes digital portable sphygmomanometer.

Stress test with the LathaSathi's Questionnaire describing 52 events which cause mental stress was given to evaluate stress. Stress level: Lower the score is considered as less stress

Table 1: Yogic practices for 6 weeks

S. No.	Name of practices	Duration in minutes	Repetitions	Duration in minutes	Repetitions	Duration in minutes	Repetitions
		Table 1 – I and II Week		Table 2 – III and IV Week		Table 3 – V and VI Week	
1	Prayer	2	1	2	1	2	1
2	Loosening exercise	7	1	4	1	5	1
3	Tadasana	4	2	3	2	2	2
4	Padahastasana	4	2	3	2	2	2
5	Makarasana	5	2	3	2	2	2
6	Pawanamuktasana	--	--	3	1	2	1
7	Bhujangasana	--	--	--	--	2	2
8	Cat and Cow stretch	--	--	--	--	3	2
9	Shavasana	4	1	3	1	4	4
10	Nadhisudhi	5	2	3	2	--	--
11	Ujjai	4	2	3	2	--	--
12	Bhramari	--	--	3	2	5	1
13	Sheetali	--	--	5	1	--	--
14	Simple meditation	--	--	--	--	6	1
15	Relaxation	10	1	10	1	10	1
	Total duration	45		45		45	

and vice versa. 0–17 mild stress, 18–35 moderate stress, 36–52 severe stress, and control index: 0–51 complete control over stress, 52–105 partial control over stress, and 106–156 no control over stress.

Statistical Technique

The data collected from the subjects were treated statistically to find out the significant differences among the hypertensive men. The statistical technique used to analyze was *t*-test to find out the significant difference in values of the variables of systolic and diastolic blood pressure and stress between pre- and post-test.

The investigator has analyzed scientific results obtained by application of various methodologies discussed above and the results are analyzed and presented in the form of detailed discussion graphs and various tables in the next chapter.

RESULTS AND DISCUSSION

Over View

The experimental group and control group were analyzed for the differences in health-related risk factors in relation to pre-test and post-test.

Test of Significance

The subjects were selected at random, but the groups were not equated in relation to the factors to be examined. Hence, the difference between the means of two groups in the pre-test had taken into account during the analysis of the post-test differences between the means. This was achieved by the application of *t*-test. The significance of the means of the obtained test results was tested at 0.05 level of confidence.

If the obtained value was greater than the table value, alternate hypothesis was accepted. If the obtained value was less than the table value, the alternate hypothesis was rejected.

Level of Significance

The probability level below which the hypothesis is rejected is termed as the level of significance. The "*t*" ratio obtained by "*t*" test was compared at 0.05 level of significance. In "*t*" ratio at 0.05 level of confidence for the degree of freedom (df) at 39 = 2.021.

Computation of Analysis of "*t*" Test

The following tables illustrate the statistical results of the effect of yogic practices on selected systolic and diastolic blood pressure of hypertensive men forming the two groups, namely, control and the experimental group. The significant differences between these two groups are given in the following tables.

RESULTS OF SYSTOLIC BLOOD PRESSURE

The systolic blood pressure was measured through citizen make digital portable B.P. Monitor. Table 2 shows the "*t*" of systolic blood pressure on Yogic practices (Group I) and control group (Group II) of hypertensive men.

Results of Blood Pressure (Systolic)

The data from the pre-test and post-test on blood pressure (systolic) levels of the control group and experimental group have been statistically analyzed using dependent "*t*" test and the results are presented in Table 2.

Discussion on the Findings of Blood Pressure (Systolic) Levels

The findings of the study imply that there was a significant improvement (decrease) in the blood pressure (systolic) levels which may be the effect of yogic practices given.

RESULTS OF DIASTOLIC BLOOD PRESSURE

The diastolic blood pressure was measured through standard lab test. Table 3 shows the "*t*" of diastolic blood pressure on Yogic practices (Group I) and control group (Group II) of hypertensive men.

Table 2: Mean, standard deviation, and mean difference of the groups and the "*t*" test of the control group and the experimental group for blood pressure (systolic)

Group	Test	*n*	Mean	SD	MD	*t*
Control	Pre-test	20	146.455	5.327	2.18	1.632
	Post-test	20	148.635	4.679		
Experimental	Pre-test	20	147.467	4.632	9.245	6.820*
	Post-test	20	138.222	3.953		

*Significant, "t" ratio at 0.05 level of confidence for the degree of freedom (df) at 38 = 2.021

Table 3: Mean, standard deviation, and mean difference of the groups and the "*t*" test of the control group and the experimental group for blood pressure (diastolic)

Group	Test	*n*	Mean	SD	MD	*t*
Control	Pre-test	20	98.763	5.621	2.154	2.02
	Post-test	20	96.609	5.016		
Experimental	Pre-test	20	98.276	6.465	8.879	7.632*
	Post-test	20	89.397	4.992		

*Significant, "*t*" ratio at 0.05 level of confidence for the degree of freedom (df) at 38=2.021

Results of Blood Pressure (Diastolic)

The data from the pre-test and post-test on blood pressure (diastolic) levels of the experimental group and the control group have been statistically analyzed using dependent "*t*" test and the results are presented in Table 3.

Discussion on the Findings of Blood Pressure (Diastolic) Levels

The findings of the study imply that there was a significant difference in the blood pressure (diastolic) levels which may be the effect of yogic practices given.

RESULTS OF STRESS

The stress was measured through Dr. Lathasatish Questionnaire. Table 4 shows the "*t*" of stress on Yogic practices (Group I) and control group (Group II) of hypertensive men.

Results of Stress

The data from the pre-test and post-test on stress levels of the experimental group and the control group have been statistically analyzed using dependent "t" test and the results are presented in Table 4.

SUMMARY

The purpose of the study was to investigate the effects of yogic practices on risk factors among hypertensive men from difference hospitals of age group between 30 and 40. In this study, yogic practices were given to experimental group for the period of 6 weeks.

The subjects were involved with their training for a period of 6 weeks. The subjects were monitored throughout the sessions. At the end of the 6 weeks training, post-test with respect to systolic and diastolic blood pressure and stress were measured using the standardized tests and methods. The significant difference between the means of the experimental group and control group for the pre-test and post-test scores was determined by "*t*" test. The level of significance was fixed at 0.05 level of confidence. The result of this study proved that significant differences were recorded due to 6 weeks of yogic therapy for hypertensive men.

Table 4: Mean, standard deviation, and mean difference of the groups and the "*t*" test of the control group and the experimental group for stress

Group	Test	*n*	Mean	SD	MD	*t*
Control	Pre-test	20	41.2	5.800	0.10	0.956
	Post-test	20	41.3	5.722		
Experimental	Pre-test	20	40.25	6.214	7.45	0.804
	Post-test	20	32.8	6.161		

*Significant, "*t*" ratio at 0.05 level of confidence for the degree of freedom (df) at 38=2.021

CONCLUSION

Within the limitation of the present study revealed that systolic blood pressure, diastolic blood pressure, and tress of the experimental group showed significant improvement (Decreased) when compared to the control group.

Recommendations

- It was found that yogic practices would be useful for the hypertensive men patients.
- Yogic practices may be included in all hospitals for health and overall development.
- Men, women, and children may be encouraged to involve in yogic practices.
- Yogic practices may be included in academic curriculum.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

The impact of physical education in modern society

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ABSTRACT

In today's world, physical education is essential. Man can live healthy and better life only by doing physical exercise. Today new and new diseases are emerging and have made big harm to man's body. Man's life has become dependent on medicines, for example, digest medicine, medicine for excretion, and medicine for sleep. Because of these medicines, man has become like a walking robot. In such condition is it fair to waste this body like this? How sad it is that man has time to do the service of technical gadgets such as car, freeze, and television but he does not have time to take care of his valuable body. Through physical education man can live his day–to-day life healthily. Physical education plays an important role in man's development and proves helpful for better physical, mental, social, emotional, and spiritual life. Here, the author wants to introduce the importance of physical education in our modern life.

INTRODUCTION

Helpful for Natural Development

Man's body develops very naturally from the prenatal stage to the old age. When this natural development is accompanied with some physical exercises it improves the energy level of the body. Considering this fact even special body exercises are suggested for the pregnant women. In the same way, there are different types of exercises for different age stages such as infant, adolescent, young, adult, and old age. This exercise becomes like a supplement to natural development in scientific way. The balanced emotional development is possible only with good body health and development. It can be considered as a fundamental use of physical education.

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BODY CHARM

Beautiful body is considered as the first step toward success in life.

People do so many efforts for well figured body. The beauty of the body depends on healthy muscles. Body can be well-shaped through physical exercise just as an expert sculpture brings out a beautiful idol by carving an ordinary stone structure. The secret of charming body lies in the muscles of the body.

STRONG AND HEALTHY BODY

We can make our body stronger and healthier through physical education. The significance of strong body lies in the happiness that we get after doing some hard physical or mental work. In other word for a strong person hard work does not remain a matter of tiredness. The reason of physical weakness found in the society is that physically man is not strong and healthy.

Man feels weakness and tiredness even after small physical work. Its psychological effect takes place that man does not stand for any physical work.

BOOSTS THE SELF-CONFIDENCE

And for the man who is full of self-confidence even the become a game playing. He can pass his life with full happiness and peace of mind. It will become a service to humanity, if this psychological secret of advantage of physical education is spread and attract the people toward it.

DEVELOPMENT OF DISCLIPLINE

Physical education develops not only self-discipline but also supports to maintain external discipline on man. Discipline is as important as the food for life. People with uncontrolled behavior deny any kind of restriction and control. However, they do not know that the real freedom lies in restriction.

CHARACTER BUILDING IN LIFE

The presence of the three qualities-energy, character, and beauty in life is very important for being a complete man in Indian culture. Energy and beauty are the direct advantage of physical education but indirectly it builds character too. Character can be developed well by physical education. The process of character building through physical education is so gradual that it cannot be seen directly but can be felt. All the weaknesses from man's life fall down like the dry leaves from the tree. The ideal form the culture and the civilization of any nation and society is developed through good character. All the vices such as violence, wars, jealousy, unhealthy competitions, and hatred give way to the character.

CONSTRUCTIVE USE OF TIME

It is man's natural desire that he or she wants relaxation from work. In the state of relaxation man neither works too much nor takes complete rest but he combines both the work and the rest. In combining the rest and the work.

HELPFUL FOR AWARENESS IN SOCIETY

Physical education is helpful for creating intimacy with society. In physical education team spirit is very important. Team is like a family.

Is a miniature form of society. Team is the center where the person gets opportunity to know the importance of cooperation with other people. According to the saying "With One Hand No Clap," the person cannot get complete advantage of physical education on his own. This limitation motivates man to cooperate with others. Thus, man develops faith in the feelings of communality and oneness with others. This faith becomes a part of man's character and connects man with his or her family, society, nation, and the world. Physical education prepares an ideal citizen unknowingly and unintentionally. Moreover, such ideal citizen breathes in the air of freedom in the society being free from limited narrow mindedness. He creates happiness not only for himself but also for the society. Thus, people devoted to the society, nation, and the world can be prepared through physical education.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Stress management

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MEANING

"Set of techniques and programs intended to help people deal more effectively with stress in their lives by analyzing the specific stressors and taking positive actions to minimize their effects" (Gale Encyclopedia of Medicine, 2008).

Stress is the "psychological, physiological, and behavioral response by an individual when they perceive a lack of equilibrium between the demands placed upon them and their ability to meet those demands, which, over a period of time, leads to ill-health" (Palmer, 1989).

SYMPTOMS OF STRESS

Common Symptoms

- Difficulty sleeping;
- Weight gain or weight loss;
- Stomach pain;
- Irritability;
- Teeth grinding;
- Panic attacks;
- Headaches;
- Difficulty concentrating;
- Sweaty hands or feet;
- Heartburn;
- Excessive sleeping;
- Social isolation;
- Fatigue;
- Nausea;
- Feeling overwhelmed;
- and obsessive or compulsive behaviors.

Emotional symptoms of stress include:

- Becoming easily agitated, frustrated, and moody
- Feeling overwhelmed, like you are losing control or need to take control
- Having difficulty relaxing and quieting your mind
- Feeling bad about yourself (low self-esteem), lonely, worthless, and depressed
- Avoiding others.

Physical symptoms of stress include:

- Low energy
- Headaches
- Upset stomach, including diarrhea, constipation, and nausea
- Aches, pains, and tense muscles
- Chest pain and rapid heartbeat
- Insomnia
- Frequent colds and infections
- Loss of sexual desire and/or ability
- Nervousness and shaking, ringing in the ear, cold or sweaty hands and feet

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- Dry mouth and difficulty swallowing
- Clenched jaw and grinding teeth.

Cognitive symptoms of stress include:
- Constant worrying
- Racing thoughts
- Forgetfulness and disorganization
- Inability to focus
- Poor judgment
- Being pessimistic or seeing only the negative side.

Behavioral symptoms of stress include:
- Changes in appetite – either not eating or eating too much
- Procrastinating and avoiding responsibilities
- Increased use of alcohol, drugs, or cigarettes
- Exhibiting more nervous behaviors, such as nail biting, fidgeting, and pacing.

IS STRESS HARMFUL?

Repetitive exposure of the stress response on our body is proven to lead to long-lasting psychological and physical health issues; these include cardiovascular disease, diabetes, anxiety, and depression.

DIFFERENCE BETWEEN STRESS AND BURNOUT

Burnout may be the result of unrelenting stress, but it is not the same as too much stress. Stress, by and large, involves too much: too many pressures that demand too much of you physically and mentally.

Stress	Burnout
Characterized by over-engagement	Characterized by disengagement
Emotions are over reactive	Emotions are blunted
Produces urgency and hyperactivity	Produces helplessness and hopelessness
Loss of energy	Loss of motivation, ideals, and hope
Leads to anxiety disorders	Leads to detachment and depression
Primary damage is physical	Primary damage is emotional
May kill you prematurely	May make life seem not worth living

SEVEN TIPS FOR STRESS MANAGEMENT

The following seven tips will help us in managing stress:

1. Understand your stress
   The first and foremost thing that we should understand is that we should understand the reason for our stress. The cause of stress and its impact on our health needs to be analyzed.
2. Identify your stress sources
   All the factors that contribute to stress need to be identified and thoroughly analyzed. The factors such work, family, society, or any other potential elements that contribute to tress need to be verified.
3. Learn to recognize stress signals
   The next step is recognize the symptoms of stress. The symptoms such as headaches, stomach pains, body pain, and low BP need to be addressed.
4. Recognize your stress strategies
   People who face stress should identify the various strategies by themselves to overcome stress. It can be yoga, exercise, meditation, work plans, etc. They should not indulge in self-medicating or alcohol.
5. Implement healthy stress management strategies
   After identifying various strategies that help in managing stress, the option that contributes in coping stress needs to be chosen and implemented effectively.
6. Make self-care a priority
   People who face stress should take care of their physical and mental health. They need to have healthy food.
7. Ask for support when needed
   People facing stress need to be seeking support from professionals and their near and dear ones. This will help in boosting their morale.

STRATEGIES FOR STRESS MANAGEMENT ARE

- Set realistic deadlines
- Take a lunch break
- Go home on time
- Take your holiday leave
- Leave work at work
- Participate in work functions
- Establish open and professional communication
- Respect other employees
- Do not tolerate discrimination of any sort, report any instances
- Sign up for workplace training programs to develop and improve your skills.

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Research Article

Effect of Kriyas on VO_2 max of women

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ABSTRACT

Yoga has considered internal purification of the human body in depth. The shuddhi kriyas (Cleansing Processes mentioned in the Niyamas of the 8 Limbs of Yoga) are intended to help to achieve total purification of the body. The organs where there can be a lot of impurities require these shuddhi kriyas. The internal organs, which come into contact with the external matters regularly, need to be purified. The trachea regularly comes into contact with the external air, the food pipe comes into contact with the external food products, and the mind comes into contact with the thoughts of the external world; these and such other organs need to be purified internally. This is especially useful in today's climate where there are many man-made chemicals that come into contact with our bodies and increase our toxic overload. Certain conditions can be cured with these kriyas, and the emphasis in Yoga is on the natural method of cleansing. Shat means 'six' and kriya means 'cleansing'. Yogic kriya remove the waste materials of our internal organs which are not expelled normally. Therefore, the aims of Hatha Yoga and of the Shatkriyas are to cleanse the internal organs and thereby create harmony between the major pranic flows, Ida and pingala, and attaining physical and mental purification and balance. The Purpose of the study was to find out "Effect of Kriyas on Vo_2 max of Women". To achieve these purpose 40 subjects in the age group ranging from 19 to 23 years studying in Government first Grade College for women Vijayapura, and Karnataka State were selected randomly as subjects. The following Kriyas training were selected for 6 weeks of training for 40 subjects. Criterion variable Physiological Variable was selected measured by using Vo_2 max. It was used for pre -test and post –test. The result shows that the 6 weeks of Kriyas training develops Vo_2 max Performance. Kriyas training develops Vo_2 max Performance.

Keywords: Kriyas training, Kapalabhati, Trataka, Neti, and Vo_2 max

INTRODUCTION

The Sanskrit root "kri" means "action" or "effort." Moreover, "ya" is the Atman or soul. Hence, its literal translation is some sort of action or effort involving your transcendental self. Yogic Kriyas are also known as Shuddhi-Kriya, Saucha, Sauca, Shudhi-Karan, Shat-kriyas, Shat-karma, and Shata-Karma. In other words, we can say that just as the external organs of the body are cleaned, in the same way, cleaning their internal organs is also very important. Ancient yogis found that Kriya Yoga is a means through which it helps to clean and remove unwanted substances stored in the internal organs of the body.

Kriyas have many benefits. Kriyas have physiological benefits and psychological benefits. Kriyas can be energizing, calming, or transcendent. One can more easily control the fluctuations of the mind through controlling one's energy, one's life force.

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In addition, through these kriya practices, this evolutionary action, we can burn through past karma in a way that frees us from the chain of karma. Kriya helps us shift our awareness so that we think thoughts instead of thoughts thinking us, arriving at a state in which we take the spontaneous right action. In other words, the state created through kriya is a dharmic or purposeful life, rather than a life ruled by past karma.

METHODOLOGY

The procedure adopted in the present research work is related to the selection of subjects, selection of variable, selection of test, and statistical technique involved in the study.

Selection of Subjects

The purpose of the study was to find out "EFFECT OF KRIYAS ON VO_2 MAX OF WOMEN." To achieve this purpose, 40 subjects in the age group ranging from 19 to 23 years studying in Government First Grade College for women Vijayapura, and Karnataka State were selected randomly as subjects. The following Kriyas training was selected for 6 weeks of training for 40 subjects. Criterion variable physiological variable was selected measured using Vo_2 Max. It was used for pre-test and post-test.

Selection of Variable

Independent Variable

Kriyas

- Jalaneeti
- Kapalbhati
- Trataka

Dependent Variable

Physiological Variable

- Vo_2 max

Selection of Test

The test item and measurement

S. No.	Test item and tool	Variable	Criterion measurement
1.	Cooper test 12 min Run and walk 400 m running track, marker, cones, and stopwatch.	Vo_2 max	Distance covered by subject against time taken.

Statistical Techniques

Standard devotion was used to find out a significant mean difference in pre-test and post-test scores of different groups with respect to each parameter. Standard devotion was used to find out significant mean, *t* value difference of two groups with respect to each parameter.

Table 1: The pre-test and post-test for Kriyas training experimental group on Vo_2 max performance

Variable	Test	*n*	Mean	SD	*t*-value
Vo_2 max	Pre-test	20	42.3667	8.53182	14.400*
	Post-test	20	65.4667	7.22416	

The level of significance 0.05 = Table value = 1.96

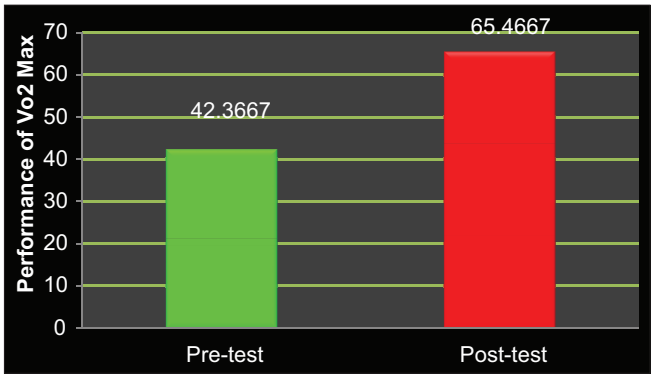

Figure 1: The pre-test and post-test for Kriyas training experimental group on Vo_2 max performance

The statistical analysis was carried out with the help of the Software Package of the Social Science 15.0 versions for SPSS packages.

Analysis and Interpretation of Data

The aim of the research work was to find out the "Effect of Kriyas on Vo_2 max of Women." For the purpose of the research study, 40 subjects in the age group of 19–23 years belonging to the student of Government First Grade College for women Vijayapura, and Karnataka State were selected as subjects for the present study. The subjects were divided into two groups. Group I treated as Kriyas training group, Group II considered as a control group.

Pre- and post-test data were gathered on Vo_2 max and the same as described in the following table.

Table 1 indicates that the "*t*" value is the more than table value that is 1.96; hence, it is significant.

The pre-test mean value is 42.3667 and the post-test mean value 65.4667. The post-test mean value is more than pre-test mean value. Is shows significant improvement in the Vo_2 performance of women owing to the 8 weeks Kriyas training the same as displayed in Figure 1a.

Figure 1a clearly indicates that the 8 weeks Kriyas training performance is drastically improved the Vo_2 max performance of the subjects.

SUMMARY

The purpose of the study was to investigate the "Effect of Kriyas on Vo_2 max of Women." The researcher selected Vo_2 max for physiological variables. Six weeks of Kriyas training were given to 40 subjects before training; the researcher conducted pre-test performance on physiological variable. The performance of the pre-test was recorded. After the 6 weeks of Kriyas Training, the post-test performance was recorded on Vo_2 max performance. The result of the post-test performance indicates significant improvement.

CONCLUSION

Six weeks of Kriyas training has shown significant improvement on Vo_2 max of subjects.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Innovative teaching and learning: A pedagogical change

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ABSTRACT

A great challenge before any teacher today is capturing the students' attention, and putting across ideas in such a way that it stays with them long after they have left the online meets and classrooms. For this to happen, classroom experience should be redefined and innovative ideas that make teaching-learning methods more effective should be implemented. So here are some innovative tools and techniques that will help teachers renovate their teaching methods and make their classes interesting and attractive. The use of innovative methods in educational institutions has the potential not only to improve education but also to empower people, strengthen governance, and activate the effort to achieve the aim of human resource development for the country. The purpose of this paper is to suggest useful innovative teaching tools and techniques which could easily impart knowledge to the students and keep them going.

Keywords: Blogging, Classroom, Innovative teaching, Learning, Voice threads

INTRODUCTION

The world today is facing a new consequence where people are struggling to learn and to work hard to create a new learning environment. The purpose of education is not only teaching the textbook and makes the students understand but also adds innovative thinking creative environment and self-sufficiency. Today the challenge is, it has to be done without meeting them in person (face to face). That's the reason why institutions have included innovative tools and techniques that impart knowledge. Finding and adopting an innovative method for teaching in the current situation is of great importance. Research has proved that certain methods and approaches can surely enhance the learning process. Some innovative methods of teaching could be the combination of various digital media types such as text, images, audio, and video, into an integrated multisensory interactive application or presentation to convey information to the audience.

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Student engagement is the need of the hour. It refers to the degree of attention, curiosity, interest, optimism, and passion that students show when they are learning or being taught. When students are engaged, they learn more, retain more, and find joy in completing the work. Hence, to make their classes interesting and keep them engaged, here are some innovative techniques and tools that will help teachers reinvent their teaching pedagogy.

WHAT IS INNOVATIVE TEACHING?

Innovative teaching involves creativity and novelty of the teacher which changes the style and method of teaching Innovative teaching today means teaching with technology. Educational institutions all over the world are implementing

new tools and techniques to enhance the students' knowledge and student engagement. Innovative teaching is necessary for the present and future of education to help students to reach their full potential. Higher education should serve the long-term intellectual needs of the students like providing new material by teachers helps the student to gain new insights or open up new channels of intellectual stimulation or enhanced student's essential and creative thinking power. Innovative teaching is a necessity for all teachers to meet the educational needs of the new generations. However, teachers' competency for innovative teaching is a key factor influencing their performance and all the teachers are expected to be adaptive to the new tools and techniques to survive in the current education system.

TECHNIQUES OF INNOVATIVE TEACHING

A teacher can give the best only if s/he truly loves what they do. You will be more creative and inspired when you are not stressed. Loving your work keeps you relaxed and allows you to experiment new ideas.

Brainstorming

Make time for brainstorming sessions into your classrooms. These sessions are a great way to get creative ideas. When you have multiple brains focusing on one single idea, you are sure to get numerous ideas and will also involve everyone into the discussion. These sessions will be a great platform for students to voice their thoughts without having to worry about right or wrong. Set some ground rules before you start. You can go for simple brainstorming or group brainstorming or paired brainstorming.

Classes Outside the Classroom

Some lessons are best learned when they are taught outside of the classroom. Organize field trips that are relevant to the lessons or just simply take students for a walk outside of the classroom. The children will find this fresh and exciting and will learn and remember the things taught faster.

Role Play

Teaching through role play is a great way to make children step out of their comfort zone and develop their interpersonal skills. This method comes in handy, especially when you are teaching literature, history, or current events. The role-playing approach will help the student understand how the academic material will be relevant to his everyday tasks.

Puzzles and Games

Learning is fun, where puzzles and games are part of education. Children may not feel they are learning when their lessons are introduced through games. Puzzles and games help children to think creatively and face challenges.

Refer Books on Creativity

To be a creative teacher, you need to do some research on creative ideas and techniques. There are a lot of books on creativity. Choose some of the best works and start learning, it will be helpful for your professional development as well.

Introduce Lessons like a Story

Just think, why do you watch movies with much interest? You like to watch movies because there is always an interesting story to keep you engaged. Like that, learning sessions become more interesting when you introduce it like a story. If you are creative, even math lessons can be related to interesting stories.

TEACHING WITH TECHNOLOGY (TOOLS)

An effective teaching-learning atmosphere requires the incorporation of technology within our discipline and classes. Some of the popular and effective tools used are:

Voice Threads to Build Student Engagement

Voice thread is a web service that allows users to upload PowerPoint slides, videos, photos, etc., and add voice narration to create a multimedia presentation. Voice thread is an application that runs inside your web browser and it allows you to transform collections of media, such as images, videos, documents, and presentations, into a place for a conversation. These conversations are not live but take place whenever it is convenient for the people to participate. They are also secure, with simple controls that let you dictate who can participate and what they can do. It starts student-driven discussions with better understanding. It is a great way to deliver projects and solicit feedback.

Blogging

Blogging is a public post. Blogging for study sessions is to be practiced. Students can post case studies in a class blog. Students can be asked to post notes on class blog. You can analyze, evaluate, and create the material. Teachers naturally think back on what has happened in their classroom, and often wonder what they could have done better. Blogging can help with this process, enabling teachers to keep an ongoing personal record of their actions, decisions, thought processes, successes and failures, and issues they have to deal with. Blogging can crystallize your thinking. Sometimes we do not really know what we are thinking until we actually write it down in a physical format, which can be done through blogging.

Prezi–Your Presentations

Prezi is a new way to do the presentations. Prezi is a versatile app that lets you make professional-looking presentations. It is like a free, pared-down version of PowerPoint. Prezi lets you make presentations that are as casual or as professional

as you want them to be. It allows you to add information to a Prezi organize it in a logical way, embellish it with audio and video and then share it with the people you need to reach. Prezi makes making a presentation very easy. Prezi feels fresh and easy but still produces nice looking presentations.

Social Bookmarking

Bookmarking is the simple process of saving the address of a website in the favorite folder of your web browser so that you can find it again later. Social bookmarking takes these process two steps further. First, instead of saving the bookmarks to your favorite folder, it saves them online. The great advantage of this is that you can then access them from any computer, not just the one you saved them on, simply by logging into your social bookmarking account. This enables you to access your favorite sites from wherever you are, rather than wherever you bookmarked the site.

Podcast in Classroom

Podcasts are serial recordings, posted regularly online. Basically, producing podcasts is the technology-based equivalent of oral lectures. Much as lectures and news has been shared with listeners, who download the files online. The advantages of podcast are its flexibility, reusability of your lecture. It is advantage for hearing impaired students.

Screencast

Screencasts have emerged as a prominent teaching tool on the Internet. Screencasts are an effective way to share ideas, deliver content, and obtain student feedback. Screencasts can be used for describing a step-by-step process, explaining a particular concept, or presenting a PowerPoint presentation with narration and multimedia elements. A screencast can be used in any class as a part of real-time instruction or as the lesson itself, as in the flipped teaching model. With the flipped teaching method, instructors use screencast videos to deliver their lectures, assigning them as homework.

Moodle

It is an open-source system to help design your session. Moodle is a virtual learning environment which provides staff and students with access to electronic teaching and learning materials such as lecture notes and links to useful websites and activities such as discussion forums, group it is something that lets you capture your experience, note, website, and photos.

More Teaching Tools

- Chat rooms
- Discussions board
- Webinars
- Emails
- Social media in class rooms
- Smart boards
- Evernote notebook

INNOVATIVE LEARNING TECHNIQUES

Learning in schools and colleges can be enriched by experiences from everyday life; informal learning can be deepened by adding questions and knowledge from the classroom. These connected experiences spark further interest and motivation to learn.

Crossover Learning

An effective method is for a teacher to propose and discuss a question in the classroom, then for learners to explore that question on a museum or industrial visit or field trip, collecting photos or notes as evidence, then share their findings back in the class to produce individual or group answers. These crossover learning experiences exploit the strengths of both environments and provide learners with authentic and engaging opportunities for learning. Since learning occurs over a lifetime, drawing on experiences across multiple settings, the wider opportunity is to support learners in recording, linking, recalling, and sharing their diverse learning events.

Learning through Argumentation

Students can advance their understanding of science and mathematics by arguing in ways similar to professional scientists and mathematicians. Argumentation helps students attend to contrasting ideas, which can deepen their learning. It makes technical reasoning public, for all to learn. It also allows students to refine ideas with others, so they learn how scientists work together to establish or refute claims.

Teachers can spark meaningful discussions in classrooms by encouraging students to ask open-ended questions, re-state remarks in more scientific language, and develop and use models to construct explanations. When students argue in scientific ways, they learn how to take turns, listen actively, and respond constructively to others. Professional development can help teachers to learn these strategies and overcome challenges, such as how to share their intellectual expertise with students appropriately.

Incidental Learning

Incidental learning is unplanned or unintentional learning. It may occur while carrying out an activity that is seemingly unrelated to what is learned. For many people, mobile devices have been integrated into their daily lives, providing many opportunities for technology-supported incidental learning. Unlike formal education, incidental learning is not led by a teacher, nor does it follow a structured curriculum, or result in formal certification. However, it may trigger self-reflection and this could be used to encourage learners to reconceive what could otherwise be isolated learning fragments as part of more coherent and longer-term learning journeys.

Embodied Learning

Embodied learning involves self-awareness of the body interacting with a real or simulated world to support the learning process. When learning a new sport, executive summary five physical movements is an obvious part of the learning process. In embodied learning, the aim is that mind and body work together so that physical feedback and actions reinforce the learning process.

Technology to aid this includes wearable sensors that gather personal physical and biological data, visual systems that track movement, and mobile devices that respond to actions such as tilting and motion. This approach can be applied to the exploration of aspects of physical sciences such as friction, acceleration, and force, or to investigate simulated situations such as the structure of molecules.

Context-based Learning

Context enables us to learn from experience. We can understand the relevance of a concept by interpreting the information in the context of where and when it occurs and relating it to what we already know.

We have opportunities to create context by interacting with our surroundings, holding conversations, making notes, and modifying nearby objects. We can also understand it by exploring the world around us supported and evidences. Context can be shaped by the process of learning.

CONCLUSION

This paper focuses innovative teaching and learning methods in the classroom by giving the students a new way to train their skills, encouraging teachers to adopt new method technology into the classroom and use multimedia to modify the contents of the material. Any teaching method without destroying the objective could be considered as innovative methods of teaching. Researchers believe that the core objective of teaching is passing on the information or knowledge to the minds of the students. There are a number of ways that teachers can bypass the system and offer students the tools and experiences that spur an innovative mindset. Education is a light that shows mankind the right direction to upsurge. The purpose of education is not just making a student literate but adds rationale thinking, knowledge, and self-sufficiency. Change comes to those who know what they want goes the saying. Innovative teaching and learning benefit both students and teachers. Instructional consultants in teaching improvement centers are the cheerleaders and reinforces of those who bring inventiveness into their teaching.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Impact of yogic exercises on aggression of schoolchildren

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ABSTRACT

Yoga is one of the most popular fitness practices around the world, and there is a reason why this ancient form is such a rage even today. To put it simply, yoga is the act of harmonising your body, mind and soul. Yoga is a spiritual practice that has nothing to do with religion. Yoga has been mistaken as a product of Hinduism, just because it took birth in the same region as the religion. Yoga is about complete transformation - physically, psychologically and spiritually. This means, that yoga has the power to transform your mind, body and soul. The Purpose of the study was to find out "Impact of Yogic Exercises on Aggression of School Children". To achieve this purpose 30 school children in the age group ranging from 14 to16 years studying in Adarsh English Medium High School, Vijayapura, Karnataka State were selected randomly as subjects. The following Yogic Exercises training were selected for 6 weeks of training for 30 subjects. Criterion variable Psychological Variable was selected measured by using Aggression. It was used for pre -test and post –test. The result shows that the 6 weeks of Yogic Exercises training develops Aggression Performance. Yogic Exercises training develops Aggression Performance.

Keywords: Yogic exercises training, Padmasana, Vajrasana Tadasana, Vrikshasana Shavasana, Naukasana Makarasana, Bhujanagasana and Aggression

INTRODUCTION

Yoga is essentially a spiritual discipline based on an extremely subtle science, which focuses on bringing harmony between mind and body. It is an art and science of healthy living. The word "Yoga" is derived from the Sanskrit root "Yuj," meaning "to join" or "to yoke" or "to unite." As per Yogic scriptures, the practice of yoga leads to the union of individual consciousness with that of the universal consciousness, indicating a perfect harmony between the mind and body, man and nature. According to modern scientists, everything in the universe is just a manifestation of the same quantum firmament. One who experiences this oneness of existence is said to be in yoga and is termed as a yogi, having attained to a state of freedom referred to as mukti, nirvana, or moksha. Thus the aim of yoga is self-realization, to overcome all kinds of sufferings leading to "the state of liberation" (Moksha) or "freedom" (Kaivalya). Living with freedom in all walks of life, health, and harmony shall be the main objectives of yoga practice. "Yoga" also refers to an inner science comprising of a variety of methods through which human beings can realize this union and achieve mastery over their destiny.

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Methodology

The procedure adopted in the present research work is related to the selection of subjects, selection of variable, selection of test, and statistical technique involved in the study.

Selection of Subjects

The purpose of the study was to find out "IMPACT OF YOGIC EXERCISES ON AGGRESSION OF SCHOOLCHILDREN." To achieve this purpose, 30 subjects in the age group ranging from 14 to 16 years studying in Adarsh English Medium High School, Vijayapura, and Karnataka State were selected randomly as subjects. The following yogic exercises were selected for 6 weeks of training for 30 subjects. Criterion variable psychological variable was selected measured using aggression. It was used for pre-test and post-test.

Selection of Variable

Independent Variable

Yogic Exercises

- Padmasana, Vajrasana Tadasana, Vrikshasana Shavasana, Naukasana Makarasana, and Bhujanagasana

Dependent Variable

Psychological Variable

- Aggression

Selection of Test

The test item and measurement

S. No	Test item and tool	Variable	Criterion measurement
1.	Questionnaire developed by Mathur and Raj Kumari Bhatnagar	Aggression	As per the standard questionnaire

Statistical Techniques

Standard devotion was used to find out a significant mean difference in pre-test and post-test scores of different groups with respect to each parameter. Standard devotion was used to find out the significant mean, "*t*" value difference of two groups with respect to each parameter.

The statistical analysis was carried out with the help of the Software Package of the Social Science 15.0 versions for SPSS packages.

Analysis and Interpretation of Data

The aim of the research work was to find out the "Impact of Yogic Exercises on Aggression of Schoolchildren". For the purpose of the research study, 30 subjects in the age group of 14–16 years belonging to the student of Adarsh English Medium High School, Vijayapura, and Karnataka State were selected as subjects for the present study. The subjects were divided into two groups. Group I treated as yogic exercises group, Group II was considered as a control group.

Table 1: The pre-test and post-test for yogic exercises experimental group on aggression performance

Variable	Test	N	Mean	SD	*t*-value
ession	Pre-test	15	148.5500	3.95867	16.483*
	Post-test	15	95.7500	12.82463	

The level of significance 0.05 = Table value = 1.96

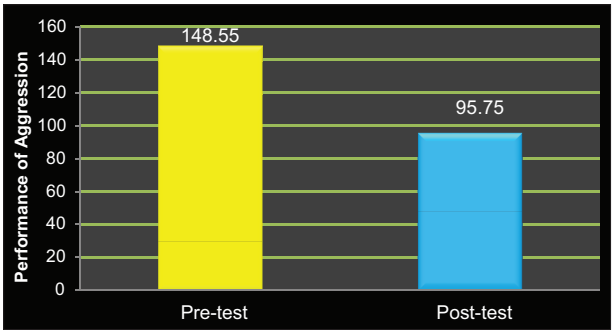

Figure 1: The pre-test and post-test for yogic exercises experimental group on aggression performance

Pre- and post-test data were gathered on aggression and the same as described in the following table.

Table 1 indicates that the "*t*" value is the more than the table value that is 1.96; hence, it is significant.

The pre-test mean value is 148.5500 and the post-test mean value is 95.7500. The post-test mean value is less than pre-test mean value. Is shows significant improvement in the aggression performance of schoolchildren owing to the 6 weeks yogic exercises the same as displayed in Figure 1a.

Figure 1a clearly indicates that the 6 weeks yogic exercises performance is drastically improved the aggression performance of the subjects.

SUMMARY

The purpose of the study was to investigate the "Impact of Yogic Exercises on Aggression of Schoolchildren." The researcher selected aggression for the physiological variable. Six weeks of yogic exercises were given to 30 subjects before training; the researcher conducted pre-test performance on the psychological variable. The performance of the pre-test was recorded. After the 6 weeks of yogic exercises, the post-test performance was recorded on aggression performance. The result of the post-test performance indicates significant improvement.

CONCLUSION

Six weeks of yogic exercises have shown significantly reduced on aggression of subjects.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

An analysis on great Indian cricketer Babaji Palwankar Baloo and his performance in cricket

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ABSTRACT

Babaji Palawankar Baloo was in fact a famous cricketer, who made his name bowling the Hindus to victory against the Parsis and the Europeans. In western India, at least, Palwankar Baloo was the first public figure to emerge from the ranks of the Untouchables, commanding enormous respect inside and outside of his community. Babaji Palwankar Baloo, commonly known as Palwankar Baloo, was an Indian cricketer. He bowled left-arm orthodox spin with great accuracy and the ability to turn the ball both ways. He was also a moderately skilled lower-order batsman. He was the first member of the Dalit (also known as the "Untouchable") caste to make a significant impact on the sport. Although being one of the finest cricketers of his time, he was never allowed to lead the team as a captain because of his so-called lower caste. However, in later years, his brother Palwankar Vithal was made captain of the Hindu team by the Hindu Gymkhana Club, which was seen as an impact of changing social situations in India. Baloo was in fact a famous cricketer, who made his name bowling the Hindus to victory against the Parsis and the Europeans. In western India, at least, Palwankar Baloo was the first public figure to emerge from the ranks of the Untouchables, commanding enormous respect inside and outside of his community. As a student, Ambedkar himself had 'looked at the solid fame of the Untouchable bowler with pride'. Baloo was a Chamaar, a member of the leather-working caste which ranks close to the bottom of the Hindu social hierarchy. He was born in 1875 in Dharwad, but the family moved soon afterwards to Poona, the old Maratha city hundred miles southeast of Bombay. His father was found working in cleaning guns and cartridges in a Government emanations department, a job regarded as polluting by caste Hindus.

Keywords: Research contribution towards physical education and sports, Sports performance, Talent identification, Social recognition, Need and scope of research

INTRODUCTION

Babaji Palwankar Baloo was in fact a famous cricketer who made his name bowling the Hindus to victory against the Parsis and the Europeans. In western India, at least, Palwankar Baloo was the first public figure to emerge from the ranks of the untouchables, commanding enormous respect inside and outside of his community.

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Babaji Palwankar Baloo, commonly known as Palwankar Baloo, was an Indian cricketer. He bowled left-arm orthodox spin with great accuracy and the ability to turn the ball both ways. He was also a moderately skilled lower-order batsman.

He was the first member of the Dalit (also known as the "Untouchable") caste to make a significant impact on the sport. Although being one of the finest cricketers of his time, he was never allowed to lead the team as a captain because of his so-called lower caste. However, in later years, his brother Palwankar Vithal was made captain of the Hindu team by

the Hindu Gymkhana Club, which was seen as an impact of changing social situations in India.

The Purpose of the Study

The purpose of the study is established based on the previous facts written by Ramachandra Guha (2002), in cricketing terms Babaji Palwankar Baloo was W. G. Grace's equivalent, as the first truly great cricketer produced in India. But of course, his contributions extended far beyond the boundary; with his brothers, he played a vital part in the movement for self-respect among the depressed castes. In social terms, Baloo's achievement can be likened to that of Jackie Robinson in American baseball, the first black to break through a previously impenetrable social barrier by playing in the major leagues. Further, the study was analyzed based on the fact figures of match score sheets.

Definition of Research Problem

This study assumes to be great significance, given its comprehensive study of a first great Indian cricketer such as Babaji Palwankar Baloo. The present investigations delineate Babaji Palwankar Baloo as the great cricketer of India before independence. The study attempts to delineate his performances in the field of cricket is a great significance itself.

Objectives of the Study

The objectives of the study were as follows:

- The present investigation attempts to delineate Babaji Palwankar Baloo as the great cricketer of India before the independence era.
- To study his match performances in the field of Indian cricket.

MATERIALS AND METHODS

As per the objectives laid down in the present study, the investigator collected the data and information related to the present study in the following methods.

Methods

- Illustrative case studies.
- Explorative (or pilot) case studies.

Data Collection Techniques

- Documents: Score sheets, letters, newspaper articles, pamphlets, magazines, books, photos, administrative records, etc.
- Archival records: Census records, survey records, name lists, etc.

Design of the Study

Sources of data and information

The different sources and methods used by the investigator to gather data and information about the present study. There are three major sources and methods that have been identified to obtain the information and data are Interview, documents, and archival records.

It is further divided as the collection of data and information for this investigation as both primary and secondary resources.

Primary Resources

The original data, material, and information are collected from the following primary resource.

(a) Interview method: The investigator personally visited Pune city to met Sri. Sudhir Vaidya, former BCCI scorer to collect the data in the form score sheets of matches played by Babaji Palwankar Baloo in India during 1906–1913.
(b) Books/Articles: The book/articles written on the subject's author were taken to study the socioeconomic background, life history, and personality of Late. Babaji Palwankar Baloo.

Secondary Resources

(a) Documents: The investigator visited various universities such as LNUPE, Gwalior, Jiwaji University, Gwalior, Banaras Hindu University, Bangalore University, Bengaluru, University of Mysore, Mysore, Karnatak University, Dharwad, University of Mumbai, and University of Pune to get the related data information of the study in the form of M.Phil. and Ph.D. thesis. The published materials in the form of newspapers, articles, magazines, books, and administrative records are collected, studied, and information were retained as documents for the investigation.
(b) Archival records: The official records and data about the cricket performances of Babaji Palwankar Baloo in the websites were studied and information and data were retained for the study.

RESULTS AND DISCUSSION

Based on the previous facts written by Ramachandra Guha (2002 and 2006) and statistical records maintained by Sri. Sudhir Vaidya, former BCCI scorer, and others the descriptive and statistical interpretation is made in the following steps,

1. Early life.
2. Cricket career.
3. Cricket achievements in India.

Early Life

Baloo was born in July 1876 in Dharwad. His father was employed in the army, and he either worked in an ammunition factory in Kirkee or was a sepoy in the 112th Infantry Regiment. His family name of Palwankar came from his native village of Palwan. Being a Dalit, he faced discrimination prevalent in India at that time (Guha 2002:86). His first job was tending the

Table 1: The performances of Babaji Palwankar Baloo in Triangular and Quadrangular Cricket tournaments played in India

S. No.	Tournaments	Matches	Performances		Results		
			Batting	Bowling	Won	Lost	Drawn
1.	Triangular	08	227	64	06	-	02
2.	Quadrangular	06	83	24	03	01	02

pitch at a cricket club for Parsis in Poona, now known as Pune. He also occasionally bowled to the members and was paid 3 Rupees a month. Around 1892, he moved to the Poona Club, a cricket club for Europeans, where his duties included rolling and sweeping the pitch, erecting the practice nets, and occasionally marking the tennis courts. His salary increased to Rs.4 a month.

Cricket Career

(a) Introduction to cricket

A Hindu club in Pune challenged the Europeans to a cricket match, creating a dilemma over whether or not to include the obviously talented Baloo in their side. The (high-caste) Brahmins in the Hindu side were against it, but some Telugu members argued for his inclusion, as did Captain Greig. This seemed to settle the matter, for Baloo was invited to play with the Hindu Club.

(b) First-class cricket career

Baloo played for the Hindu side in the famous 1906 and 1907 matches against the Europeans of the Bombay Gymkhana, in which the Hindus defeated the Europeans by 109 runs and 238 runs, respectively. These matches led to various newspaper commentaries, of two types: Ones proclaiming a victory over caste prejudice as the united Hindu team triumphed, and others painting them in nationalist tones as a victory of the natives against European rule.

Cricket Achievements in India

Table 1 showing the performances of Babaji Palwankar Baloo in Triangular and Quadrangular Cricket tournaments played in India. According to the performances shown in the table, Babaji Palwankar Baloo played total 14 first-class matches in India during 1906–1913 among them total 9 matches won, 1 lost and 4 were drawn. As per the above table results, he played total 8 triangular matches and scored 227 runs, took 64 wickets. Furthermore, he played total 6 quadrangular matches and scored 83 runs, took 24 wickets. Because of his outstanding performances, his team won a total 6 triangular and 3 quadrangular matches, respectively.

CONCLUSIONS

- These stories of untouchability being challenged in cricket have largely been ignored by historians but served as great inspiration for pioneers and architects of the Indian constitution like Dr. B.R. Ambedkar. This is why the man who emerged as the foremost sportsman of the untouchables in 1927–28 went to telling village audiences about his early attempts to gain recognition for Babaji Palwankar Baloo's achievement.
- Babaji bowled left-arm orthodox spin with great accuracy and the ability to turn the ball both easy. He was the first member of Dalit caste to make a significant impact on the sport. Palwankar Baloo's name stands out in history and not just in cricket as he though being an unfair victim of the caste system, managed to challenge this very system with his immense cricket talents.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Relationship of selected physical psychological and physiological parameters to performance of Karnataka state inter university male kabaddi players

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ABSTRACT

Kabaddi is a combative team game played with absolutely no equipment on a rectangular court, either outdoor or indoor, with seven players on the ground in each side. The game is played into two halves of 20 min each with an interval of 5 min. The present study was carried out with the aim to find out the relationship between kabaddi performance and selected physical fitness variables as well as psychological and physiological parameters to the performance of Karnataka inter university male kabaddi players. One hundred and eighty kabaddi players were selected for the present study. The physical fitness variables included speed, agility, power, flexibility, pull-ups, and endurance. The psychological variables were anxiety, aggression, and self-confidence. The physiological parameters included resting pulse rate and breath-holding time. All the physical fitness variables' psychological and physiological parameters were measured using a standardized test. The performance was measured using subjects rating of the 10-point rating scale. The study revealed that speed, leg explosive power, and endurance were significantly correlated with performance. Agility, arm power, flexibility, anxiety, resting pulse rate, and breath-holding time were not significantly correlated with performance.

Keywords: Aggression and self-confidence, Agility, Anxiety, Breath-holding time, Endurance, Flexibility, Power, Resting pulse rate, Speed

INTRODUCTION OF GAME

An evaluation of the exercise response of high-level sports competitors during competition can from a sound basis for the players' systematic development. The demands of various sports disciplines have been extensively studied. However, studies on the physical psychological and physiological demands of kabaddi players are scanty.

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Kabaddi is a combative team game played with absolutely no equipment on a rectangular court either outdoors or indoors with seven players on the ground in each side. The game is played into two halves of 20 min each with an interval of 5 min. It requires courage as well as the ability to concentrate and anticipate the opponent's moves. To facilitate further growth of kabaddi game, to facilitate growth of kabaddi game valid assessment procedures, and to comprehensively estimate the player's physical, anthropometrical, psychological, and physiological.

The present study was carried out with the aim to find out the relationship between kabaddi performance and selected

physical variables, psychological variables, and physiological parameters of Karnataka state inter university male kabaddi players.

METHODOLOGY

In the South-zone inter university kabaddi championship held at to establish the nature of the relationship between the performance in kabaddi and the study variables, the following methodology was used.

Selection of the Subjects

The subjects for the present study were male kabaddi players of universities who had received regular training and participated in competitive kabaddi game. The subjects were regular participants in the south zone inter university level kabaddi championships.

They were drawn from different universities of Karnataka State, who were rated as the best players by a panel of three expert coaches. The subjects were participants at Kuvempu University, Shivamogga (Karnataka), during the year 2015–2016.

Sample Size of the Study

The sample of the present study consisted of a hundred (180) male kabaddi players in the age group of 18–28 years.

Selection of the Variables for the Study

After a thorough review of literature relevant to the game of kabaddi found in books, journals, periodicals, and research articles besides detailed discussion with the experts and keeping in view feasibility of the study in terms of availability of equipment and the relevance of the variables to the present study, the following variables were selected.

Total performance of the selected subjects was rated by three experts subjectively on a ten-point rating scale. This was the dependent variable for this study.

Independent Variables

The various independent variables selected for the present study are listed below:

1. Physical fitness variables: (1) Speed; (2) agility; (3) power; (4) flexibility; (5) pull-ups; (6) endurance.
2. Psychological variables: (1) Anxiety; (2) aggression; (3) self-confidence.
3. Physiological variables: (1) Breath-holding time; (2) resting pulse rate.

Physical Fitness Variables

Physical variables	Test used to measure	Unit of measurement
Speed	30 m run with standing start	In sec
Agility	4 × 10 m shuttle run	In sec
Power – leg explosive power	Standing broad jump	In sec and centimeters
Flexibility	Sit and reach test	In centimeters
Pull-ups	Arm strength and endurance	By numbers
Endurance	1000 m	By min

Objectives

- To study the relationship between performance of kabaddi players and study physical variables psychological variables and physiological variables.

Statistical Analysis

- To study the impact of study physical variables on performance of kabaddi players.

Correlations		Performance
Speed	Pearson correlation	0.094
	Sig. (2-tailed)	0.212
	N	180
Agility	Pearson correlation	0.060
	Sig. (2-tailed)	0.424
	N	180
Standing broad jump	Pearson correlation	0.093
	Sig. (2-tailed)	0.214
	N	180
Flexibility	Pearson correlation	0.066
	Sig. (2-tailed)	0.381
	N	180
Pull-up	Pearson correlation	0.031
	Sig. (2-tailed)	0.683
	N	180
Endurance	Pearson correlation	0.352**
	Sig. (2-tailed)	0.000
	N	180

*Correlation is significant at the 0.05 level (2-tailed), **Correlation is significant at the 0.01 level (2-tailed)

Correlations

From the above table following inferences were made:

- The correlation between performance and speed was positive $r = 0.009$ and $P = 0.924 > 0.05$, the test was not significant at 5% levels. That is, there was no significant correlation between the performance and the speed of the kabaddi players at 5% levels.
- The correlation between performance and agility was positive $r = 0.032$ and $P = 0.726 > 0.05$, the test was not significant at 5% levels. That is, there was no significant correlation between the performance and the agility of the kabaddi players at 5% levels.
- The correlation between performance and standing broad jump was positive $r = 0.054$ and $P = 0.558 > 0.05$, the test was not significant at 5% levels. That is, there was no significant correlation between the performance and the standing broad jump of the kabaddi players at 5% levels.
- The correlation between performance and flexibility was positive $r = 0.137$ and $P = 0.137 > 0.05$, the test was not significant at 5% levels. That is, there was no significant correlation between the performance and the flexibility of the kabaddi players at 5% levels.
- The correlation between performance and pull-ups was positive $r = 0.137$ and $P = 0.137 > 0.05$, the test was not significant at 5% levels. That is, there was no significant correlation between the performance and the pull-ups of the kabaddi players at 5% levels.
- The correlation between performance and endurance was positive $r = 0.460$ and $P = 0.00 < 0.05$, the test was significant at 5% levels. That is, there exists a significant correlation between the performance and the endurance of the kabaddi players at 5% levels.

a. Dependent variable: Performance

The estimated regression equation of performance on the physical variables was given by performance = 24.55 + 0.059 (endurance)

Moreover, the above regression equation was significant as indicated in ANOVA table with $P = 0.00 < 0.05$ at 5% level of significance.

Hence, one unit change in endurance indicates a 0.059 unit change in performance.

- There exists a significant correlation between the performance and the endurance of the kabaddi players.
- The regression equation of performance and the physical variables was statistically significant, with one unit change in endurance indicates 0.059 unit change in performance.

Psychological Variables

Psychological variables	Test and unit of measurement
Anxiety	Rainer Martins questionnaire – 1977
Aggression	Anand Kumar and Prem Shankar Shulka questionnaire – 1989
Self Confidence	Rekha Agnihotri questionnaire – 1987

Descriptive statistics of psychological variables

Psychological variables	*n*	Minimum	Maximum	Mean	Standard deviation
Anxiety	180	18.00	40.00	28.5111	4.03683
Aggression	180	6.00	24.00	14.9000	3.19409
Self confidence	180	18.00	56.00	34.2278	7.18691
Valid *n* (listwise)	180				

From the above table, following details were given:

- The average anxiety score of the players was 28.51 with a standard deviation 4.04.
- The average aggression score of the players was 14.90 with a standard deviation 3.19.
- The average self-confidence score of the players was 34.23 with standard deviation 7.19.

Correlation analysis was used and the computations made were tabulated in the table

From the above table, following inferences were drawn:

- The correlation between performance and anxiety was positive, $r = 0.012$ with $P = 0.869$; the test was not significant at 5% levels; that is, there was no significant positive correlation between performance and anxiety.
- The correlation between performance and aggression was negative, $r = -0.083$ with $P = 0.268$ the test was not significant at 5% levels; that is, there was no significant negative correlation between performance and aggression.
- The correlation between performance and self-confidence was negative, $r = -0.008$ with $P = 0.916$ the test was not significant at 5% levels; that is, there was no significant negative correlation between performance and self-confidence.

Since the calculated Chi-square value was greater than the table value, the test was significant at 5% levels, that is, the level of self-confidence of kabaddi players was not equally distributed. Among 180 kabaddi players, 30 (16.7%) were at the below-average level of self-confidence, 118 (65.6%) were at an average level of self-confidence, and 32 (17.8%) were at the above-average level of self-confidence and it was found to be statistically significant at 5% level of significance.

Correlations					
Psychological variables		**Performance**	**Anxiety**	**Aggression**	**Self-confidence**
Performance	Pearson correlation	1	0.012	−0.083	−0.008
	Sig. (2-tailed)		0.869	0.268	0.916
	N	180	180	180	180
Anxiety	Pearson correlation	0.012	1	−0.217**	−0.157*
	Sig. (2-tailed)	0.869		0.003	0.035
	N	180	180	180	180
Aggression	Pearson correlation	−0.083	−0.217**	1	0.515**
	Sig. (2-tailed)	0.268	0.003		0.000
	N	180	180	180	180
Self-confidence	Pearson correlation	−0.008	−0.157*	0.515**	1
	Sig. (2-tailed)	0.916	0.035	0.000	
	N	180	180	180	180

**Correlation is significant at the 0.01 level (2-tailed), *Correlation is significant at the 0.05 level (2-tailed)

Physiological Variables

Physiological variables	Equipment used to measure	Unit of measurement
Breath-holding time	Manual nose clip	Seconds
Resting pulse rate	Digitalized heart rate monitor	Monitor Beats per minute

Breath Holding Time

The correlation between breath-holding time and performance.

Breath-holding time		Breath	Performance
Breath-holding time	Pearson correlation	1	−0.005
	Sig. (2-tailed)		0.942
	N	180	180
Performance	Pearson correlation	−0.005	1
	Sig. (2-tailed)	0.942	
	N	180	180

Correlation

Resting Pulse rate		Performance	Resting
Performance	Pearson correlation	1	0.078
	Sig. (2-tailed)		0.295
	N	180	180
Resting Pulse rate	Pearson correlation	0.078	1
	Sig. (2-tailed)	0.295	
	N	180	180

The correlation between breath and performance was negative, $r = -0.005$ with $P = 0.942 > 0.05$, the test was not significant at 5% levels. That is, there was no significant correlation between breath and performance at 5% levels.

Resting Pulse Rate

The correlation between resting pulse rate and performance

Correlations

The correlation between resting and performance was negative, $r = -0.005$ with $P = 0.295 > 0.05$, the test was not significant at 5% levels. That is, there was no significant correlation between resting and performance at 5% levels.

The estimated regression equation of performance on breath and resting was given by

Performance = 38.459 – 0.004 (breath) + 0.051 (resting)

Since $P = 0.578 > 0.05$, the test was not significant at 5% levels (ANOVA table); that is, the above-estimated regression equation of performance on physiological variables was statistically not significant at 5% levels.

Since the calculated Chi-square value was greater than the table value, the test was significant at 5% levels, that is, the level of breath of kabaddi players was not equally distributed. Among 180 kabaddi players, 25 (13.9%) were at the below-average level of breath, 128 (71.1%) were at an average level of breath, and 27 (15.0%) were at the above-average level of breath and it was found to be statistically significant at 5% level of significance.

Since the calculated Chi-square value was greater than the table value, the test was significant at 5% levels, that is, the level of resting of kabaddi players was not equally distributed. Among 180 kabaddi players, 22 (12.2%) were at below the average level of resting, 140 (77.8%) were at an average level of resting, and 18 (10.0%) were at the above-average level of

resting and it was found to be statistically significant at 5% level of significance.

RESULTS AND DISCUSSION

With the emphasis made by the investigator in the introduction, about 11 variables under study were essential qualities of good performance in kabaddi. The multiple regression analysis was conducted and the following regression equation of performance in kabaddi on the 13 variables under the study was obtained.

With the findings narrated earlier, the investigator found that not all 11 variables were significantly correlated with the performance in kabaddi, stepwise regression analysis was conducted for performance in kabaddi on two classified categories – physical variables, psychological variables, and physiological variables the study variables separately, the analysis has been presented earlier.

Considering the physical variables only as independent variables in the stepwise regression analysis, leg explosive power, speed, and cardiovascular endurance would act as predictors for performance in kabaddi. The other three variables agility, flexibility, and arm strength endurance were found to be not significantly associated with the performance in kabaddi.

Considering the psychological variables only as independent variables in the stepwise regression analysis, anxiety, aggression, and self-confidence would act as predictors for performance in kabaddi were at the above-average level of self-confidence and it was found to be statistically significant with the performance in kabaddi.

Considering the physiological variables only as independent variables in stepwise regression analysis with the performance in kabaddi, breath-holding time, and resting pulse rate were found to be not significantly associated with the performance in KABADDI.

In the light of discussion and the stepwise regression analysis in respect of performance in kabaddi and the eight study variables, the investigator has arrived at the following conclusions.

The estimated multivariate stepwise regression of performance on the study variables was given by

$$\text{Performance} = -28.967 + 5.242\ (\text{Speed}) + 6.491\ (\text{standing broad jump}) + 0.056\ (\text{endurance}) + 0.152 - 0.316\ (\text{aggression})$$

That is, for one unit change in speed score indicates 5.242 unit change in performance; for one unit change in standing broad jump score indicates 6.491 unit change in performance; for one unit change in Endurance score indicates 0.056 unit change in performance; and for one unit change in aggression score indicates 0.316 unit change in performance.

CONCLUSION

Among the physical variables agility, arm power, flexibility found statistically not significant, with kabaddi performance. Among the six physical variables, only speed, leg explosive power, and endurance act on dominate predator variables for the performance in kabaddi. Among the psychological variable anxiety aggression, self-confidence found only aggression act on dominate predator variables for the performance in kabaddi. Among the physiological variables, breath-holding time and resting pulse rate found statistically not significant, with kabaddi performance. The investigator, therefore, concludes that speed, leg explosive power, endurance, and aggression in the same order act as dominant predictors of performance in kabaddi.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Types of mudras in Yoga

P. S. Harish

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ABSTRACT

This paper traces the origin of the word "Mudra," explain the meaning and focuse on its trans religious use around the globe. In general, it is believed that the word "Mudra" is associated with Hinduism and Jainism and that it has no meaning for other religions, or it is known outside the subcontinent. This research, however, has found that mudras present in almost all the known religions, including Islam.

Keywords: Charkara, Gyan Mudra, Mantra Shastra, Mudra, Nritya Shastra, Panja and Panjtan, Sanskrit, Upasana Shastra

INTRODUCTION

Mudra means "seal," "gesture," or "mark." Yoga mudras are symbolic gestures often practiced with the hands and fingers. They facilitate the flow of energy in the subtle body and enhance one's journey within. Explore mudras means "seal," "gesture," or "mark." Yoga mudras are symbolic gestures often practiced with the hands and fingers fearfulnesswith time.

Chin Mudra – (Gesture of Conscience)

Steps:
Simply join the tip of the thumb and the forefinger to form a circle.

Leave the other fingers joined and extended outwards, with the Middlesex finger remains unfolded on the forefinger.

This yoga mudra pose should be performed with both hands and the palms facing upward.

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Chin mudra should be done for long-time duration as compared to other mudras that are about 10–15 min.

Chin Mudra Benefits

This mudra increases our grasping power and sharpens our memory.

It relieves insomnia and excessive sleep both.

This mudra yoga also gives us relaxation from tensions and anger.

Adi Mudra – (First Gesture)

How to perform mudra "ADI"

First, create a fist by joining close your four fingers on the thumb.

Place your thumb inside of the palm of the hand touching the base of the little finger allowing the palms to face downward.

While doing this yoga mudra, inhale and exhale long and deep. According to the Hindu mythology, Adi means first. It is believed that Adi Mudra is the first position adopted by the newborns.

Dhyana Mudra – Gesture of Meditation

Mudra steps

This mudra in yoga should be executed while sitting in a comfortable position (in Sukhasana).

Keep both the hands resting on the legs and the right hand over the left.

The palms should be facing upward and fingers extended. This mudra is found in Hindu, Buddhist, and Jain iconography as it represents the illumination above the illusion.

Apana Mudra Pose – Gesture of the Vital Air Apana (Also Called Mudra of Digestion)

How to Do Apana Yoga:
The tip of the thumb should be joined first with the tip of the middle and ring fingers keeping the other fingers straight. This yoga mudra should be executed with both hands.

Health Benefits of Mudra Apana:
Apana means air that runs in our body.

This mudra energizes and helps in governing all forms of elimination and reproduction of our body.

Agni Mudra (Also Called Surya Mudra)

How to Present Mudra Pose:
First, bend your ring finger so that you can touch the base of the thumb and press it with the thumb on the second phalanx keeping the other fingers straight.

Yoga Agni Mudra Benefits:
This mudra symbolizes our inner fire which works great in preventing and curing many digestive disorders.

This is an effective yoga mudra for weight loss. It also helps to reduce excess body fat and lowers our laziness quotient.

It is beneficial for diabetics and people with cholesterol too.

Vayu Mudra – (Gesture of the Air)

How to Do It:
First, bend your index finger at the base of the thumb and press with your thumb on the second phalanx, keeping the other fingers straight. This mudra should be performed with both hands and the palms facing in an upward direction.

Vayu Mudra for Body:
This mudra balances the air element within the body.

Akash Mudra – (Gesture of the Space)

How to Do It:
First, join the tip of the thumb and the middle finger to form a circle, keeping the other fingers straight. It has to be executed with both hands and the palms facing upward.

Benefits of Akash Yoga Mudra

This mudra balances our space element in the body.

It helps our body to achieve the other energies inside our body.

Gyan Mudra (Mudra of Knowledge)

This mudra gives rise to the root chakra reducing tension and depression.

Increase in the memory power,

nervous system, and pituitary gland production.

How to do it:
This pose is performed by touching the index finger with the thumb while keeping the other three fingers straight. It is best to perform this pose in the early morning for 35 to 40 min at a stretch.

Ling Mudra (Mudra of Heat)

This mudra builds heat in the body and can cause sweating even in winters.

It helps in the control of cold, asthma, cough, sinus, and dried phlegm.

How to do it:
To perform this pose, clasp the fingers of both hands together, and keep your right thumb erect. Place a little pressure and sit relaxed. You can do this pose for 20 to 30 min every day.

Prana Mudra (Mudra of life)

Prana mudra symbolizes energy or spirit of life.
It provides energy and health.
It improves eyesight.
Increases the body resistance to diseases.

How to do it:
Touch the tip of the thumb with the ring finger and the little finger together, while keeping the other two fingers straight. Take a regular breath, breathe in, and exhale for a few seconds.

CONCLUSION

The practice yoga mudra in our day lives will help us in ameliorating our brain functioning. Memory power. Concentration and digestion. The effect of yoga mudra oh nervous system will enhance the overall vigorous functioning of neuroanatomic system.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Communication in sports

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ABSTRACT

In general, communication involves people interacting with one another to convey information. The most obvious form of communication is linguistic expressing verbally or in writing but body language, behavioral mannerisms and many other interpersonal signals are also forms of communication. In view of this background, the present paper highlights the importance of communication, especially in sports and physical education.

INTRODUCTION

Communication in sports, the available methods can seem very specific. A quarterback uses a nod of the head to indicate which direction the receiver should cut. The coach calls a play using a series of gestures known only to his or her team. Although these forms of communication may seem particular to the game, they are analogous to non-verbal cues people use in everyday life. A nod or shake of the head, a thumbs up, or any other motion or gesture that people use to convey something to someone else are all similar types of non-verbal communication. As far as interpersonal, verbal communication goes, clear and constructive communication between players, coaches, administrators, parents, and others involved with a team parallels positive communication in any other organization – like a business. Promote positive communication and respect among players improve overall motivation. Coaches who learn to communicate effectively with their athletes can deliver positive feedback and constructive criticism in ways that actually influence players' performance.

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THE IMPORTANCE OF COMMUNICATION IN SPORTS AND PHYSICAL EDUCATION

For Coaches and Players

Many studies have shown the benefits of good communication in competitive athletics. Players who know how to effectively interact with each other will work together better, forming a stronger overall team. However, learning to communicate one's thoughts and feelings clearly and effectively without hurting or offending others can take time. Fostering this knowledge in players is primarily the responsibility of the team's coach. Workshops in effective communication are a part of many successful athletic programs and coaches who communicate openly with their athletes can model effective interaction by speaking directly, listening attentively, and valuing others' opinions. Positive communication in sports can also benefit from common practices like pre-game meetings when the team

and coaching staff can come together to give feedback, discuss strategies, and set goals for the day.

For Administrators

Administrators have many responsibilities in sports organizations, as they have a hand in overseeing every aspect of their organizations. Most of these aspects involve communication, including coordinating and monitoring the coaching staff, making budgets with financial planners, interviewing prospective employees and athletes, and meeting with investors, owners, or officials. Improving the communication of the staff and management of any business has been shown to maximize productivity and improve employee morale. This can result in a more successful business with higher retention rates.

Another important aspect of administrative communication in sports is an organization's public relations with parents, media, and fans. Administrators need to work hard to develop good relationships based on clear and constructive communication with parents in collegiate and high school settings. In professional sports, interactions with the media and fans are integral. New research shows that an authentic and genuine connection with fans through various forms of communication, including social media, plays an important role as well.

CONCLUSION

The importance of communication in sports promotes positive communication and respect among players improve overall motivation. Coaches who learn to communicate effectively with their athletes can deliver positive feedback and constructive criticism in ways that actually influence players' performance. Similarly, administrators who support open interaction in the workplace create positive working environments. Communicating directly and positively with the public through every available channel fosters public support and personal connections.

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Research Article

Components of health-related physical fitness

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ABSTRACT

The components of health-related fitness are a basis from which to measure our general well-being. It is the aim of exercise to improve our capabilities in each of these areas. The components of skill-related fitness are not the skills associated with any particular sport, such as running, catching, tackling, or kicking, but are the underlying skills which are brought to bear when participating in a sport. These are important fitness components, not just for sporting ability but also for use in everyday life.

INTRODUCTION

In general, the word training is commonly used the term in human language, but broad sense training may be defined as an organized and systematic instructional process, in which aim is to improve the individual's physical, psychological, and intellectual performance capacity.

Meaning

Training means the process for the preparation of some tasks.

The concept of training and sportsman preparation seems to coincide but is not identical.

Preparation is a complex process and directly influences the sportsman's development and ensures the necessary degree of readiness for success.

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This includes sports training, competition, and special nutrition. Sports training is the main component and the basic form of preparing the sportsman.

It is a systematically planned preparation with the help of various exercises. Systematic training improves the athlete's fitness level.

The physical exercises used in training have an impressive effect on the physical development of an athlete.

Definitions of Sports Training

According to Hardial Singh (1993):
Sports training is a pedagogical process, based on scientific principles, aiming at preparing sportsmen for higher performances in sports competitions.

According to Matveyew (1981):
Sports training is the basic form of an athlete's training. It is the preparation systematically organized with the help of exercises, which, in fact, is a pedagogically organized process of controlling an athlete's development (his sporting perfection).

Components of Health Related Fitness

Cardiovascular endurance

Cardiovascular endurance is also referred to as aerobic fitness and is a measure of the athlete's ability to continue with exercise which places demands on the circulatory and respiratory system over a prolonged period of time. This occurs in activities such as running, walking, cycling, and swimming.

Flexibility

Flexibility is the measure of free movement in a person's joints. This is especially important in gymnastics.

Muscular strength

Muscular strength is the maximal force that can be applied against a resistance. It could be measured by the largest weight a person could lift or the largest body they could push or pull.

Muscular Endurance

Muscular endurance differs from muscular strength in that it is a measure of a person's ability to repeatedly apply maximal force, for example, in a series of push-ups, over a period of time.

Body Composition

Body composition is usually measured by the percentage body fat a person carries.

Components of Physical Fitness

The components of skill-related fitness are not the skills associated with any particular sport, such as running, catching, tackling, or kicking, but are the underlying skills which are brought to bear when participating in a sport.

These are important fitness components, not just for sporting ability but also for use in everyday life.

In times of illness, or in aging, these components are often features of our lives that fail and their levels are reduced.

Exercise and activities that promote skill components of fitness are therefore very important at all ages.

Components of Skill-Related Fitness

Agility: Agility is the ability to rapidly and accurately change the direction of the body at speed. It necessitates a combination of speed, balance, power, and coordination.

Balance: Balance is the ability to maintain equilibrium when stationary or moving.

Power: Muscular power is the ability to contract muscles with speed and force in one explosive act.

Speed: Speed is a measure of the ability to move all or part of the body as quickly as possible.

Coordination: Coordination is the ability to carry out a series of movements or motor tasks smoothly and efficiently.

Reaction time: Time is the ability to respond to stimuli quickly.

CONCLUSION

Physical fitness is a state of being that reflects a person's ability to perform specific exercises or functions and is related to present and future health outcomes.

These efforts intensified during times of war, focused primarily on improving athletic performance and military preparedness.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Development and critical analysis of gymnastics curriculum for fundamental level

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ABSTRACT

The purpose of this present study was to develop practicum curriculum of gymnastics and did critical analysis of fundamental level. The research scholar developed gymnastics fundamental curriculum with the help of supervisor and reviewed it with 10 different experts from all over India from different reputed institutes and organizations belongs to field of gymnastics and physical education. This level includes different areas in which scholar work such as modules, learning outcomes, level objectives, expectation from coach and for skills activity stage, instructions, and required apparatus was enlisted. The research scholar did data collection from The Gymnastics Academy for time duration of 2 months on four beginner students who were selected with the help of academy coach and director with the observation method. For evaluation, research scholar develops rubrics for each skill enlisted in curriculum and for assessment, research scholar constitutes skill instruction bifurcation into the range of 1–5 marks, that is, 20%–100%. The research scholar opts 80% or above as advanced or promoted, above 60%–below 80% range as proficiency or improvement, above 40%–below 60% range as learning, and 20%–below 40% range as retention. After evaluation by research scholar, all four students score 80% and above (advanced or promoted) which shows the success of product development through educational gymnastics syllabus and the completion of curriculum objectives.

Keywords: Curriculum, Gymnastics, Modules, Product development, Rubrics

BACKGROUND

Curriculum can be defined as document, plan, or blueprint for instructional guide, which is used for teaching and learning to bring about desirable learner behavior change. This definition refers to formal curriculum, which is planned ahead of time, bearing in mind the characteristics of the curriculum recipient, the philosophy and goals of education, the environment, resource, the method of teaching, and evaluation procedure.

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It is the road map to attainment of the goals of education, the curriculum document can be regarded as syllabus, the scheme of work, or the course outline. It refers to the planned curriculum.

GYMNASTICS CURRICULUM

Gymnastics in education is concerned with the use of movement in a creative way in response to set tasks, both individually and with others. Children explore movement on the floor and when negotiating a variety of equipment. The gymnastics curriculum encourages children to participate in movement experiences that are open to personal interpretation, providing every child with the opportunity to experience

success at a personal level, by engaging in challenging but realistically achievable tasks (James *et al*., 2017) (Hrusa.petr, 2013), how gymnastics curriculum leads to improvement in individual by developing locomotive, object control skills, and general body coordination which develop movement competency in children. It can develop amazing skills while getting strong and flexible in fun and challenging ways; it is a sport for life with something for all ages and all abilities. Gymnastics is a common mechanism for improving physical literacy as it develops a child's fundamental movement skills and provides a sound basis for further skill development across all sports.

Development of Gymnastics Curriculum

The curriculum was developed with the concept focusing on "Level Gymnastics" with the help of different experts by individualized focus discussion from the field of gymnastics from different and reputed organization and institutes and also by the consent of supervisor. The level was made with the objective of educational gymnastics targeting and working on different variables such as development of spatial awareness, progression of gross motor skills with keeping mind on their body alignment which is very important in gymnastics, and finally on their psychological exploration and learning for this particular level and exploration of the gymnasium and the environment.

The respective level includes different areas to work on or to keep in mind while developing a kid like modules or it can also have called as pre requisite training which help kid to get ready physically or mentally for any kind of skill or activity he or she going to perform further it has objectives which already elaborated above. This level includes learning outcomes which is very important for any training program like able to help kid to aware them from their physical exploration, it develops sensory perception as there was so many activities performed by kid which includes use of senses such as touch, hear, see, and speak in different activities. Student will able to learn with progression in different skills. This level also provides psychological development.

This level also includes area of expectation from coach so coach can focus on quality movement, good execution of skill and also demonstrates safety concern. Next is the activity stage which includes 26 activities or skills such as different jumps, skills, fundamental positions, different scales, running in different pace, jumping on trampoline, and walk with obstacles, different so the objective and learning outcomes can be achieved through these skills.

Finally, next two areas include instruction of the activity so coach and students have clear picture of the particular skills and clear instruction so the quality movement can be learned by student of that level.

Last area includes the required apparatus for performing skill which help coach to understand the requirement of apparatus for given skill. The whole curriculum of this level is educational curriculum for student and for coach so they have clear and simplified image of all skills, objectives, and learning outcome for respective level.

Selection of Subject

The sample of four kids was selected from "The Gymnastics Academy" situated at Dhul Siras, Dwarka, Delhi, for this training who just joined the gymnasium for gymnastics activity and totally beginner. The sample was selected with observation method according to level objectives and with the proper guidance and suggestion of director and coaches of academy.

Implementation of Curriculum

The professional coach was appointed for the particular level and the research scholar explains all the objectives and key points of the respective level and did keen observation of the training of the subjects selected for this level for continuous 2 months. The research scholar visited to academy on regular basis and always talks to coach regarding difficulties and student's response on the training. The research scholar keeps record of each student interests and learning.

Critical Evaluation of Curriculum

For critical evaluation of curriculum, the research scholar developed "Rubrics" that constitute of skill instruction bifurcation into the range of 1–5 marks, that is, 20%–100%. The objective of evaluation is to assess skills which cover movement economy, proper technique, and correct body alignments. Hence, execution and body alignment and quality movement can be evaluated with the help of rubrics. Further, range opts by research scholar to clarify result of level assessment which enlisted with following range and levels.

Range	Levels
20%–below 40%	Retention
Above 40%–below 60%	Learning
Above 60%–below 80%	Proficiency/improvement
Above 80–100%	Advanced/promoted

ANALYSIS OF RESULT

Table 1 reveals that a total of four students were trained and evaluated at the end of the session by research scholar no. of skill attempted by all students was 26. Subject 1 scored 120, subject 2 scored 113, subject 3 scored 106 marks, and subject 4 scored 122 all subjects fall under category of promoted or advanced, that is, 80% or above.

Discussion of Findings

Based on the findings of the present study, it was observed that all subjects of respective level were able to score 80–100% and

Module	Objectives	Learning outcome	Expectation from coach	Activity stage	Instructions	Apparatus required
• General exercise such as running and stretching of different body parts should be done before any activity students perform. • Head rotation, hand rotation, waist rotation, and wrist rotation exercises can be included in their warm up exercise.	• Develops spatial awareness (awareness of Space) • Gross motor skills (enable children to perform everyday functions such as walking, running, and skipping) • Body alignment development (In which the body is perfectly balanced) • Psychological exploration and learning (child will come in different environment and face different challenges) • Gymnastics hall visit of kid and introduction of apparatus	• Aware them from the physical exploration • This level develops their sensory perception (as they will hear, see, and touch in different activities) • Develops progression stages of various skills • This introductory level provides students opportunity to grow in psychological prospective	• This is expected from the coach to take care of their body alignment such as stretched toes, hands tight, and chin up and make them continuously aware them from body alignment. • Motivate everyone to participate. • Demonstrate safety concern and ensure safety of participants.	1. Walk in gym 2. Walk on toes with different arms variation 3. Leg kicking 4. Pace running 5. Lunge position 6. Jump on trampoline 7. Jump on both leg, one leg, leg change 8. Knee up and back running 9. Walk on marked line with different obstacles 10. Walk on different stations to aware them from different space 11. Different scales 12. Rocking motions (hollow back) 13. Rock n roll 14. L long sitting position 15. V siting position with the support of wall 16. Different jumps 17. Arabesque position 18. Candlesticks with help of coach 19. Color footprints in different directions 20. Different type of walk and jump 21. Tuck swings 22. Aware them from different grips 23. T-Lunges 24. Handstand lying 25. Donkey kick	A brief introduction of gymnastics hall includes all apparatus, students, coaches, and the environment of gymnasium. In this skill, student has to put body weight on toes and walk. In this activity, student has to raise leg and try to lift and kick far from body alignment in different direction. (front, side, and back) Its running with different pace like slow, fast can be done on signals done by coach. This position is a progression skill or position which includes lunge position to start such as handstand and round-off Student will explore this apparatus of gymnastics by doing simple jumps on it. In this skill, student will perform jump with different leg on command of coach. Student will run with knees close to the chest and back running by touching heels back to the hips while running. Different obstacles will place on marked line and student has to cross all obstacles and finish the skill Student will walk in different space such as on crash mat, landing mat, trampoline, and floor arena. In this skill, student will perform different scales in different direction with 45 degrees or more of angle (front, back side scale) Students will aware with cat position and make hollow back for rolling motions. In this skill, student will do rolling motion on his/her back to make them aware of rotation of the small body. Student will sit in L position on floor arena make them aware of different positions in gymnastics. This position will have performed by the help of wall and students will sit in V position. Students will do straight high jump on both leg and jump in position of tuck with the use of arm swing and good alignment of body. Stand on one foot and raise the other leg to the back in the split try to raise maximum till the point student will be comfortable.	In gymnastics hall On floor arena. On floor arena. In open arena On floor arena On big trampoline On floor arena In open arena Marked line will be marked on floor. In gymnastics hall on different apparatus On floor arena, in open arena On floor arena or on mat On floor arena or on mat On floor arena or on mat On floor with the wall support On the floor arena and on marked lines On floor arena On floor arena, on crash mat In open arena On floor arena On uneven lower bar On lower uneven bar On open arena with high platform for hands support. On floor arena On trampoline and high platform

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Module	Objectives	Learning outcome	Expectation from coach	Activity stage	Instructions	Apparatus required
					A candle stick is a shoulder stand position where the gymnast is essentially resting on the back of their shoulder with their feet pointed toward the ceiling. The teacher will use different colors of footprints and put them in different direction and student has to jump on different footprint on the command of coach. Students will do different walking patterns and jumps such as deep walk, cat walk, scissor jump, and stag jump. This activity will have performed on bars by bending legs in tuck position and swing the legs while holding bars. Bar apparatus in gymnastics different types of grip to perform different skills it is necessary to aware them with all (under grip, over grip, and wide grip). This activity will be performed by students to make them aware of hand placement, neck position, and position of both legs. Handstand lying will performed while lying down in prone position on floor. Coach can use Resistance band in wrist to make them aware that students will always put their hands in shoulder position. Student will put hands on high platform and legs on small trampoline and try to kick legs upward with help of trampoline and coach must assist students while performing this activity.	

Skill	Explanation	1	2	3	4	5
1. Walk on toes with different arms variation	In this skill, student has to put body weight on toes and walk.	• Student will able to keep hands in erect position.	• Student will able to keep head between the hands and eyes keeping forward	• Student will able to stand on toes for 2 s and able to keep back straight and stand in correct posture.	• Student will able to walk on toes without keeping foot on floor.	• Student will able to walk at least for 20 m with all hand variation and on toes with correct posture
2. Leg kicking	In this activity, student has to raise leg and try to lift and kick far from body alignment in different direction. (front, side, and back)	• Student will able to keep hands straight and at shoulder level. • Student will able to maintain correct posture.	• Student will able distinguish between strong leg and rare leg.	• Student will able to kick leg far from body alignment using ballistic movement in maintained balance position.	• Student will able to perform leg kick at least in two different directions.	• Student will able to perform leg kicking movement in all three directions with proper technique and posture.
3. Pace running	Its running with different pace like slow, fast can be done on signals done by coach.	• Student will able to run in normal pace.	• Student will able to run at least for 10 s continuously	• Student will able to listen command of coach and coordinate and balance the body accordingly.	• Student will able to distinguish between slow and fast running and change pace of their body according to the command of coach.	• Student will able to perform and change pace of running every time coach instructs them to do without making mistakes.
4. Lunge position	This position is a progression skill or position which includes lunge position to start such as handstand and round-off.	• Student will able to identify skill when coach instructs them to do.	• Student will able to place strong foot forward.	• Student will able to maintain body balance and stand straight at shoulder level.	• Student will able to shift body weight on knees.	• Student will able to maintain 90 degrees of angle in knees and perform skill with correct posture and body alignment.
5. Jump on trampoline	Student will explore this apparatus of gymnastics by doing simple jumps on it.	• Student will able to stand on trampoline.	• Student will able to push trampoline for jumping movement.	• Student will able to perform coordinated movement of body with trampoline.	• Student will able to take jump with arm swing.	• Student will able to perform coordinated jumping movement on trampoline and able to balance body in air.
6. Jump on both leg, one leg, leg change	In this skill, student will perform jump with different leg on command of coach.	• Student will able to maintain any position from which coach wants student to start activity.	• Student will able to maintain body balance while one leg jump.	• Student will able listen and follow the instruction of coach.	• Student will able to distinguish between jumps and at least able to do two different jumps on command of coach.	• Student will able to perform all jumps on command of coach and in maintained body posture.

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Skill	Explanation	1	2	3	4	5
7. Knee up and back running	Student will run with knees close to the chest and back running by touching heels back to the hips while running.	• Student will able to run at normal pace.	• Student will able to keep knees close to the chest in running movement.	• Student will able to touch toes to the hips in running position. • Student will able to coordinate and balance body while running.	• Student will able to listen and follow the instruction of coach and able to distinguish in both running.	• Student will able to perform this running pattern without getting confuse and able to change the running pattern accordingly.
8. Walk on marked line with different obstacles	Different obstacles will place on marked line and student has to cross all obstacles and finish the skill	• Student will able to understand obstacles.	• Student able to follow the obstacle pattern made by coach.	• Student will able to cross obstacles with coordinated mind and body movement.	• Student will able to clear 5–6 obstacles without getting confuse or without skipping	• Student will able to perform whole obstacle pattern without skipping and without falling in between.
9. Walk on different stations to aware them from different space	Student will walk in different space such as on crash mat, landing mat, trampoline, and floor arena.	• Student will able to distinguish between different stations.	• Student will able to understand coach instruction.	• Student able to listen coach and change station according to instruction.	• Student able to go on every obstacle without getting confuses and without getting afraid.	• Student able to complete all task and instructions given by coach.
10. Different scales	In this skill, student will perform different scales in different direction with 45 degrees or more of angle (front, back side scale)	• Student able to stand erect, hand straight at shoulder level.	• Student able to differentiate between strong leg and rare leg.	• Student able to maintain balance on strong foot. • Student able to raise rare leg at 45 degrees of angle without bending knee.	• Student able to perform at least two different scales in different direction.	• Student able to perform all scales with correct postures.
11. Rocking motions (hollow back)	Students will aware with cat position and make hollow back for rolling motions.	• Student able to put extended arms on floor arena.	• Student able to sit on knee and keeping eyes between the hands.	• Student able to tuck chin toward the chest able to extend hip and back in upward direction	• Student able to inhale and round back in upward position and make curve in proper position.	• Student able to hold hollow position in back for 4 s.
12. Rock n Roll	In this skill, student will do rolling motion on his/her back to make them aware of rotation of the small body.	• Student able to sit in deep squat position.	• Student able to grip hands on knees correctly. • Student able to tuck chin correctly toward the chest.	• Student able to shift body weight from toe to heel and then on back.	• Student able to maintain rounded back on floor and swing body toward backward to forward motion.	• Student able to back to initial position, that is, squat position in correct posture.
13. L long sitting position	Student will sit in L position on floor arena make them aware of different positions in gymnastics.	• Student able to sit on floor with extended leg.	• Student able to maintain erect arms position at shoulder level and able to look forward.	• Student able to sit without bending knees and with back straight.	• Student able to maintain that L position in body with stretched toes in outward direction.	• Student able to maintain L sitting position for 5 s.

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Skill	Explanation	1	2	3	4	5
14. V siting position with the support of wall	This position will have performed by the help of wall and students will sit in V position.	• Student able to sit in L position with help of wall.	• Student able to place palms on floor beside thighs.	• Student will able to shift weight on hands from legs and student will raise leg	• Student will able to make V position and able to keep legs in hook position without shivering in body.	• Student will able to make perfect position of V with the help of wall and able to hold it for 2 s.
15. Different jumps	Students will do straight high jump on both leg and jump in position of tuck with use of arm swing and good alignment of body.	• Student will able to stand erect body • Student will able to stand with arms straight at shoulder level.	• Student will able to take proper swing with both arms.	• Student will able to jump in vertical direction with straight body with proper arm swing.	• Student will able to jump in vertical direction but keeping knees bend toward the chest.	• Student will able to land properly and on marked line after performing both jumps.
16. Arabesque position	Stand on one foot and raise the other leg to the back in the split try to raise maximum till the point student will be comfortable.	• Student will able to stand erect and arms straight at shoulder level.	• Student will able to distinguish between strong leg and rare leg.	• Student will able to stand strong leg and kick rare leg backward.	• Student will able to maintain balance at this position and without bending strong foot.	• Student will able to complete this arabesque position at maximum backward movement of rare leg with wall support.
17. Candlesticks with help of coach	A candle stick is a shoulder stand position where the gymnast is essentially resting on the back of their shoulder with their feet pointed toward the ceiling.	• Student will able to lie on floor arena on supine position.	• Student will able to raise leg at 90 degree of angle.	• Student will able to lift body on the back of shoulder with wall support.	• Student will able to keep hands on wall straight beside body.	• Student will able to perform whole skill with proper body alignment.
18. Color footprints in different directions	The teacher will use different colors of footprints and put them in different direction and student has to jump on different footprint on the command of coach.	• Student will able to distinguish between different colors.	• Student will able to understand coach instruction.	• Student will able to listen coach and change station according to instruction.	• Student will able to recognize all direction and follow the instructions accordingly	• Student will able to complete all task and instructions given by coach.
19. Different type of walk and jump	Students will do different walking patterns and jumps such as deep walk, cat walk, scissor jump, and stag jump.	• Student will able to identify names of all jumps and different pattern walks.	• Student will able to follow arm swing movement.	• Student will able to walk and jump on marked area.	• Student will able perform at least one walking pattern and one jump on marked line.	• Student will able to perform all four walks and jumps on give marked area with proper body alignments.

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Skill	Explanation	1	2	3	4	5
20. Tuck swings	This activity will have performed on bars by bending legs in tuck position and swing the legs while holding bars.	• Student will able to hold bar (over grip).	• Student will able to hang on bar without falling from apparatus.	• Student will able to bend knees toward the chest and hang.	• Student will able to swing with maintained tuck position.	• Student will able to swing on bar in tuck position for at least 3 s.
21. Aware them from different grips	Bar apparatus in gymnastics different types of grip to perform different skills it is necessary to aware them with all (under grip, over grip, and wide grip).	• Student will able to distinguish between the different instructions.	• Student will able to identify grips with name.	• Student will able to listen and understand the instruction of coach.	• Student will able to change grip according to the instruction of coach.	• Student will able to demonstrate all grips on bar correctly.
22. T- Lunges	This activity will be performed by students to make them aware of hand placement, neck position, and position of both legs.	• Student will able to distinguish between strong leg and rare leg.	• Student will able to place hands on higher platform. • Student will able to keep head between the hands.	• Student will able to swing rare leg in backward direction.	• Student will able to keep knees straight and tight while kicking rare leg.	• Student will able to hold that position for few seconds with proper alignment.
23. Handstand lying	Handstand lying will performed while lying down in prone position on floor. Coach can use Resistance band in wrist to make them aware that students will always put their hands in shoulder position.	• Student will able to lie straight on stomach.	• Student will able to keep head between the hands.	• Student will able to eyes straight watching thumb of both hands.	• Student will able to keep hands stretch toes stretch and palms open.	• Student will able to perform whole skill with proper body alignment.
24. Donkey kick	Student will put hands on high platform and legs on small trampoline and try to kick legs upward with help of trampoline and coach must assist students while performing this activity.	• Student will able to stand on trampoline.	• Student will able to place hands on equal platform with palms open.	• Student will able to keep head position between the hands.	• Student will able to keep strong leg on trampoline and swing rare leg.	• Student will able to kick rare leg for handstand with proper body positioning.

Table 1: Scoresheet of data

S. No.	Subjects	Skill attempted	Score out of 120	Percentage	Category
1.	Subject 1	26	110	92.30	Promoted/advanced
2.	Subject 2	26	103	86.90	Promoted/advanced
3.	Subject 3	26	96	81.50	Promoted/advanced
4.	Subject 4	26	112	93.80	Promoted/advanced

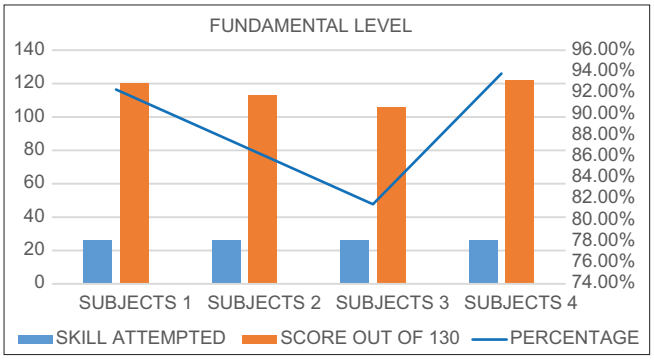

Figure 1: Graphical representation of scoresheet

able to achieve curriculum objectives. The findings of study are in the line with Rodd, Barnett *et al*. (2017) stated that training of gymnastics or gymnastics intervention was found to be benefited for developing children movement competency and physical self-concept. Hence, gymnastics curriculum is effective program.

CONCLUSION

The research scholar opts 80% or above as advanced or promoted, above 60%–below 80% range as proficiency or improvement, above 40%–below 60% range as learning, and 20%–below 40% range as retention. After evaluation by research scholar, all four students score 80% and above (advanced or promoted) which shows the success of product development through educational gymnastics syllabus and the completion of curriculum objectives.

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Volume 39 • Issue 1 ISSN 2231-3265

International Virtual Conference on
"Digital Teaching, Training & Coaching - An Approach to Physical Education & Sports Sciences"
22nd and 23rd August 2020

Organized by
Government First Grade College, K G F - Kolar - Karnataka. &
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Collaboration with
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Fitness and Sports Science Association

International Journal of Health, Physical Education and Computer Science in Sports
A Peer Reviewed (Refereed) International Research Journal - ISRA Journal Impact Factor 7.217

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Research Article

Influence of selected anthropometric measurements on basketball shooting ability

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INTRODUCTION

The physical structure, especially the height and arm length, has definite and decisive advantage in many games and sports. Similarly, segmental length of individual body parts, especially height and arm length, is of considerable advantage in certain games. Anthropometric measurements have revealed a correlation between body structure and physical characteristics and sports capabilities. This knowledge of mathematical correlation permits sports physicians to evaluate and to predict performance potentialities on the requirements of sports and games, the prediction prognostics. The higher-level performance of a basketball does not depend only on the mastery of technical, tactical aspects alone but also on the anthropometric measurements.

Players advance the ball by bouncing if while walking or running (dribbling) or b passing it to a teammate, both of which require considerable skill.

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Aim of the Study

The aim of the study was to know the influence of the selected anthropometric measurements on the shooting ability of basket player.

Procedure

A total of 40 university-level basketball players were randomly selected as subjects for this study. The anthropometric variables selected for this study were height, weight, forearm, length leg, upper arm girth, chest girth, thing girth, and calf girth, shooting ability data were collected through shooting test. The statistical techniques of product movement correlation were used to analyze the data.

RESULTS

The statistical analysis shows that there was a significant correlation between the selected anthropometric measurements and shooting ability of basketball players

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Health education and sports

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INTRODUCTION

My dear professional colleagues, you know, "Health is Wealth." During childhood and youth, physical education at school and college provides an excellent opportunity to learn and practice skills which are likely to enhance lifelong fitness and good health. These activities may include daily running, swimming, cycling, and climbing, as well as more structured games and sports. Early mastery of the basic skills crucially helps young people to perform and understand the value of these activities better in their later education, or as adults at work or during leisure time. Goals that extend beyond physical education and sport – such as good health, sound personal development, and social inclusion – give further weight to the importance of including this subject in the school and college curriculum.

Attention to be paid specifically to the physical and mental health problems caused by declining physical activity among young people and the continuous increase in sedentary lifestyles and obesity. The guidelines estimated that up to 80 % of school-age children engage in physical activity at school and that they should have at least one hour of light physical activity every day. Sufficient time devoted to sport and physical activity at school, either in the formal curriculum or on an extracurricular basis, can make a key contribution to healthier lifestyles.

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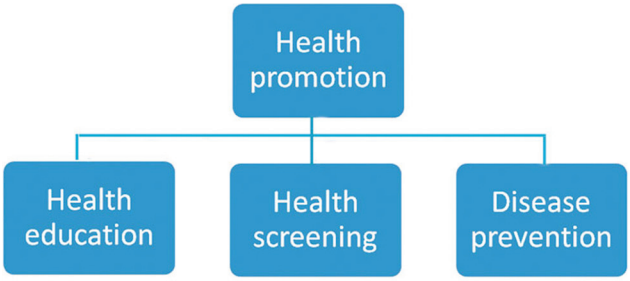
The promotion of physical education in schools involves introducing or adopting policies which aim to raise general awareness of the lifelong social and educational value of physical and sports activity. All countries specify the main aims of physical education at school, in some cases supplemented by a national definition. Physical education cannot be limited to improving just physical abilities, as it is concerned with a much broader range of skills, some of them emotional and social, as well as with cognitive processes, motivation, and moral concepts. Thus, almost all countries identify the physical, personal, and social development of young people as its main goals.

The nature of physical education is such that its classes usually give top priority to the development of physical and motor skills. A further concern of physical education is to compensate for the hours spent sitting in most other classroom lessons and, more generally, to discourage a sedentary lifestyle. Physical development is closely linked to the promotion of health and a healthy lifestyle, including lifelong enjoyment in physical activity and exercise. Nearly all countries stress that it is vital to appreciate the value of such activity for health to improve the quality of life. Young people at school and college should also be given an opportunity to learn more about factors affecting their physical abilities. Health education is also an effective tool that helps improve health in developing nations. It not only teaches prevention and basic health knowledge but also conditions and ideas that re-shape the everyday habits of people with unhealthy lifestyles in developing countries. Moreover, besides physical health, prevention, and health education can also provide

more aid and help people deal healthier with situations of extreme stress, anxiety, depression, or other emotional disturbances to lessen the impact of these sorts of mental and emotional constituents, which can consequently lead to detrimental physical effects.



A healthy lifestyle is often mentioned by countries as one of the main aims of physical education at school and college. Countries typically stress the value of a long-term commitment to physical activity. Physical education is regarded as a way of inspiring children and young people to experiment with different activities so that they are motivated to enjoy physical recreation throughout their lives. Practical factors sometimes significantly condition the choice of particular mandatory activities provided by schools and colleges. They have to be able to offer appropriate facilities and equipment for teaching. Physical education in classes lasts around an hour. The importance of physical education is emphasized in the curricula of all countries, in which it is a mandatory subject throughout the whole of full-time compulsory general education.

The Netherlands and the United Kingdom, official recommendations on taught time apply to all school subjects as a whole. Schools are therefore free to decide how they allocate this time to individual subjects according to their particular circumstances. Although these countries have no precise prescribed taught time, some of them have issued strategies or recommendations about the time to be devoted to physical activities within the curriculum. According to such guidelines, pupils in Belgium and the United Kingdom (Wales) should engage in organized physical activities and sport at least twice a week.

CONCLUSION

Finally, certain programmers and projects for health promotion and enhancement are also designed for schools and mainly (though not exclusively) involve extracurricular activities. While some of them are focused on specific problems, others cover more general aspects of health and healthy habits to be formed in daily life. Education for health begins with people. Finally, physical education provides a setting, in which they can test their physical fitness independently, experiment with certain activities, and pursue them in their leisure time if they wish.

With the success of the conference and the consensus that the standardization of the profession was vital, those who organized the conference created the National Task Force in the Preparation and Practice of Health Educators.

Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Politics and sports in India

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ABSTRACT

Politics and sports or sports diplomacy describes the use of sport as a means to influence diplomatic, social, and political relations. Sports diplomacy may transcend cultural differences and bring people together. The use of sports and politics has had both positive and negative implications over history. In 1978, UNESCO described sport and physical education as a "fundamental right for all." However, until today, the right to play and sport have too often been ignored or disrespected. Sport has a unique power to attract, mobilize, and inspire. By its very nature, sport is about participation. It is about inclusion and citizenship. Sports and recreation have become important dimensions in social and economic life. Government of India investing several crore rupees into various sports bodies for promoting. Sports and encouraging the sportsmen but these sports bodies have become fertile ground for the politicians and ex-bureaucrats to make money.

Keywords: Fundamental right, Political interference and Indian sports, Sports diplomacy

INTRODUCTION

Apart from the rich culture and diverse arts presence, India has tremendous experience in different sporting activities such as athletics, cricket, shooting, hockey, chess, badminton, golf, swimming, and kabaddi. Besides, this country has respectable traditional sports such as boat racing, kushti, gilli danda, and others. However, the most popular sport in the country is cricket that this sport is played at all age groups starting from the grassroots right up to the international level.

To understand the relationship between sports and politics, one needs to first understand the relationship between sports and society. In the past, sports have symbolized societies values and provided a glimpse into how people spent their free time.

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The Mayans used sports to determine who to use for ritual sacrifices. Medieval kings held competitions to show their wealth, allowing the knights to prove their battle Prowers and chivalry. Gladiators were often defeated enemies of Rome forced into slavery for entertainment.

Leaders, auto crate, and powerful individual have frequently used sports to assert their political dominance. In 1936, Hitler attempted to use the Olympics to show off his repines and its ideologies to the rest of world but was undermined by Jesse Owens.

The Olympics, both ancient and modern, have always been political. In ancient Greece, independent city, states came together to discuss politics from political and military alliances and celebrate military victories. Modern Olympics have also seen increased political activity, especially in the past half-century.

Sport is the new form of international warfare countries fight it out on the sporting field rather than the battlefield. The color, drama, heroism, and even the language of war are now devoted to sport.

Dynasties seem to rule Indian sport. There are many examples that show how politicians and their families run committees as if it's a family get together Parmindersingh Dhindsa of the Akali Dal is president of the cycling federation of India and the son of Sukhdersinghdhindsa is currently president of Punjab Olympic Association. The Chautala brothers Abhaysingh and Ajay Singh have heralded an era of total politicization of the sports federations. Between them, the two brothers control the Indian Amateur boxing federation and the table tennis federation of India and so on.

Sports is one area where India lags behind even some of the poorest nations in the world despite a huge pool of talented sportsperson. At the junior level, our boys and girls can compete with the best in the world in almost every sport. However, when it comes to the senior levels. Where the actual capabilities of our sportsperson are tested, we fail miserably.

Even though a huge amount is spent on training and grooming of the players, we still have not been able to achieve the desired results. The prime reason for poor performances is corruption and political interference. Due to this many times, a good player is left out. The government and the respective athletic boards are the main culprit for letting down India. Most of them are corrupt, lack professionalism, and very biased. However, the fundamental problem lies in the absence of a sporting culture in India. Sports in India are considered a secondary and supplementary activity. This explains, to a large extent, the apathy on the part of the government machinery toward sports. The corporate indifference to stems from the fact that they are not sure that the sponsorship money will be efficiently used in promoting the game and the welfare of the players.

"The games we watch have become another battleground in the culture wars, and neither commentators nor fans seem willing to cede their territory" - Hua Hsu.

Another source of revenue is commercial sponsorship, companies have recognized that being linked to some sporting events can boost their images.

There is increased political interference in sports governance in the country. Two major sports bills that are the national sports development bill and the prevention of fraud in sports is still pending in the parliament. We are still waiting for their bills to develop into an effective law which would bring in a sports revolution and usher in dynamic changes in sports governance in the country.

A law is needed to prohibit people having a political background from holding positions insports federations and associations. Running these federations without any political influence will be an immense boost for sports in the country.

CONCLUSION

Sport is now politically important that it brings countries together, it increases national pride, it reinvents politics, and it makes money. This is a lot better than waging war.

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Research Article

Technical tools used in sports and physical education

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ABSTRACT

Training and mentoring in physical education and sports are a complex process and it involved through planning, organizing the requirement with a highly technical leadership. At the same, time assessment and evaluation need technological along with the technical tools for successful preparation and evaluation. Therefore, the technical tools are the key to the successful and essential component for the achievement of the goals and objective in the sports and physical education.

INTRODUCTION

Coaching and training in sports and physical education involve to improve the performance of an individual and whole team. It requires the ability to make decisions on the situations and the movements. Due to the adverse and unstable conditions of their activity, coaches are required to possess the ability to make dynamic decisions, requiring strategic intervention plans, supported by an innovative technological tool for their effective decision and implementation. However, the present paper highlights some of the technological tools which are very much essential assisting the in the fields of physical education and sports.

Following is the some of technological tools:

- Flip video camera.

This is one of the most important and essential tool used in physical education and sports. No other camera is as simple to record video footage, making it a snap to film and analyze sporting techniques and game play.

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MP3 Player/Recorder

MP3 players a technical tool used to play and record player with the ability to play and record mp3 files and connect to the radio. With the help of this tool, one can list the complete theoretical course content during a casual walk or ride.

- Mobile phones
- Calendar
- Clock/stopwatch uses the inbuilt stopwatch and alarm to help organize and time training sessions.
- SMS – It has a special feature and a service such as www.smsexpress.com.au to send bulk messages to more than one phone from your laptop and easily allows for instant communication with a large group or class.
- Camera/video camera – practical sessions as a way to film and analyze performance instantly. Most phones even come with video editing software that allows them to edit their own footage.
- TubeChop.com – It allows teachers to select a certain section from a YouTube video and share only that section.
- YouTube.com or Vimeo.com – Helps a sport or physical skill and film it with a flip video camera for uploading to YouTube.
- Google Docs – Google Docs spreadsheet with simple formulas to work out and graph averages and copy of the

spreadsheet loaded on their computer screen. Complete a step test, and record heart rates pre, post, and every minute after, for 5 min.

- Skype – Use Skype to make free phone and video calls to other Skype members all around the world. Connect the students to the textbook author to engage in a face-to-face chat world apart.
- Posterous.com – Simplest way to make an online digital portfolio of your sporting performance that can be reviewed and analyzed over time.
- Nintendo Wii Remote Control – Attach a single Nintendo Wii remote control to your computer through Bluetooth. This will allow you to utilize the inbuilt accelerometer within the control to track the movements and forces applied to the control as it is manipulated in space. Take it one step further and place it inside a dodge ball to record the forces applied to a throw within a game.
- Geocaching – Geocaching is the free high-tech treasure hunt where you use your GPS receiver to find caches hidden by other players. It is a great way to be outdoors, enjoy the environment, and the revel in the thrill of the hunt! Simply logon to www.geocaching.com and search for a cache within your area and begin your hunt with the GPS.

CONCLUSION

Technology can be used to enhance and support instruction for all the students, creating interest in students, and providing them valuable skills. As students and teachers prepare for the new millennium, technology and the committee creates growth as a vital part of educational reform. Health and sports education teachers need to increase their efforts to become technologically fluent and to incorporate various technological devices into their instructional program.

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Research Article

Effectiveness of rubrics for assessment and grading in physical education

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ABSTRACT

Globally, education in today's context is evaluated on the basis of outcome. Methods for evaluation and assessment to range the effectiveness of a subject or area underline the outcome of the same. Physical education is a subject which surely brings small or large contribution in an individual development. The methods for teaching should be defined carefully so that effective, relative, and justiciable outcome should be generated, especially in case of physical health. Various methods are used to evaluate and assess. Rubric is one of the important assessment tools which give noteworthy feedback of student learning. The objective of this paper is to analyze the need and effectiveness of rubrics for assessment and grading in physical education programs. The paper also cites important features in development of rubrics for assessment and how effective rubrics should be to achieve the goals. The methodology employed is review of various literatures about the rubrics development and its effectiveness. The review of various studies from educators around the world leads to recommending a rubric-based model for assessment to overcome various drawbacks.

Keywords: Assessment, Physical education, Rubrics model for assessment

INTRODUCTION

In today's fast-paced world, education is a necessity and educators have a big responsibility in imparting the right knowledge for a student's growth. In this context, the teachers of physical education programs face an added difficulty in the form of assessment.

Physical education is essential for all round development of a child. To effectively play any sports, one needs discipline, resilience, teamwork, courage to overcome adversities, respect for others, and a friendly attitude. These traits of sportsmanship once learned are just as useful in life as in sports. Therefore, it is imperative to have physical education for children from an early age. For these programs to be successful, the curriculum plays an important role. A comprehensive curriculum which makes learning fun and achieves its goal requires an effective assessment system as well.

Assessment is a way by which teachers get a feedback on their teaching methodology and students get to know of their understanding of the subject. The teacher can then correct the course of their teaching for a better understanding of the students, thereby increasing the learning of the students and teaching performance of the teachers.

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Rubric is one of the important assessment tools which give noteworthy feedback of student learning. In simple terms, rubric is a set of instructions or rules. In other words, rubrics are a set of rules for assessment, in which students are graded against expected level of performance for the various qualities required for the particular sports. Student learning is directly related to teaching methodology; thus, it is imperative for the physical education instructors to thoroughly understand how rubrics can help assess student learning and, in turn, improve teaching methodology.

In the rubrics model of student assessment, students are given feedback of their performance at every step. This helps both the students and the teachers to self-assess their understanding and teaching methodology, respectively. This model gains more importance in physical education assessment as compared to other subjects as the feedback in performance of students is immediately known to the them, thereby encouraging them to work harder and perform better in learning the sports. "Improving skills and facilitating outcomes ought to be a valid justification for teachers to endeavor to assess the quality of their students' efforts. In spite of the fact that teachers in other academic disciplines cannot accomplish this result, physical teachers are frequently regarded as the target of this evaluation" (Mouratidis *et al*., 2008).

Development of Rubrics

Rubrics are assessment tools. It helps teachers to assess and grade their students. They are "elucidating scoring plans," "a lot of scoring rules," and get their significance as an immediate aftereffect of the accentuation on use of built reactions and execution based errands in business programs – Hafner and Hafner, 2003; Quinlan, 2006; Glickman-Bond and Rose, 2006. A method for "imparting desires; giving focused advancing analysis; and evaluating" – Andrade and Du, 2005, Moskal, 2000; Isaacs, 2001; Holmes and Smith, 2003. Rubrics can be used for assessment of various subjects (Moskal, 2000; Tierney and Simon, 2004). As previously mentioned, rubrics are a set of instructions. These can be holistic in nature or analytical depending on the purpose. These rubrics can be drafted with respect to an individual or a task or it can be generalized for similar tasks, that is, generic. "Despite the fact that assignment explicit rubrics have been expressed in writing to have higher unwavering quality and legitimacy, their need and achievability (because of the venture of time and vitality) has been addressed" – Moskal, 2000; Popham, 1997. "Conventional rubrics, then again catch the basic elements of the 'aptitude to be estimated' and not the ability as smeared to a particular job" – Popham, 1997; Oakleaf, 2006. "Their adaptability licenses utilization for evaluation of tasks, projects, and student learning crosswise over time and projects" – Tierney and Simon, 2004; Oakleaf, 2006; Petcov and Petcova, 2006.

As per Popham (1997), rubrics have three important features:

a. Evaluation criteria
   They are the criteria on which the teacher is to assess the nature of a student's work. "They are the situations a presentation must meet to be fruitful," Wiggins (1998), Oakleaf (2006, p. 187). In expressions of certain creators: "Criteria are a lot of pointers/guides/rundown of measures/characteristics required for a student to meet a result. Posting conceptualizes and characterize measures, particularly in difficult to characterize zones, for example, basic reasoning, critical thinking, group aptitude, and so forth. It empowers model referenced segregation of exhibitions and checking of understudies learning against every basis."
b. Quality definitions
   As the name suggests, it is explanation of expectation from students. That is, qualities which a student must demonstrate in assessments in order to achieve certain grade. "The significance of these degrees of dominance, execution descriptors, and objective markers originate from their capacity to address concerns, for example, how to tell a decent reaction from a poor one; how to be steady in making a decision about student execution crosswise over assignments, time, and students; how to characterize achievement; and how to catch understudy execution in a manner to report this to guardians" – Arter, 1996 as estimated by Oakleaf 2006, p. 188.
c. Scoring strategy
   Holistic rubrics are concerned about a subject as a whole, while analytic rubrics provide in depth information about subject curriculum and its objectives. If a holistic scoring strategy is employed in rubrics, then it does not provide appropriate and detailed feedback. "Given its methodology of by and large assessment, all-encompassing rubrics don't give detailed and indicative criticism of the qualities and shortcoming of the item/execution" – Mertler, 2001; Moskal, 2000. If each criterion in the rubrics is evaluated separately and then aggregated, as in analytics rubric, it provides better information of student learning. "The writing on rubrics expresses that the point by point criticism gave by these, is helpful for directing the development of SL at a total just as at an distinct student level" – Klenowski, 1996; Simon and Forgette-Giroux, 2001.

Benefits of Rubrics

Rubrics contribute to student learning and program improvement in no. of ways.

a. Rubrics make the learning target clearer.
   If students know what the learning target is, they are better able to hit it (Stiggins, 2001). When students are to learn difficult skills or techniques, such as Perry O Brien technique in shot put or Hitch kick technique in long jump,

students who know in advance what the criteria are for assessing their performance will be will be able to perform or learn the techniques easily and effectively.

b. Rubrics guide instructional design and delivery.
   When teacher carefully articulates their expectation for student learning in the form of a rubric, they are better able to keep the key learning targets front and center as they choose instructional approaches and design learning environments that enable students to achieve these outcomes (Arter and McTigue, 2001).
c. Rubrics make the assessment process more accurate and fairer.
   By referring to a common rubric in reviewing each student product or performance, a teacher is more likely to be consistent in his or her judgments. A rubric helps to anchor judgments because it continuously draws the reviewer's attention to each of the key criteria so that the teacher is less likely to vary their application of the criteria from student to student. Furthermore, when there are multiple raters (e.g., large lecture classes that use teaching assistants as graders), the consistency across these raters is likely to be higher when they are all drawing on the same detailed performance criteria. In addition, a more prosaic benefit is the decided decrease in student complaints about grades at semester's end.
d. Rubrics provide students with a tool for self-assessment and peer feedback.
   When students have the assessment criteria in hand as they are completing a task, they are better able to critique their own performances (Hafner and Hafner, 2004). A hallmark of a professional is the ability to accurately and insightfully assess one's own work. In addition, rubrics can also be used by classmates to give each other specific feedback on their performances. (For both psychometric and pedagogical reasons, we recommend that peers give only formative feedback that is used to help the learner make improvements in the product or performance, and not give ratings that are factored into a student's grade.)

Studies Related to Effectiveness of Rubrics

Several studies have been done on rubrics to prove its efficacy in assessment of physical education programs. The most important factor in its popularity and acceptance around the world is the fact that:

a. It sets and informs the objectives and expectations
b. And it gives detailed feedback to the students of their strengths and shortcomings.

Rubrics model is a popular assessment model at school level in the USA and is now being employed in institutions of higher education as well (Simon and Forgette-Giroux, 2001). One of the main causes of this change is the discontent in both the students and teachers in grading of long essay-like answers, case analysis, oral presentations, and projects.

A study of grading system was conducted by Holmes and Smith in 2003 in a business program. A survey was collected from a total of 230 students of marketing and accounting where they were asked to point out the "specifically irritating" features of grading of their essays and quantitative problems, respectively, by the faculty. The inference from the survey said, "Independent of the appraisal strategy, essays or quantitative issues, understudy reactions of reviewing extensively fell under the two classes of (a) lack of fairness and (b) lacking feedback."

Similar inferences were drawn from other studies done by Oakleaf in 2006 and Powell in 2001 in other academic programs.

Another survey of grading system was conducted by Michlitch and Sidle in 2002 to study the perspective of teachers. It was collected from a total of 50 teachers from two US-based business schools. The survey showed when students were assessed in groups, assessments being done on case studies, or quantitative problems; they scored high both in terms of frequency and effectiveness. However, there was a significant mismatch in the frequency and effectiveness of assessment for the strategies for "analytic scoring of students recording assignments to break every expertise region" and "perception of student's introductions estimating execution, utilizing measure." The investigation inferred that "the educators accepted that the utilization of these techniques would prompt' incredibly upgraded' SL and accentuated on the necessity for 'successful' devices to control evaluation of understudy exhibitions when utilizing these strategies."

Application of Rubrics to Physical Education

For a teacher who has already who has already attained the high-level competence in their respective game and has a deep knowledge about the game, rubrics help them to attain the higher order thinking. Undertaking an analysis (the breaking down) of their sport into skill sets introduces many teachers to the concept of objectivity, which helps them move from the subjective – a product of their personal criteria – to the objective, in which categories and criteria are aligned with reasonable physical education standards. To emphasize the need for consistency and accuracy of the judgments, they will be making about their students and their learning, teachers need to present the idea that a well-constructed scoring rubric should generate similar scores regardless of who employs it. For students, once they learn the fundamentals and can identify the necessary components of a rubric as an assessment tool, student can then proceed to what they would demonstrate or imply in performance of a specific sports skill.

For Example if We Take a Rubric of Basketball for Assessment

The essential skills that comprise basketball can serve as excellent material to cocreate a rubric with students. The

Table 1: Rubrics for assessment of basketball

Skills	1 mark	2 marks	3 marks	4 marks	5 marks
Dribbling	• Student is not aware of the method of dribbling, • Dribble and move forward without controlling the ball. • Dribbles with both the hands • No proper stance and eyes fixed on the ball	• Student cannot dribble the basketball with control while moving. • Dribbles with palm of hand • Rigid stance, knees not bent.	• Student can dribble the basketball while moving • Does not have good control on ball • Cannot dribble with head up • Sometimes dribbles with finger pads.	• Student can dribble the basketball with good control and proper positioning • Student dribbles with head up • Student dribbles with finger pads, knees bent • Able to pivot while dribbling	• Student can dribble the basketball with excellent control, proper positioning. • Able to dribble from both hands simultaneously. • Student dribbles with head up, finger pads, knees bent.
Shooting	• Student cannot hold the ball properly. • Not able to focus on target • Cannot differentiate between shooting and non-shooting hand. • Student does not have body balance and does not demonstrate follow-through technique.	• Student could hold the ball properly. • Student uses two hands to shoot the ball. • Student could not shoot the ball successfully. • Student does not have body balance. • Does not demonstrate follow-through technique.	• Student uses two hands instead of one to shoot. • Student could sometimes shoot the ball successfully. • Student does not have body balance. • Does not demonstrate a proper follow-through technique.	• Student uses one hand to shoot the ball.. • Student could shoot the ball successfully. • Student is able to have body balance. • Student demonstrate follow-through technique	• Student shoots the ball demonstrating the "BEEEF" technique (Bend/Balance, Elbow, Eyes, Extend, Follow-through). • Student demonstrates excellent accuracy while shooting. • Student demonstrates perfect body balance and proper follow-through technique.
Passing	• Student could not pass the ball. • When passing, no step is taken by student toward the receiver. • When catching student step toward the pass.	• Student could not pass the ball to the teammate. • Student takes one step toward the receiver while passing. • Student does not take follow-through step on pass and unable to balance the body. • Student does not make sure the pass recipient is ready for the ball	• Student somehow manages to pass the ball successfully • Student somehow demonstrates follow-through step on passing and manage to balance the body. • Student does not make sure the pass recipient is ready for the ball. • The ball passed does not have accuracy and speed.	• Student passes the ball successfully to the teammate. • Student demonstrate follow-through step on passing with proper balance of body. • Student makes sure their teammate is ready for the pass. • The ball passed does not have accuracy and speed.	• Student passes the ball with precision and accuracy. • Student passes the ball to the teammate so that they can receive it with ease. • Student demonstrates perfect follow-up technique.

(*Contd...*)

Table 1: (*Continued*)

Skills	1 mark	2 marks	3 marks	4 marks	5 marks
Lay ups	• Student cannot demonstrate a lay-up. • Student is unaware of 2-step approach of lay-up. • Students find difficulties with balance and strength • Loses control of the ball.	• Student cannot demonstrate a proper lay-up. • Has difficulty performing the proper 2-step approach after many attempts. • Loses control of the ball. • Movement is performed without rhythm.	• Student can sometimes demonstrate proper lay-ups. • Can occasionally perform proper 2-step approach. • Scoring lay-ups is inconsistent. • Student focuses on results instead of process • The power to get the ball to the basket is not there	• Student demonstrates proper lay-ups • Students uses 2-step approach • Mostly performs the lay-up technique successfully. • Demonstrate control over the ball. • Perfect combination of strength and balance is missing during the technique performed	• Student demonstrates proper lay-ups • Student uses correct 2-step approach. • Student finds success in scoring lay-ups in each and every time. • Student demonstrates the proper combination of strength and balance during the technique. • Have proper control over the ball.
Game play	• Student does not have proper knowledge of the rules of basketball. • Student finds it difficult to understand the regulation of the game. • Student has no understanding of positioning and game play.	• Student has knowledge of rules and regulation of the play but does not follow the rules of basketball. • Student argues with other players. • Student has little understanding of positioning and game play. • Student has no understanding of offensive and defensive play	• Student has knowledge of rules and regulation of the play and follows the rules of basketball. • Student is not a team player and does not help others on the team. • Does not interact with the other team player in negative manner. • Student is not always involved in the game • Student does not show defensive or offensive skills.	• Student demonstrates the knowledge of rules and regulation of the game and follows the rules of basketball • Student is a team player and helps others on the team. • Does not interact with the other team in a negative manner. • Student is always involved in the game • Student does not always show proper defensive or offensive skills.	• Student demonstrates the perfect knowledge of rules and regulation of the game and consistently follows the rules of basketball. • Student is a team player. • Student is always involved in the game • Student demonstrates good understanding of offensive and defensive play

question now is, "What are the essential skills that we look for in a basketball player, and what would differentiate an excellent player from a satisfactory and an unsatisfactory player?" In addition to the ability to perform the obvious technical skills of dribbling, passing, shooting, and lay ups, players need to possess a tactical sense of knowing when to dribble, pass, and shoot.

When faced with the hypothetical task of teaching a basketball unit, teacher candidates can consider the following: What are the essential elements students need to learn and be able to do? What are the levels of achievement to be assigned, and what does each level look like? They then create a rubric similar to the one in Table 1.

CONCLUSION

Within the current educational system, there is a documented need to provide teachers with assessment tools to document their students' learning (Lund, 2011). The purpose of this article was to provide a few effective pedagogical approaches that may be used by PE teachers in the process of introducing rubrics to physical education teacher. It is hoped that teachers will be motivated to learn more about rubrics, improve their skills, and be able to discriminate in their evaluation of the rubrics they encounter in their professional settings.

For teachers, rubrics make the evaluation procedure more precise and fairer. Teachers like to be consistent in their decisions, referencing a typical rubric when assessing every product or student's performance. A rubric helps determine a decision since it causes the reviewer to notice every one of the key measures set forth earlier so that the professor is less likely to change the criteria from one student to another. In addition, where there is more than 1, consistency in these rates is high when they are all related to the similar performance measures. In addition, there is another advantage and rubrics do not enable students to complain about grades at the end of the semester.

The study has clearly showed that rubrics can have a major impact on performance of the student if they have former knowledge of the idea of rubrics and can express specific ideas. This result leads to students reaching a particular area that helps them to express their opinions with rubrics. In this way, we can conclude that the rubrics make the evaluation procedure increasingly substantial and solid; their genuine worth is the advancement of the instructing and learning process. The best rubrics license assessors and educators to take their expert information and use this expert information with the goal that the rating procedure does not include individual passionate contrasts or human data preparing limits. Rubrics show learning objectives. On the off chance that understudies realize what the objective is, they are progressively ready to accomplish it. Rubrics are bound to assume a progressively viable job in view of an intricate undertaking more work, more thinking, and more valued tasks.

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Volume 39 • Issue 1 ISSN 2231-3265

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International Journal of Health, Physical Education and Computer Science in Sports
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Research Article

Physical education studies

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INTRODUCTION

Physical education is a course taught in school that focuses on developing physical fitness. Effective physical education classes help kids develop skill and confidence, maintain physical fitness, learn about personal health and wellness, and demonstrate positive social skills. Whether the class produces positive effects on students' health, behavior, and academic performance depends on the kind of program that is taught. Studies have shown that it enhances muscular strength and endurance, as well as cardiovascular endurance. It also provides psychological benefits such as improving general mental health, concentration, awareness, and positive mood. It can be taught to any age student with little or no equipment, making it ideal for mixed ability and age classes. Tai Chi can easily be incorporated into a holistic learning body and mind unit. Where the sport originated. Teaching non-traditional (or non-native) sports provide an opportunity to integrate academic concepts from other subjects as well, which may now be required of many PE teachers. Non-traditional sports add benefits and challenges for those who often get easily distracted, are uncoordinated, or have less interest in traditional sports, which helps to make PE classes accessible to as wide a group of children as possible.

Objective

The main objective is fostering physical education and the teaching how to implement it in social, professional, physical, and recreational activities.

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The goals of the program are as follows:
Optimization of learning techniques; search of new forms and teaching methods, their improvement with an opportunity of giving comprehensive education and making physical education an efficient factor in the development of a strong personality, and readiness for professional activities.

Development of the department's teaching potential by means of extending methodological support of educational, pedagogic, health, and fitness activities; practical implementation of information technology in process of planning and forming of learning activities.

Research activities at the development of innovative educational technology, which includes available, secure, and effective praxis in the field of health protection, all-round development and individual improvement.

Fostering healthy lifestyle as to either a success factor in study and career or a flexible way of primary preventative measures and health protection.

The purposes of the discipline are as follows:

1. Understanding the meaning of physical education for an individual development and improving general health for professional activity.
2. Fostering motivational attitude to the physical education, healthy lifestyle, and regular exercising.
3. Learning special knowledge, practical skills, which provide health protection, form compensatory process, correct present health abnormalities, provide mental prosperity,

development, and improvement of psychophysical skills, form professional qualities of an individual.
4. Body's adaptation for physical and mental workload and also at the increasing of the capability of physiological systems as well as raising of the resistance of immune defenses.
5. Learning the methodology of formation and taking health exercises independently, the methods of self-control while exercising, hygiene rules, and sound schedule for work and rest.
6. Learning how to resist unfavorable factors and working conditions, decreasing fatigue during professional activities, and raising the quality of results.

Which are the main forms of physical education. According to the curriculum of physical education discipline, students of 1–3 academic years have 4 academic hours of physical education classes per week during the whole period of their theoretical studies.

DISCUSSION AND CONCLUSION

Which are the main forms of physical education. According to the curriculum of physical education discipline, students of 1–3 academic years have 4 academic hours of PE classes per week during the whole period of their theoretical studies which are the main form of physical education. According to the curriculum of physical education discipline, students of 1–3 academic years have 4 academic hours of PE classes per week during the whole period of their theoretical studies. Rather than confining health and health education to the prevention of premature death and disease, I discuss health, in relation to learning, as always being in the process of becoming. The health resources for living a good life can then be found in the "river," with the "swimmer," and in the relation between the "river" and the "swimmer." In this way, health can manifest itself in many different ways. I ask why we even attempt to talk about health in the singular when talking about different diseases. Is health rather a plural? Is it even a noun? Or is it something we do – a verb? If the latter, health education can be conceived of as a practice – "healthying" – rather than a fixed, static outcome set up by research and public health policies as something to achieve in education.

Globally, health has been advocated as a major objective for physical education, and despite the multiple ways that health can be understood, a specific mantra seemingly dominates Western physical education contexts in terms of health being connected to aerobic capacity, fitness, body mass index, 10,000 steps per day, or body shape. But is this the only way to understand health? Also, what are the basic assumptions when it comes to what it is to be a human being when health is widely regarded as a fixed end point that each citizen should strive to obtain and fit into Let us think about this question for a moment – what is health? Please write down what you think on a piece of paper.

SUGGESTIONS AND RECOMMENDATION

This chapter presents the committee's recommendations for strengthening and improving programs and policies for physical activity and physical education in the school environment, including before, during, and after school. These recommendations were developed in accordance with the guiding principles outlined in which included recognizing the benefits of instilling lifelong physical activity habits in children, the value of applying systems thinking in efforts to improve physical activity and physical education in the school environment, current disparities in opportunities, and the need to achieve equity in physical activity and physical education, the importance of considering all types of school environments, the need to consider the diversity of students in developing recommendations, the importance of taking into account the practicality of implementation and the challenges and barriers faced by stakeholders, and the need for recommendations to be based on the best available scientific evidence and promising approaches. The consensus recommendations presented in this chapter are a result of the committee's deliberations on the existing evidence and on the need for additional evidence.

The committee formulated recommendations in six areas: Taking a whole-of-school approach, considering physical activity in all school-related policy decisions, designating physical education as a core subject, monitoring physical education and opportunities for physical activity in schools, providing pre-service training and professional development for teachers, and ensuring equity in access to physical activity and physical education.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Stress management

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We are in the 21st century where technology is ruling the world. Humans are replaced by machines, its reducing the workforce, not only in performing a work its literally reducing the power of humans.

72.96 million of the adults after 40 years are suffering from diabetes.

180,000 adults are suffering from blood pressure.

The main cause of many diseases is "*STRESS*"

According to mental health foundation, stress can be defined as the degree to which you feel overwhelmed or unable to cope as a result of pressures that are unmanageable.

There are three different types of stress

- Acute stress
- Episodic acute stress
- Chronic stress

STRESS AND OUR BODY

Body reacts to stress by releasing hormones. These hormones make the brain more alert, it tenses the muscles to produce the stress.

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Stress is like two faces of a coin where it is helpful as well as harmful.

- Acute stress: This is short-term stress that goes away quickly. Its help the person to escape from the danger.
- Chronic stress: This is stress that lasts for a longer period of time body stays alert, even though there is no danger. Overtime, this puts you at risk for health problems.
- High blood pressure.
- Heart diseases.
- Diabetes.
- Obesity.
- Depression.
- Anxiety.
- Skin problems.
- Menstrual problems.

SIGNS AND SYMPTOMS OF SEVERE STRESS

Stress can cause many types of physical and emotional stress.

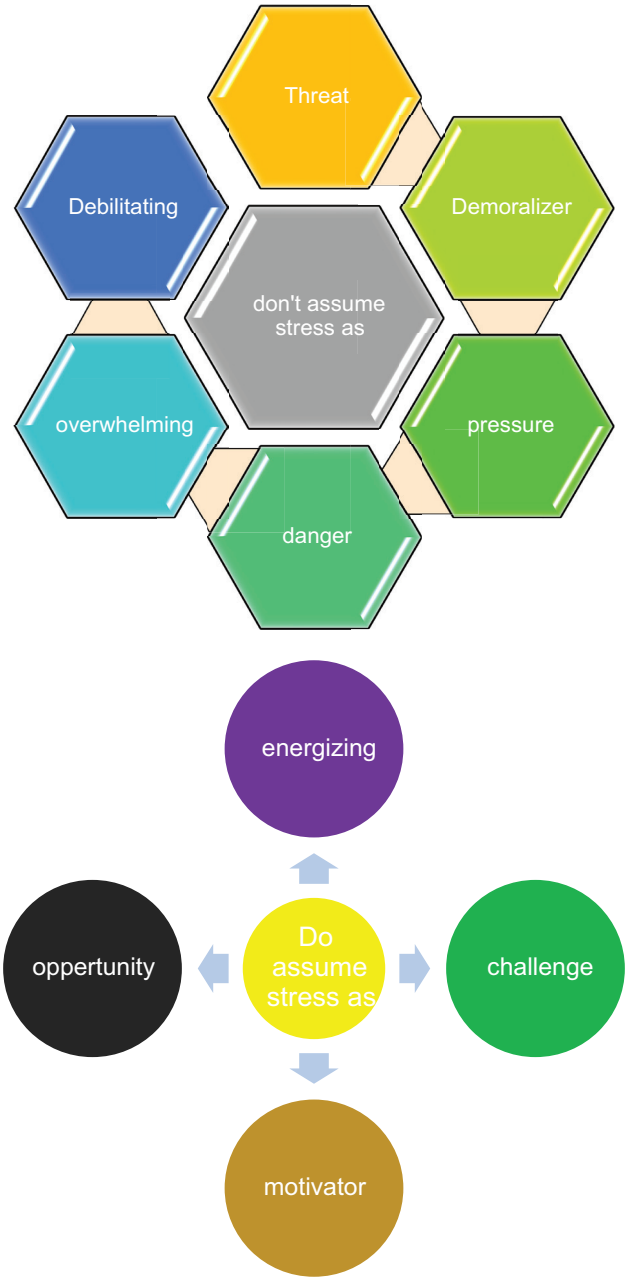
It may include:

- Forgetfulness.
- Frequent aches and pains.
- Headache.
- Lack of energy.
- Sexual problems.
- Stiff jaw or neck.
- Tiredness.
- Insomnia.
- Stomach upset.

- Usage of narcotics for the sake of relaxation.
- Changes in weight.

SIMPLE WAYS TO MANAGE STRESS

1. Meditation.
2. Exercise.
3. 7–8 h of deep sleep.
4. Connecting socially.
5. Eating stomach healthy food.
6. Yoga.
7. Time management.
8. Setting the short-term. goals
9. Planning the timeline.



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Research Article

Physical fitness and physical fitness index of high school girls of Karnataka state

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ABSTRACT

Nowadays, physical fitness may be defined as "the ability to carry out daily tasks with vigorous and alertness, without undue fatigue and with ample energy to enjoy leisure time pursuits and to meet unusual situation and unforeseen emergencies." Fitness is a key to enjoy life. Exercise is an important of a total fitness program. Modern living has taken all the exercise out of our lives and so to get fit and have to put it back again, regular exercise is important to develop and maintain an optimal level of health, performance and appearance. It makes feel good, both physically and mentally. It gives psychological lift and strengthens a sense of accomplishment. The main purpose of this study was to compare the physical fitness components such as leg strength, reaction time, and physical fitness index (PFI) between residential and non-residential high school girls of Karnataka state. To achieve the purpose of the study, data were collected from 60 players, 30 from each school. The age of the subjects was ranging from 13 to 14 years. The data collected were treated with the statistical technique "*t*" and found that there is a significant difference in the selected physical fitness and PFI aspects between residential and non-residential school girls of Karnataka state.

Keywords: Leg strength, Physical fitness, Physical fitness index, Reaction time

INTRODUCTION

In the current years of physical education and sports have specifically under the impact of scientific advancement and new discoveries in sport science. The field of physical education has been keeping up with the development and growth of every brand of biology, medicine, and many others sciences and this association has led to the emergence of new affiliation in physical education and sport science. Thus, the trend of evaluation and variety in physical education has brought about new challenges for this field. So far interestingly enough, thanks to the expansion and association of physical education with various aspects to social and human capabilities, it has been defended its practical and capacities. One of the new fields of sports science is the science of training or theory of training, which based on the medical achievement and physiology of training.

The term "fitness" increased in western vernacular by a factor of 10. Modern definition of fitness describes either a person or machine's ability to perform a specific function or a holistic definition of human adaptability to cope with various situations. This has led to an interrelation of human fitness and attractiveness which has mobilized global fitness and fitness

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equipment industries. Regarding specific function, fitness is attributed to person who possesses significant aerobic or anaerobic ability, that is, strength or endurance. A well-rounded fitness program will improve a person in all aspects of fitness, rather than one, such as only cardio/respiratory endurance or only weight training.

Fitness is a key to enjoy life. Exercise is an important of a total fitness program. Modern living has taken all the exercise out of our lives and so to get fit and have to put it back again, regular exercise is necessary to develop and maintain an optional level of health, performance, and appearance. It makes feel good, both physically and mentally. It gives psychological lift and strengthens a sense of accomplishment. Looking young is a reflection of good health. Regular physical exercise enhances the function of the joints, increases the sense of physical well-being, and promotes a sense of feeling good, increases physical working capacity by increasing cardiorespiratory fitness, muscle strength, and endurance, and decreases the risk of serious diseases that could lead to early disability and death.

The very nature of sport requires certain amount of skill and physical fitness. It has been due to the growing change in the competitive philosophy of sports that a close liaison has developed among sports scientist, team physician, athletic trainers, coaches, and athletes to investigate modern scientific technique in terms of selection of athletes.

A comprehensive fitness program tailored to an individual typically focuses on one or more specific skills, and on age- or health-related needs such as bone health. Many sources also cite mental, social, and emotional health as an important part of overall fitness. This is often presented in textbooks as a triangle made up of three points, which represent physical, emotional, and mental fitness. Physical fitness can also prevent or treat many chronic health conditions brought on by unhealthy lifestyle or aging. Working out can also help some people sleep better and possibly alleviate some mood disorders in certain individuals.

It is a known fact that adding regular physical activity to one's daily routine will improve health and well-being. And that physical activity does not necessarily need to be strenuous for a person to enjoy benefits to health. Of course, by increasing the amount of physical activity (within reason), one will increase the amount of health benefits "Exercise Physiology."

One of the most important benefits of physical activity is that it actually lessens a person's risk of developing or dying from many of the most common causes of serious illness and death in the United States. The risk developing colon cancer, heart disease, high blood pressure, and diabetes is reduced through regular physical activity. Being physically active has also been proven to help build healthy bones, joints, and muscles. Furthermore, regular physical activity reduces the overall risk of dying prematurely from any case. In fact, in 1995, the American College of Sports Medicine estimated that 5 times as many Americans die from being, inactive than from losing, their lives in car accidents.

There is a need to know the physical fitness level of our future physiotherapists. They can be sensitized to perceive a healthy lifestyle right from the beginning their career. The physical fitness index (PFI) measures the physical fitness for muscular work and the ability to recover from the work. The study was undertaken to assess PFI using modified Harvard step test.

PURPOSE OF THE STUDY

The purpose of the study was to compare the selected physical fitness components and physical fitness index between residential and non-residential high school girls of Shivamogga district, Karnataka.

METHODOLOGY

To achieve the purpose of the study, data were collected from 60 subjects of which 30 girls from residential schools and 30 girls from non-residential schools of Shikaripur taluk, Shivamogga district. The age of the subjects was ranging from 13 to 14 years.

Statistical Technique

The collected data were analyzed using "*t*" statistical technique with the help of 19th version of SPSS.

RESULTS

The data collected were treated with "t" test and the results are presented in the following tables.

Table 1 shows the mean, standard deviation, and "*t*" value of strength (leg strength) between two groups that are residential and non-residential high school girls. The calculated "*t"* value is 2.32 which is greater than table value 1.96 so it is significant at 0.05 level. Here, residential girls are better in strength (leg strength) than non-residential school girls.

Table 1: Mean, standard deviation and "*t*" value of strength (leg strength) in residential and non-residential high school girls

S. No.	Subjects	Sample size	Mean	Standard deviation	"*t*" value
1.	Residential high school girls	30	1.42	0.22	2.32*
2.	Non-residential high school girls	30	1.52	0.12	

*Significant at 0.05 level

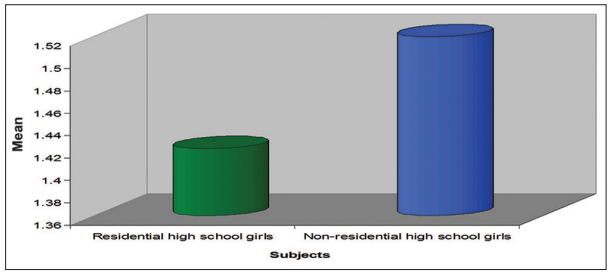

Figure 1: Graphical representation of strength (leg strength) of residential and non-residential high school girls

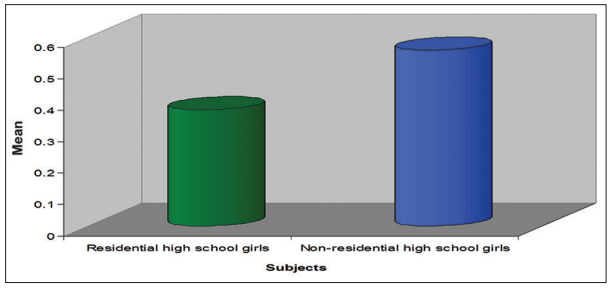

Figure 2: Graphical representation of reaction time of residential and non-residential high school girls

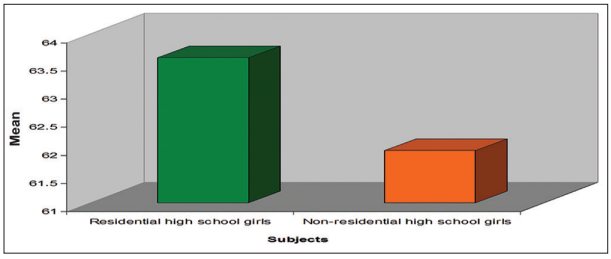

Figure 3: Graphical representation of physical fitness index of residential and non-residential high school girls

Table 2 shows the mean, standard deviation, and "*t*" value of reaction time between two groups that are residential and non-residential high school girls. The calculated "*t*" value is 2.64 which is greater than table value 1.96 so it is significant at 0.05 level. Here, residential girls are better in reaction time than non-residential school girls.

Table 3 shows the mean, standard deviation, and "*t*" value of physical fitness index between two groups that are residential and non-residential high school girls. The calculated "*t*" value is 2.09 which is greater than table value 1.96 so it is significant at 0.05 level. Here, non-residential girls are better in physical fitness index than residential school girls.

DISCUSSION ON FINDINGS

In leg strength and reaction time, residential girls are better than non-residential school girls. Because residential school girls are fit when compare to non-residential school girls and they are all come from different villages. As usually people from villages are fit because of their nature of work. They are working in lands, cultivate so many food grains and doing hard work in fields. This might be the one of the reason.

In physical fitness index, non-residential girls are better in than residential school girls. Because they can be perceive a healthy lifestyle right from the beginning their life. Non-residential girls doing muscular work daily and the ability to recover from the work.

Table 2: Mean, standard deviation, and "*t*" value of reaction time of residential and non-residential high school girls

S. No.	Subjects	Sample size	Mean	Standard deviation	"*t*" value
1.	Residential high school girls	30	0.37	0.26	2.64*
2.	Non-residential high school girls	30	0.56	0.29	

*Significant at 0.05 level

Table 3: Mean, standard deviation, and "*t*" value of physical fitness index in residential school girls and non-residential school girls

S. No.	Subjects	Sample size	Mean	Standard deviation	"*t*" value
1.	Residential high school girls	30	63.58	2.53	2.09*
2.	Non-residential high school girls	30	61.93	4.12	

*Significant at 0.05 level

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Research Article

The effect of yogic and physical exercises on blood pressure variables of secondary school students in Vijayapur district of Karnataka

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ABSTRACT

The study was on physiological variables of secondary school students in Vijayapur district of Karnataka State. The purpose of the present study was to find the effect of yogic practice and physical exercises on blood pressure (both systolic and diastolic) variables of secondary school students. For purpose, 150 students studying in various classes of Nagthan composite junior college Vijayapur in Karnataka students in the age group of 14–16 were selected using purpose random techniques. They were divided into three equal group, each group consisted of 15 subjects, in which Group I underwent yoga practice, Group II underwent training physical exercises, and Group III acted as control group who are not allowed to participate in any special training apart from their regular curricular activities. The training period for this study was 6 days a week for 8 weeks. Before and after the training period, the subjects were tested for blood pressure (systolic and diastolic). The Analysis of Covariance (ANCOVA) was applied to find out which group has better performance. Whenever, "*F*" ratio for adjusted test was found to be significant for adjusted post-test means, Scheffe's test was followed as a *post hoc* test to determine which of the paired mean differ significantly. It was concluded from the results of the study that after yoga practice and physical exercise periods, both the training has improved the blood pressure (both systolic and diastolic) for both the experimental group. However, the yoga group has noticed better performance in blood pressure comparing the physical exercises group The results of the study also shown that there was a significant difference which was found between yoga and physical exercises the control groups.

Keywords: Cardiovascular endurance and blood pressure, Physical exercises, Yoga

INTRODUCTION

Yoga is the science of the right living and, as such, which is intended to be incorporated in daily life. It works on all aspects of the person: The physical, vital, mental, emotional, psychic, and spiritual. Yoga aims at bringing the different bodily functions into perfect coordination so that they work for the good of the whole body.

Yoga focuses on harmony between mind and body, yoga derives its philosophy from Indian metaphysical beliefs. The word yoga comes from Sanskrit language and means union or merger. The ultimate aim of this philosophy is to strike a

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balance between mind and body and attain self attinghtment. The achieve this, yoga use movement, breath, posture, relaxation, and mediation to establish a healthy, lively, and balanced approach to life. According to Swami satayananda Saraswathi, "yoga is not an ancient myth buried in oblivion. It is the most valuable inheritance of the presents. It is the essential need of today and the culture of tomorrow."

The regular practice of asana maintains the physical body in an optimum condition and promotes health even in an unhealthy body. Through asana practice, the dormant energy potential is released and experienced as increased confidence in all areas of life. Yoga asana has a deeper a significant value in the development of the physical, mental, and spiritual personality, whereas pure exercises only have a physical effect on the blood pressure.

Physical exercises are performed quickly and whit a lot of heavy breathing. Yoga asana is performed slowly with relaxation. The benefits of various yoga techniques have been professed to improve body muscular strength, performance, stress reduction, attainment of inner peace, and self-realization. It is well-established the fact that participation in physical education and sports activities if highly beneficial to one's health and leads to improved performance by students in schools, in addition to helping them in developing many life skills. In general, children need at least 30 min of vigorous activity every day. Unfortunately, today, children are three to 4 times less active than they were 30 years ago. As children grow elder, their lives become more sedentary. Many take to bus or drive to schools where they sit behind a desk all day. In the evening they watch TV or play computer games. Computers may have become a necessary for today's kids, but a study says that the Machines are producing a "generation of weaklings" as children swap outdoor play for screen games and the internet, reports PTI from London.

METHODOLOGY

This study under investigation involves the experimentation of yoga practice and physical exercise on muscular strength and blood pressure [systolic and diastolic]. Only boys student those who were studying in various classes of Nagathan PU composite junior college of Vijayapur in Karnataka and aged between 14 and 17 years were selected. The selected 150 subjects were randomly divided into three groups of fifteen each, out of which Group I ($n = 50$) underwent yogic practice, Group II ($n = 50$) underwent physical exercise training, and Group III ($n = 50$) remained as control.

The training program was carried out for 5 days/week during morning sessions only (6 am to 8 am) for 12 weeks. Cardiovascular endurance was measured by skipping the test, se and blood pressure was measured using sphygmomanometer.

The study was to find out the effect of yogic exercises on selected 150 students of high school, ages 14–16 years are selected randomly, the control random group 50 subjects, experimental Group 1 (yogic exercise) 50 subjects, experimental Group 2 (physical exercise) 50 subjects. Physiological variables, cardiovascular endurance, and blood pressure.

Human bodies are designed for regular physical activity. The sedentary nature of much of modern life probably plays a significant role in the epidemic incidence of depression today. Many studies show that depressed patients who stick to a regimen of aerobic exercise improve as much as those treated with medication.

Hence, the researcher has selected secondary school students for this particular research work. In this study, secondary school students have given various yogic exercises. On the effect of yogic exercises, finally, the researcher has succeeded on get the result in this particular study. Mainly in this study, the researcher has taken secondary schoolchildren; hence, the physiological condition will change in this age; then also, the researcher has given the particular training and he has got improvement in the particular physiological variables.

DISCUSSION ON BLOOD PRESSURE

Diastolic Blood Pressure

It was also hypothesized that yoga training may reduce the blood pressure diastolic than physical exercises

Discussion and Findings (Blood Pressure Diastolic)

When we refer Table 1, it was found that the computed "F" ratio was 1.691. As this value was more than table value, it was considered significant at 0.05 level. To find out the difference between the adjusted paired means, Scheffe's *post hoc* test was employed.

Table 1 A reveals the Scheffe's *post hoc* test result of 1.4608, which was not found significant.

Table 1: Computation of covariance of physiological variables of blood pressure (diastolic) of control group, experimental Group 1 (yogic exercises) and experimental Group 2 (physical exercises) of secondary school students

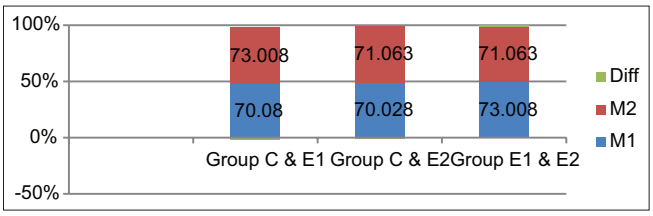
Source variance	Df	Sum of the square	Mean square	Remarks
Between the group	2	350.46	175.23	Sig
Within the group	296	10477.51	35.39	
Total	148			

Significant at 0.05 level

Table 2 also reveals the difference between Group A and Group B (−2.980). The difference between Group A and Group C (−1.035) and also the difference between Group B and Group C (1.945).

From the statistical analysis, it was shown that slight mean difference has revealed that yogic exercise reduced blood pressure (diastolic) than the control group and experimental Group II (physical exercise groups). It may be due to the reason that the yogic exercise and physical exercises are both better for better functioning of the internal organs, especially the circulatory system of the body. Hence, the diastolic blood pressure was slightly reduced comparing to yogic exercise, hence formulated the hypothesis, there would be a significant influence on the reducing diastolic rate of the yoga practitioners, which was rejected that alternative hypothesise was accepted.

The graph showing the mean differences of blood pressure diastolic of the experimental group recorded at the pre- and post-test.



Systolic Blood Pressure

To determine, the influence of yogic and physical exercise on blood pressure (systolic) ANACOVA was employed. The obtained results pertaining to this are presented in the table.

It was also hypothesized that yoga training may reduce the blood pressure systolic than physical exercises.

Mean differences of Control Group (A), Experimental Group 1(B) (yogic exercise), and Experimental Group 2(C) (physical exercise).

Results and Findings. (Blood Pressure Systolic)

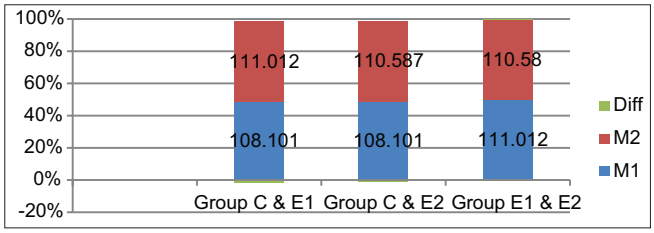
Table 1 shows the F ratio of 9.448, which was significant at 0.05 level. Hence, Scheffe's *Post hoc* test was employed

Table 2: A blood pressure (diastolic mean differences of control group (a), experimental Group 1 (b) (yogic exercise) and experimental Group 2c (physical exercise)

Group	M1	M2	Diff
Group C and E1	72.273	74.966	−2.693
Group C and E2	72.273	73.711	−1.438
Group E1 and E2	74.966	773.711	1.254

0.3787, which was found significant. Table 1 (shows Scheffe's *Post hoc* test) shows the mean difference between the three groups. The difference between Group A (control group) and Group B (Experimental Group I, yogic exercise) was −2.912. The difference between the Group A (Control group) and Group C (Experimental Group II, physical exercise group) was −2.486. The difference between Group B (Experimental Group I, yogic exercise) and Experimental Group II (physical exercise) was 0.425.

The graph showing the mean differences of blood pressure of systolic of experimental group recorded at the pre- and post-test



DISCUSSION AND FINDINGS (BLOOD PRESSURE SYSTOLIC)

When we refer Table 1, it was found that the computed "F" ratio was 9.448. As this value was more than table value, it was considered significant at 0.05 level. To find out the difference between the adjusted paired means, Scheffe's *Post hoc* test was employed. Table 2 reveals the Scheffe's *post hoc* test result of 0.3787, which was significant. Table 2 also reveals that the difference between Group A and Group B (−2.912). The difference between Group A and Group C (−2.486) and also the difference between Group B and Group C (0.425).

Table 1: Computation of covariance of physiological variables of blood pressure (Systolic) of control group, experimental Group 1 (Yogic Exercises), and Experimental Group 2 (physical exercises) of secondary school students

Source Variance	Df	Sum of the square	Mean square	Remarks
Between the group	2	217.15	108.57	9.08
Within the group	296	3567.76	12.05	
TOTAL	298			

Significant at 0.05 level

Table 2: Blood pressure (Systolic)

Group	M1	M2	Diff
Group C and E1	107.895	110.018	−2.123
Group C and E2	107.895	109.566	−1.671
Group E1 and E2	110.018	109.566	0.452

CONCLUSION

It was concluded from the results of the study that after yoga practice and physical exercise periods, both the training has improved the blood pressure (both systolic and diastolic) for both the experimental group. However, the yoga group has noticed better performance in blood pressure comparing the physical exercise group. The results of the study also shown that there was a significant difference which was found between yoga and physical exercises the control groups.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Sports and physical activities as part of a healthy lifestyle

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INTRODUCTION

People who lead an active life are more likely to live longer and less likely to develop serious diseases such as heart disease, cancer, and diabetes.

The large amount of research into the extent to which sports and physical activity has a positive impact on health has shown involvement in regular physical activity occupational health, physical mental, social, spiritual, and occupational health.

HEALTH

- HEALTH is the level of functional or metabolic efficiency of a living organism. In humans, it is the general condition of a person's mind and body, usually meaning to be free from illness, injury or pain (as in "good health" or "healthy").
- The World Health Organization (WHO) defined health in its broader sense in 1946 as "A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."

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SPORTS

- SPORT is all forms of usually competitive physical activity which, through casual or organized participation, am to improve skills while use, maintain or physical ability, and providing entertainment to participants and, in some cases, spectators.
- The use of sport as a tool to communicate vital health-related information to "at risk" groups.
- The use of sport mobilize hard-to-reach groups to large-scale health campaigns, for example, communities with low population density.
- Sport is contributed to achieving mental health objectives, including addressing depression and stress-related disorders.

Childhood obesity is a growing global concern and physical exercise may help decrease some of the effects of childhood and adult obesity. Health care providers often call exercise the "miracle" or "wonder" drug – alluding to the wide variety of proven benefits that it provides.

Children and Exercise

With about a third of all children in England aged between two and 15 now classed as being overweight or obese, it is more important than ever to get children active. Physical activity in childhood has a number of benefits, including healthy growth

and development. It helps children maintain a healthy weight and gives them an opportunity to interact with other people and make friends. Activities that put stress on children bones, including jumping and skipping, can help protect against osteoporosis in later life and develop strong and healthy bones.

CONCLUSION

- The factors that may be determinants on health include intensity, type of physical activity, clothing, footwear, climate, stress levels, injury, and sleep patterns.
- Physical activities and sports have been used in the treatment and rehabilitation of communicable and non-communicable diseases.
- These are the cost-effective methods to improve the public health. People may get the positive experiences and roles, while they are taking part in sports activities.
- The value of practice and the challenge of competition should be learnt from the sports persons. Many people use sports to create positive view of body and to create a healthy self-image
- Sports give the children the chance to be physically active and to develop healthy lifestyle that supports their athletic behaviors.

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Research Article

Injuries and rehabilitation in sports

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INTRODUCTION

Injuries are a "Part of the Game" is a common saying. Is it TRUE? However, studies have shown that 50–70% of all sports injuries can be prevented. Needless to say, the SPORTS PHYSICIAN is a key player in this process along with the Coach. The most common sports injuries are sprains and strains, knee injuries, swollen muscles, Achilles tendon injuries, pain along the shin bone, rotator cuff injuries, fractures, and dislocations.

Causes Injuries

Intrinsic causes

Previous injury, poor conditioning, muscle imbalance, anatomical abnormalities, nutritional factors, and growth factors.

Previous injury

The most reliable predictor of injury is previous injury. Proper rehabilitation is necessary for a return to play.

Poor conditioning

Unfit athletes are more likely to get injured and off-season training program is necessary.

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Muscle imbalance

Most common in athletes and a difference in 10 % may cause injury (agonists & antagonists).

Chronic injuries that take place over a period of time (over-use injuries), for example, jumpers knee and Achilles tendinitis

Two types of chronic injuries: (1) Intrinsic and (2) extrinsic.

Extrinsic Causes

a) Training errors – intensity, duration, and frequency
b) Inappropriate training structure
c) Improper footwear

Training errors

- "Too much too soon" sudden increase in (FIT principle)
- Frequency – Intensity- Time

Improper workout structure

One of the common reasons athletes get injured is because they do not prepare their bodies with a structured workout, that is – scientific training protocols, micro, meso and macro cycles, relaxation techniques, off-season, pre-competitive, and competitive season workouts.

Improper Footwear Invest on "Proper Training SHOES" *soft, flexible, cushioned heel cup, mid arch support, cushioned tongue, toe box, and those shoes that fit your foot.

Rehabilitation

If you get hurt, stop playing. Continuing to play or exercise can cause more harm. Treatment often begins with the RICE (Rest, Ice, Compression, and Elevation) method to relieve pain, reduce swelling, and speed healing. Other possible treatments include pain relievers, keeping the injured area from moving, rehabilitation, and sometimes surgery.

Definition

Rehabilitation is a treatment or treatments designed to facilitate the process of recovery from injury, illness, or disease to as normal a condition as possible.

Purpose

The purpose of rehabilitation is to restore some or all of the patient's physical, sensory, and mental capabilities that were lost due to injury, illness, or disease. Rehabilitation includes assisting the patient to compensate for deficits that cannot be reversed medically. It is prescribed after many types of injury, illness, or disease, including amputations and arthriti.

Preventing Sports Injuries

1. Pre-season physical fitness – General and specific physical conditioning programs *Strength, *Endurance, *Flexibility , *Speed, and *Coordination.
2. Proper warm-up, warm-down, proper warm-up, and cool down are a part of the game-prepare the athlete psychologically – increase body temperature-increased heart rate and breathing-increased ROM of joints-increased flexibility of muscles-removal of lactic acid.
3. Safe playing conditions
   Ground markings – play fields free of potholes, stones, thorns – water facilities – shades for players.
4. Avoid extremes of temperature.
   Hyperthermia – Increase in body temperature can lead to heat exhaustion and heat stroke Hypothermia – Decrease in body temperature leading to frostbite. Proper dress and athletic gear to be worn during training and competitions.
5. Proper equipment's – *The equipment's that is used in daily practice, training, and competition is to be checked for wear and tear, oiling, greasing, and if damaged are to be promptly replaced. *Mats and floorings to be cleaned of blood, sweat, and dust.
6. Rules, regulations, and punishments.
   *Rules and regulations of the game or sport are to be known by the athlete and it is mandatory. *Penalty, punishment, and sanctions are necessary for unfair and foul play.
7. Protective Devices
   *Protective safety equipment's is to be worn at all times of play. *Helmets, mouth guards, chest and abdomen pads, groin guards, hand gloves, thigh and leg pads, shin pads, and proper footwear.
   - Herapeutic exercise and rehabilitation mean any exercise planned and performed to attain a specific physical benefit under qualified personnel for…

Various problems such as a joint, muscle, ligament, and tendon problem.

- A sporting injury.
- Returning to your maximum state of health following a stroke, head injury, fracture, or other similar illness.
- Recovering from an operation.
- Preparing yourself before an operation.
- A training schedule for your sport.
- Improving your knowledge and understanding as a coach or fellow professional.

CONCLUSIONS

A major obstacle to developing strategies for preventing injury is the lack of epidemiological data on injury rates in most sports in India. "PREVENTION IS BETTER THAN CURE"…

Recommended Exercise Methods

a. A few simple rules are helpful as you develop your own routine.
b. Do not eat for 1–1/2 h before vigorous exercise.
c. Drink plenty of fluids before, during, and after a workout.
d. Adjust your activity level according to the weather and reduce it when you are fatigued or ill.
e. When exercising, listen to the body's warning symptoms, and consult a doctor if exercise causes chest pain, irregular heartbeat, undue fatigue, nausea, unexpected breathlessness, or light-headedness.

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Research Article

A comparative study on body mass index between Navodaya High School and Central High School students

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ABSTRACT

The International Obesity Task Force (IOTF) was established in 1994 to address the increase in the worldwide prevalence of obesity. The goals of the IOTF are to (1) raise awareness in the population and among governments that obesity is a serious medical condition, (2) develop policy recommendations for a coherent and effective global approach to the management and prevention of obesity, and (3) implement appropriate strategies to manage and prevent obesity on a population basis worldwide. The purpose of the study is to compare the body mass index between Navodaya High School and Central High School students of Belagavi district. In the present study, total of 200 subjects from two high schools of Belagavi district were randomly selected. Among 200 subjects, equally selected from 100 from Navodaya School and 100 from Central School. The age of the subject ranged between 13 and 16 years during the academic year 2018–2019. The body mass index formula was developed by Belgium statistician Adolphe Quetelet (1796–1874) and was known as the Quetelet Index. BMI is also referred to as "body mass indicator." BMI is an internationally used measure of obesity. Among 100 samples of Navodaya School students studying in high school in Belagavi district, 64% were under weight, 28% were normal weight, 7% were overweight, and 2% were obese. Similarly, out of 100 sample students, studying in the central school in Belagavi district, 55% were under weight, 29% were normal weight, 12% were overweight, and were 4% of obese, which can be seen. On the basis of the results of the study, it was concluded that the students studying in Navodaya School and Central Schools had differential health status. The Navodaya School students are more in underweight category (64). The Central School students more in normal weight (29), overweight (12-7), and obese (4-2) categorizes. The central school students are needed information about fitness, physical activates, and nutrition in daily activates.

Keywords: Anthropometric, Body fat, Body mass index, Fitness, International obesity task force

BMI should serve as an initial screening for children and adolescents. A health care provider should integrate other factors into a health assessment, including evaluations of diet, physical activity, family history, and other appropriate health screenings.

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Statement of Problem

The purpose of the study is to compare the BMI between Navodaya High School and Central High School students of Belagavi district.

Delimitations

- The class of students was limited to 8th–10th standards.
- The age of the selected students ranged from 13 to 16 years.

- The study was limited to 200 high schoolboys and girls.
- The criterion variables selected were delimited to BMI as height and weight only.
- The study was delimited to Navodaya High School and Central High School students studying during 2018–2019.

Limitations

The limitations of the present study are as follows:

- Socio-economic background of the students is one of the limitations of the study.
- The difference in socio-economic status and Navodaya High School and Central High School students that might be influence on BMI were not considered.
- The study of physical fitness and physical training activities might be impact on result of the study was not taken into account.
- The physiological factors which could also cause stress are not taken into account during the study.

Hypotheses

1. It was hypothesized that would not be a significant difference in BMI between Navodaya School and Central School students.
2. This study may also help the physical education teacher, director, to formulate an appropriated physical training program and organize the health awareness program throughout the year.
3. The result of the study also brings light on the maintains of health concerned fitness and also to focusing on systematic life and discipline.
4. This study may help to become screening device for the health problems of the students.

METHODOLOGY

In this present study, the investigator attempted to compare the body mass index between boys and girls high school students of Belagavi district. For this purpose, a systematic study and approach were made to the selection of the subject's, selection of the variables, and criterion measure reliability of instruments. Administration of testing procedure has been explained.

Selection of Variables

In this study, the following variable was selected with consideration of research material, review of literature, opinion of the field experts, an informant, feasibility, and economy of the study.

Variables: height and weight
Test: Anthropometric

ANALYSIS OF DATA

This chapter contains an analysis of data and status of the Navodaya High School and Central High School students.

The above table clearly defines the underweight, normal weight, overweight, and obese, those students who are studying in high school in Belagavi district. Among 100 samples of Navodaya School students studying in high school in Belagavi district, 64% were under weight, 28% were normal weight, 7% were overweight, and 2% were obese. Similarly, out of 100 sample students, studying in the Central School in Belagavi district, 55% were under weight, 29% were normal weight, 12% were overweight, and were 4% of obese which can be seen.

The table was showing these following factors:

- There were more underweight students in Navodaya School (64) than Central School students (55).
- There were more normal weight students in the central school (29), than Navodaya School students (28).
- Furthermore, there were more overweight students in the central school (12), than Navodaya School students (7).
- And eventually, central school students with obese BMI were less (4) compared to the Navodaya School students (2).

Table 2 clearly indicates the underweight students studying in high school in Belagavi district among 100 Navodaya School students, 64% were underweight. Similarly, out of 100 sample of high school students studying in Central School, 55% were underweight.

Table 4.3 clearly indicates the normal weight students studying in high school in Belagavi district. Among 100 Navodaya School students, 28% were normal weight. Similarly, out of 100 sample of high school students studying in Central School, 29% were normal weight.

Table 4 clearly indicates the overweight students studying in high school in Belagavi district. Among 100 Navodaya School students, 7% were overweight. Similarly, out of 100 samples of high school students studying in Central School, 12% were overweight.

Table 1: The percentage of BMI for Navodaya School and Central School in Belagavi district

Group	Total subjects	BMI							
		Underweight	%	Normal weight	%	Overweight	%	Obese weight	%
Navodaya School	100	64	64	27	27	7	7	2	2
Central School	100	55	55	29	29	12	12	4	4

Table 2: The percentage of BMI for Navodaya School and Central High School students underweight categories

Group	Total number of students	BMI	
		Underweight	Percentage
Navodaya School	100	64	64
Central School	100	55	55

Table 3: The percentage of BMI for Navodaya School and Central High School students normal weight categories

Group	Total number of students	BMI	
		Normal weight	Percentage
Navodaya School	100	28	28
Central School	100	29	29

Table 4: The percentage of BMI for Navodaya School and Central High School students overweight categories

Group	Total number of students	BMI	
		Overweight	Percentage
Navodaya School	100	7	7
Central School	100	12	12

Table 5: The percentage of BMI for Navodaya School and Central High School students obese weight categories

Group	Total number of students	BMI	
		Obese weight	Percentage
Navodaya school	100	2	2
Central school	100	4	4

Table 5 clearly indicates the obese students studying in high school in Belagavi district. Among 100 Navodaya School students, 2% were obese. Similarly, out of 100 samples of high school students studying in Central School, 4% were obese.

Comparisons of Weight, Height, and Body Mass Index of Navodaya School and Central School in Belagavi District

Variables	Correlation
Height	0.39
Weight	0
Body mass index	0

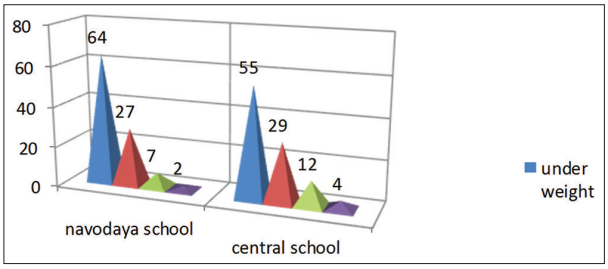

Figure 1: Percentage of underweight, normal weight, overweight, and obese between Navodaya School students and Central School students

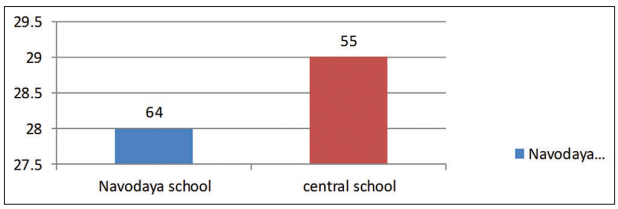

Figure 2: Percentage of underweight obese between Navodaya School students and Central School students

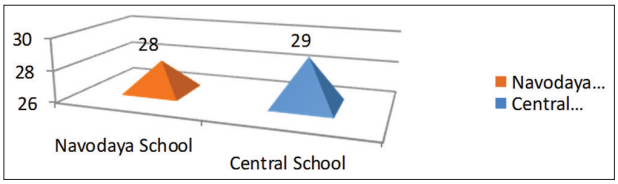

Figure 3: Percentage of normal weight between Navodaya School students and Central School students

Figure 4: Percentage of overweight between Navodaya School students and Central School students

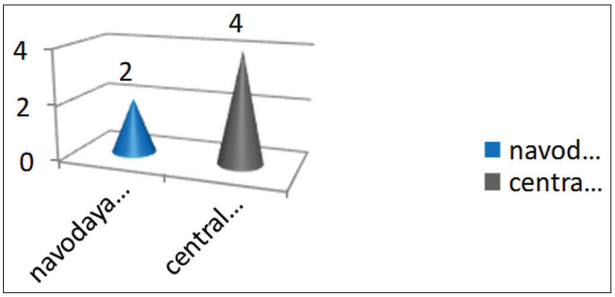

Figure 5: Percentage of obese between Navodaya School students and Central School students

Table: The above table shows that there is no correlation between height weight and body mass index of Navodaya School and Central School.

CONCLUSION

On the basis of the results of the study, it was concluded that the students studying in Navodaya School and Central Schools had differential health status.

- The Navodaya School students are more in the underweight category (64).
- The central school students are more in normal weight (29), overweight (12-7), and obese (4-2) categorizes.
- The central school students are needed information about fitness, physical activates, and nutrition in daily activates.

Recommendations

On the basis of the results of this study, the following recommendations are suggested.

- A similar study is recommended with advanced testing tools, including skinfold calipers, underwater weighing, or bioelectric impedance.
- A study is recommended with students of different age groups and classes.
- A similar study can be carried to compare the BMI for government schools and Morarji schools' students.
- A similar study can be conducted in the university for teaching and non-teaching faculties.
- A similar study can be conducted with the different team players also.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Role of information technology in the field of physical education and sports

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ABSTRACT

Information technology means using of computers and its application for production, storage, processing, distribution, and exchange of information. IT uses computer technology and internet information and communication. Information technology has become an inter-disciplinary partner for sports and physical education. Information technology has an important role in the development of sports and physical education. IT has made sports to reach each and every one all over the world. Information technology has given a new vision to sports and physical education, sports has enriched by practical application of information science. A variety of programs are available, which help in track-grading, conducting health assessment, monitoring research projects, analyzing sports performances, and recording of sports data. In modern time, IT can be used as a source of power to drag sports activity on the desired track. With the contribution of IT sports, the industry has reached its highest peak. Fetching of data gathered by IT helps to a trainer to enhance the sports performance. IT recreates man physically and mentally. This paper highlights the use of modern technology in physical education and sports. The use of technology for teaching and learning has to be summarized in the following aspects: The needs for technology, computer-motion analysis, internet, video analysis/conferencing, etc. It is concluded that technology use tremendously improves teaching and learning of physical education and sport.

INTRODUCTION

Information technology (IT) is the use of computers to store, retrieve, transmit, and manipulate data or information.[1] IT uses computer technology and internet information and communication. The term information technology was coined by the Harvard Business Review, to make a distinction between purpose-built machines designed to perform a limited scope of functions and general-purpose computing machines that could be programmed for various tasks[2].

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Sports are a crucial part of a student's growth and development. They help in the development of mental health and physical fitness of the body. Through participation in sports and games, a student gains various skills, experience, and confidence that are helpful for developing their personality[3]. Sport includes all forms of competitive physical activity or games which, through casual or organized participation, at least in part aim to use, maintain, or improve physical ability[4]. Sports can bring positive results to one's physical health. Sport is also a major source of entertainment for non-participants[4], whereas physical education is a course taught in school that focuses on developing physical fitness and the ability to perform and enjoy day-to-day physical activities with ease. Kids also develop the skills necessary to participate in a wide range of

activities[5]. Sports and physical education are the interrelated disciplinarians; both are running together.

Information technology plays key role in the human being in particularly in field of sports and physical education. It helps to avoid mistake in the organization and administration of various sports and games at the world level. Information technology in sports has established scientific discipline, research activities, improve learning and coaching, bio-mechanical analysis, and field research which have evolved[6]. IT uses computer technology and internet information and communication. Information technology has become an inter-disciplinary partner for sports and physical education. Information technology has an important role in the development of sports and physical education. IT has made sports to reach each and every one all over the world. Information technology has given a new vision to sports and physical education, sports have enriched by practical application of information science. In modern time, IT can be used as a source of power to drag sports activity on the desired track. A variety of programs are available, which help in track-grading, conducting health assessment, monitoring research projects, analyzing sports performances, and recording of sports data.

This paper highlights how modern technology in physical education and sports taken a major role. Paper also highlights the summary of the use of technology for the teaching and learning process in the following aspects: The needs for technology, computer-motion analysis, Internet, video analysis/conferencing, etc.

Informational Technology, Physical Education, and Sports

The information age was started in 1970's. By the creation of the world web, a lot of changes had brought to society. The way of communication of channels and the content of massage was changed by the change in technology. In the early 1960's, the computer technology was establish protocols which become the Internet in 1969. Then, later development of Hypertext Mark-up Language (HTML) in 1989 became the basic for the development of the web in 1993. The web was introduced to the public at large. During the formative days of the web, lot of things were included such as Email, Blog, Facebook, twitter, lot of website, journals, YouTube, and lot of communicating apps[6]. The world of sport is continually changing over the years, and the use of technology is just one of those areas that have made an impact on many sports in the modern day[7].

Modern sports organizations have been complicated in the complex, competitive environment due to environmental, organizational, and technology changes. In fact, in this competitive environment and virtual organizations, sport authorities need to consider a variety of modifications in the organizations, and most of them probably need an overall review and redesign in their organizations structure[8]. One of the most definitive tests for human athleticism is sports, but this does not mean that technology cannot facilitate it. When administering and officiating sports, technology can succeed where humans may not. This guarantees fair judgment of the performance and ensures that athletes win fairly[9].

Use of Informational Technology in Teaching and Learning Process of Physical Education and Sports

The subsystems of information acquisition in teaching innovation of physical education should play a fundamental role in the teaching process. The PE information acquisition mainly refers to teachers of physical education obtained information related to their professional from relevant sources such as journals, books, magazines, television, Internet, and CD, by some means bibliography retrieval, computer search, etc[10]. Information and communications technology describe the variety of technological tools and resources used to produce, distribute, store, and manage information and knowledge. In the modern era, these tools have brought revolutions to training and teaching methodologies of sports and physical education. Rapid development in ICT has introduced innovation and increases the effectiveness of the training program. Using these advanced IT tools, performance level continued to grow and expected level of performance increases to all-time high. IT improves accessibility and expand the digital environment to the field of sports and physical education. It not only let a user earn knowledge but it also helps to connect and communicate with the world. It brings changes and reforms to the pedagogy of physical education and sports. Therefore, in the current study, the researcher intends to discuss about some of the popularly used IT tools in the field of sports and physical education[11].

Computer and Internet

Computer in physical education is an interdisciplinary discipline that has its goal in combining the theoretical as well as practical aspects. Computer-assisted instruction provides students with an alternative to classroom settings and frees the instructor from wrote process that is better handled by the computer. Students can observe and listen to the mechanics of movements in slow motion and learn effectively with the help of computer. Using the internet, one can update the recent technological improvement in sports training, changes in rules, to download the rules from the internet authorities, to do research, and so on. Computers have potential applications in the elementary and secondary physical education curriculum current usage is minimal when compared to other disciplines. Computers are highly useful in making wide tasks and projects, including budgeting, financial statements, calculations, and scheduling in physical education programs. Using computers not only enhances the quality of

documentation but also saves time and operational expenses for sport organizations[12]. Computer-based and web-based applications are primary educational tools that are used to motivate students in today's schools. In the physical education field, educational applications related to the computer and the internet became more prevalent to present visual and interactive learning processes[13]. Sports teams and other organizations use computers to track scores, maintain player records, create virtual playing fields, and model new sports techniques and methods. Sports equipment manufacturers use computers to design and test new equipment[14]. In the world of sports, statistics are important. Everyone taking part, those watching as well as sports agents need to know exactly how well they are or have been performing at any moment in time. Computers are used in sport to collect and keep track of such data. With the help of a computer, a team manager is able to create a spreadsheet database where he will be able to store all the stats for the team[15].

The sports industry also uses computers for the training, nutrition, and health of the athletes. By putting an athletes height, weight and other body measurements into a computer, it is possible to get a program that will help trainers to get a competitive advantage. Over a number of years, the popularity of sports video games has increased[16].

Motion Analysis and Video Analysis

In sport, systems have been developed to provide a high level of task, performance, and physiological data to coaches, teams, and players. The objective is to improve individual and team performance and/or analyze opposition patterns of play to give tactical advantage. Video motion analysis is a technique used to get information about moving objects from video. Examples of this include gait analysis, sport replays, speed and acceleration calculations, and in the case of team or individual sports, task performance analysis. The motion analysis technique usually involves a high-speed camera and a computer that has software allowing frame-by-frame playback of the video. Conventionally, video motion analysis has been used in scientific circles for calculation of speeds of projectiles or in sport for improving the play of athletes. Recently, computer technology has allowed other applications of video motion analysis to surface, including things like teaching fundamental laws of physics to school students, or general educational projects in sport and science[17]. Video analysis allows athletes to take a critical look at their performance to improve skills and prevent injury. Recording a player's performance allows you to catch small details and techniques that are often missed when watching a player live. With the help of a video camera and a professional to analyze the motions, athletes can get help to recognize mistakes, identify their strengths, and often times offer the player an entirely new perspective on his/her performance[18]. Motion analysis is simply the process by which the biomechanics of an athletic action are captured and analyzed. At that time, the process of data capture of say the pitching motion, analyzing the data, and presenting the data was a process requiring an inordinate amount of time from start to finish. Through this process of data capture, models of efficiencies in terms of the translation of energy in athletic actions have been developed. These models are now utilized to determine the efficiency or lack thereof in terms of energy translation through the kinetic chain into bat, ball, racquet, or club[19]. Sports motion analysis coaching training systems are the surest way for athletes to reduce injuries and improve performance[20].

Video Conferencing

It allows two or more people at different locations to see and hear each other at the some time. The communication technology offers new possibilities for sport colleges, libraries, including formal instruction to share strategies for coaching sport skills[21]. Nowadays, video conferencing is frequently used by coaches and players. Using different technologies, coaches can give instructions to players about diet, nutrition, game techniques, etc., the teaching and learning process can do through videoconferencing.

Application of Informational Technology in Different Field of Sports

Most professional sports in the world have long used instant replay and other high-tech aids to help referees make the right call. Gridiron has used video replay systems to check referees' calls for many years. Basketball referees use replay systems to make sure players are shooting within the time allotted by the shot clock. In international cricket, the third umpire has been used, one sitting off the ground with access to TV replays of certain situations (such as disputed catches and boundaries) to advise the central umpires. The umpires out on the field are in communication through wireless technology with the other umpire. The third umpire is also asked to adjudicate on run out decisions, which he makes without consultation with the two central umpires. One sport that has resisted the use of high-tech assistance until very recently is soccer/football. Replays could be used to decide off-side decisions, whether a ball passes over the goal line and clarifies penalty decisions[22]. Some sporting organizations may use a computer to assess sports injuries. In athletics, technology is used to detect false starts. The use of websites for the advertisement of sporting events. Computers can be used to design floors for indoor sports Computer-Aided Design of sailing boats or for Kayaks or for Formula One. Computer-Aided Design can be used for Tennis Racquets. The use of sensors to detect when a ball has passed the goalposts in football Team card Technology is used on season tickets so that season ticket holders can gain quick access to the ground. The use of Digital TV to provide interactive features when watching sport. Online booking for tickets to sporting events[23].

Instant replay is an example of the remarkable technology being used in sports today. With this technology, officials are able to see exactly what happened. Sensor tools are often used to analyze whether a goal is valid or not. It is often used in cases where the naked eye cannot truly tell if a ball went past the goal line. Different sports use varying sensor tools. For example, cricket's Hawk-Eye technology analyzes sound to determine if the ball smashed into the bat before it was caught. Hawk-Eye is also used to determine where the ball would have landed if it had not hit a player's foot. This establishes whether the ball was unfairly blocked from striking the wicket. On the other hand, tennis sensor tools use laser beams to determine whether the tennis ball went out of bounds or not. Sensor technologies help to accurately determine the position of the ball at a given time. Timing systems are using in many races today, the starter pistol is linked to a clock. Once the pistol goes off, the clock immediately starts timing the race. On the other hand, swimming uses a touchpad placed at the finish lanes as well as wearable inertial sensors to determine performance. Many racing events also use laser beams and photographs to determine winners[24].

CONCLUSION

Information technology plays key role in the human being in particularly in field of sports and games. It helps to avoid mistake in the organization and administration of various sports and games at world level. Information technology in Sports has established scientific discipline. Research activities, improve learning and coaching, bio-mechanical analysis, and field research have evolved. The visual physical education lesson is essentially based on the connected learning environment which uses technology that is networked in structure. IT helps to trainer to enhance sports performance. IT recreates man physically and mentally. IT improves accessibility and expand the digital environment to the field of sports and physical education. It not only let a user earn knowledge but it also helps to connect and communicate with the world. Using IT, one can update the recent technological improvement in sports training. Overall information technology has a major role in the field of sports and physical education. IT made sports rich.

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Volume 39 • Issue 1 ISSN 2231-3265

International Virtual Conference on
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Research Article

Effect of SAQ training on vital capacity of schoolchildren

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ABSTRACT

Speed, agility, and quickness training has become a popular way to train athletes. This method has been around for several years. Speed, agility, and quickness training may be used to increase speed or strength, or the ability to exert maximal force during high speed movements. Some benefits of speed, agility, and quickness training include increases in muscular power in all multiplanar movements; brain signal efficiency; kinaesthetic or body spatial awareness; motor skills; and reaction time. Speed, agility, and quickness training can cover the complete spectrum of training intensity, from low to high intensity. SAQ drills can also be used to teach movement, warm-up, or to condition an athlete. No significant preparation is needed to participate at this level of speed, agility, and quickness training. Higher intensity drills require a significant level of preparation. A simple approach to safe participation and increased effectiveness is to start a concurrent strength-training program when starting speed, agility, and quickness training (Pearson & Naylor, 2003). The Purpose of the study was to find out "Effect of SAQ Training on Vital Capacity of School Children". To achieve this purpose 50 school children in the age group ranging from 13 to17 years studying in Shantiniketan High School, Vijayapura, Karnataka State were selected randomly as subjects. The following SAQ training were selected for 8 weeks of training for 50 subjects. Criterion variable Physiological Variable was selected measured by using Vital Capacity. It was used for pre -test and post –test. The result shows that the 8 weeks of SAQ training develops Vital Capacity Performance. SAQ training develops Vital Capacity Performance.

Keywords: SAQ Training, Speed, Agility, Quickness and Vital Capacity

INTRODUCTION

The programming component of speed, agility, and quickness (SAQ) training is similar to reactive training and follows the same concept of integrated performance paradigm. Speed is this text which essentially refers to state ahead speed, agility refers to a short burst of movement that involve a change of direction and quickness refers to the ability to react to a stimulus and change the motion of the body. Professional can effectively make use of SAQ training to add intensity, complexity, and provide a simple and exciting variety to a routine workout.

SAQ training allows a client to enhance his or her ability to accelerate, decelerate, and dynamically stability the entire body during the higher velocity acceleration and deceleration movements in all planes of motion (such as running, cutting, and changing direction), it may further help the nervous system to respond or react more affectively to demands placed on it and enhance muscular recruitment and coordination when performed with correct mechanics (Clerk *et al*., 2008). Polman *et al*. (2009).

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METHODOLOGY

The procedure adopted in the present research work is related to the selection of subjects, selection of variable, selection of test, and statistical technique involved in the study.

Selection of Subjects

The purpose of the study was to find out "Effect of SAQ Training on Vital Capacity of Schoolchildren." To achieve, this purpose 50 Subjects in the age group ranging from 13 to 17 years studying in Shantiniketan High School, Vijayapura, and Karnataka State, were selected randomly as subjects. The following SAQ training was selected for 8 weeks of training for 50 subjects. Criterion variable and physiological variable were selected measured using vital capacity. It was used for pre-test and post-test.

SELECTION OF VARIABLE

Independent Variable

SAQ Training

- Butt Kickers, Bounding, Cat Wheel, V-Drill, Back Pedal, and Wheel Barrow Drill

Dependent Variable

Physiological Variable

- Vital capacity

Selection of Test

The test item and measurement

S. No	Test item and tool	Variable	Criterion measurement
1.	Wet spirometer	Vital capacity	Measuring liters

Statistical Techniques

Standard devotion was used to find out a significant mean difference in pre-test and post-test scores of different groups with respect to each parameter. Standard devotion was used to find out significant mean, "*t*" value difference of two groups with respect to each parameter.

The statistical analysis was carried out with the help of the software package of social science 15.0 versions for SPSS packages.

Analysis and Interpretation of Data

The aim of the research work was to find out the out "Effect of SAQ Training on Vital Capacity of School Children." For the purpose of the research study, 50 subjects in the age group of 13–17 years belonging to the student of Shantiniketan High School, Vijayapura, and Karnataka State, were selected as subjects for the present study. The subjects were divided into two groups. Group I treated as SAQ Training group and Group II considered as control group.

Table 1: The pre-test and post-test for SAQ training experimental group on vital capacity performance

Variable	Test	N	Mean	SD	*t*-value
Vital capacity	Pre-test	25	41.1333	8.31,589	7.780*
	Post-test	25	65.4333	14.61,384	

The level of significance 0.05=Table value=1.96

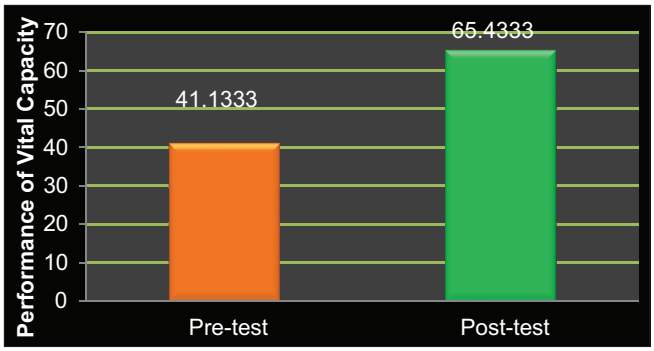

Figure 1: The pre-test and post-test for SAQ training experimental group on vital capacity performance

Pre- and post-test data were gathered on vital capacity and the same as described in the following table.

Table 1 indicates that the "*t*" value is the more than table value that is 1.96; hence, it is significant.

The pre-test mean value is 41.1333 and the post-test mean value 65.4333. The post-test mean value is more than the pre-test mean value. It shows significant improvement in the vital capacity performance of schoolchildren due to the eight weeks SAQ training the same as displayed in Figure 4.1a.

The above Figure 1a clearly indicates that the eight weeks SAQ training performance is drastically improved the vital capacity performance of the subjects.

SUMMARY

The purpose of the study was to investigate the "Effect of SAQ Training on Vital Capacity of School Children." The researcher selected vital capacity for physiological variable. Eight weeks of SAQ training were given to 50 subjects before training the researcher conducted pre-test performance on the physiological variable. The performance of the pre-test was recorded. After the 8 weeks of SAQ training, the post-test performance was recorded on vital capacity performance. The result of the post-test performance indicates significant improvement.

CONCLUSION

Eight weeks of SAQ training have shown significant improvement on vital capacity of subjects.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Nutrition diet for sports

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ABSTRACT

The awareness of nutrition plays an important role in sports performance. Many factors can impact the performance of a sports person during the competition which may be related to different domains. The most commonly encountered nutritional-related problem among sportsperson is their failure to consume a sufficient total of food energy. Food is composed of six basic substances: Carbohydrates, proteins, fats, vitamins, minerals, and water. Each one of these has a specific function in providing nourishment for the body. For the sportsman, it is of critical importance to recognize what each does to his body under the physical, mental, and emotional strains of competition. The duration and the intensity of the exercise involved in a given sports will determine the principal source of energy used in meeting the work demands of that particular sports. The certain nutrition and dietary approaches enhance the sports performance and also nutrition is essential for an athlete's good performance. The athlete's diet should be high in carbohydrates, moderate in proteins, and low in fat.

INTRODUCTION

The awareness of nutrition plays an important role in sports performance. Many factors can impact the performance of a sports person during the competition which may be related to different domains. The most commonly encountered nutritional related problem among sportsperson is their failure to consume a sufficient total of food energy.

We should all aim to eat a healthy, varied diet based on the principles of the eat well guide, which matches our energy needs. This advice still applies when taking part in regular physical activity, such as going to the gym, swimming, running, cycling, or team sports.

Following healthy eating guidelines alone can support an active lifestyle. However, when exercising, your body will use up more energy. Unless you are trying to lose weight, you may find that you need to eat more food to give your body the extra energy it needs.

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Foods for Fuel and Exercise

Carbohydrates

The main role of carbohydrates is to provide energy.

When they are digested, carbohydrates are broken down into glucose to provide readily available energy for the body to use quickly and effectively. Carbohydrates are the most important form of fuel for exercise and sports activities.

Good sources of carbohydrates in the diet include:

- Bread
- Breakfast cereals and porridge oats
- Pasta, noodles
- Rice
- Couscous
- Potatoes (with skins) and other starchy vegetables
- Beans and pulses

Protein

Protein is also important for health and physical activity. The main role of protein in the body is for growth, repair, and maintenance of body cells and tissues, such as muscle.

Found In

- Animal sources – meat, fish, eggs, milk, cheese, and yogurt.
- Plant sources – soy, tofu, quinoa, and mycoprotein, for example, Quorn™.

Do I Need Extra Protein to Build Muscle?

It is a common myth that consuming lots of extra protein gives people bigger muscles. Quite often, people taking part in exercise focus on eating lots of protein, and consequently may not get enough carbohydrate, which is the most important source of energy for exercise. A modest 20 g of high-quality protein, equivalent to approximately half of a medium-sized grilled chicken breast or a small can of tuna, have been shown to be enough for optimum muscle protein synthesis following any exercise or training session. Any more protein than this will not be used for muscle building and just used as energy!

Fat

Fat is an essential nutrient for the body, but it is also a rich source of energy. Consuming too much fat can lead to excess energy intake which can lead to weight gain over time. It is important to follow current healthy eating guidelines, ensuring fat intakes are no more than 35% of total energy intake from food, with saturated fat intakes not exceeding 11% of total energy intake from food. Fats in foods typically contain a mixture of saturated and unsaturated fatty acids, but choosing foods which contain higher amounts of unsaturated fat and less saturated fat are preferable. Most of us eat too much-saturated fat so to cut back on intakes, limit foods such as:

- Pastries, cakes, and puddings
- Chocolate and biscuits
- Some savory snacks
- Cream, coconut cream, and ice-cream
- Hard cheeses including cheddar
- Butter, lard, ghee, suet, palm oil, and coconut oil

Before

- Ideally, your pre-exercise meal should be low in fat and contain a portion of starchy foods, such as porridge, pasta, or potatoes and should be around 2–3 h before exercise. For example, if you have an exercise class at 5 pm, have your pre-exercise meal at around 2 pm.
- However, if you leave eating before exercise any longer or do not eat anything at all, you may lack energy and risk feeling light-headed during exercise.

During

- Consuming some carbohydrates during exercise can enhance performance, but this generally only applies to individuals participating in endurance or high-intensity sports that last over 60 min, as this is when carbohydrate stores may substantially decrease (e.g., marathon/long-distance running, football games, or competitive swimming events).
- It is important to consume plenty of fluids during exercise, especially if you are sweating heavily (also to replace electrolytes lost from sweating) and/or the environmental temperature is high.

After

Food and fluid intake are also important for optimum recovery after exercise.

- After a long run or exercise class, your carbohydrate stores will be lower, so it is important to replenish them, especially if you are doing more exercise later on that day or the following day.
- The post-exercise meal should be based on starchy foods (preferably wholegrain) and include some high quality, lean protein. Consuming this as soon as possible after exercise will be most beneficial for recovery, restoring glycogen levels, and muscle protein.
- If you are unable to have a meal soon after exercise, try to have a small snack that contains carbohydrate and protein, such as a banana and a glass of low-fat milk, within the first 30–60 min following exercise to begin the recovery process, especially if you have exercise within the next 8 h.

Tips to Plan Your Meals and Snacks

Preparation – your pre-exercise meal, whether it is breakfast or lunch, should be around 2–3 h before and include a good amount of starchy foods to ensure you have enough fuel in the tank. A small snack 30–60 min before exercise can help to top up energy levels.

- Recovery – base your post-exercise meal on starchy foods and include some high quality, lean protein to help restore glycogen levels and muscle protein.
- Both meals should also include some fruit and vegetables.
- Good snacks immediately after exercise should contain some protein, such as unsalted nuts or a glass of milk.
- Try to opt for wholegrain carbohydrates and high-quality protein foods, as well as nutrient-rich snacks.

CONCLUSION

The certain nutrition and dietary approaches enhance the sports performance and also nutrition is essential for an

athletes good performance. The athlete's diet should be high in carbohydrates, moderate in proteins, and low in fat.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Organizes on digital teaching, training, and coaching an approach to physical education and sports: Use of information technology in physical education and sport

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ABSTRACT

The emergence and use of technology in this century are a significant development affecting the teaching and learning of physical education and sport. Education is faced with a new dimension dominated by e-learning. For physical educators, this trend is also reflected by the necessity to improve their teaching and methodology. The modern alternative is the use of technology meant to increase accessibility to information and teaching process effectiveness. This paper highlights the use of modern technology in physical education and sports. The use of technology for teaching and learning has to be summarized in the following aspects: The needs for technology, computer-motion analysis, internet, video analysis/conferencing, chatting, and challenges. It is concluded that technology use enormously improves teaching and learning of physical education and sport.

Keywords: Physical Education, Teaching and learning

INTRODUCTION

The rapid development of technology over the past two decades has provided many new and creative ways for educators to present instructional materials effectively. Until recently, those advancements have focused on desktop technology, which limited their use in physical education The National Association for Sport and Physical Education (NASPE) believes that technology can be an effective tool for supplementing instruction when used appropriately. Therefore, the primary purpose of this document, developed by a task force of NASPE's Physical Education Steering Committee, is to provide guidelines for using technology to help students achieve the standards for physical education. Teachers now face a generation of students who have never known life without a computer, video game console, cellular phone, or Internet access and that are changing the scope of education dramatically. Technology tools can provide objective data on activity levels and creative methods for individuals to engage in physical activity. Studies have indicated that active gaming can promote higher levels of energy expenditure compared to seated video games, as well as increasing heart rate and

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oxygen consumption. National School Health Policies and Programs Study indicated that 42% of physical education teachers receive staff-development training on using physical activity monitoring devices; 37% on using technology overall. Furthermore, between 17% and 49% of the teachers studied received additional training for administering fitness tests, assessing student performance, and developing portfolios and individual physical activity plans: Areas in which technology can supplement instruction and help in managing data. Those statistics, in addition to the recent release of updated National Educational Technology Standards for Teachers, underscore the importance of developing guidelines for proper technology use in physical education. Technologies such as projection systems, smart boards, and wireless transmission (Wi-Fi and Bluetooth) allow for the display and transfer of information far beyond the traditional chalkboard. Teachers can enhance physical education instruction using those tools, provided that set-up and/or implementation do not reduce student activity time.

Planning and preparing effectively in advance of lesson presentation is necessary to ensure that these valuable tools become an integrated part of the lesson with minimal transition time and manage physical educators must consider, in which types of physical activity monitoring devices are suitable for students' developmental levels. Using technology to monitor children's heart rate and comparing the data to adult ratios, for example, or having children use pieces of equipment designed for adults can provide invalid information. Teachers should use these tools to enhance instruction only if the data provided are accurate for the grade level to which they are to using technology for technology's sake might not provide relevant instruction experiences for students since technology is not the curriculum but rather a tool or device to suppler when implementing technology, teachers must continue to adhere to the best practice of maximizing participation and success. All students, not only a few, should benefit from technology. If not enough heart rate monitors, pedometers, exert games, and/or computers are available for all students to use them simultaneously, teachers should implement station or circuit formats. Instruct Desktop programs such as Microsoft Excel and Web and CD-ROM software can allow for the collection of data using hand-held computers, with the ability to transfer results to desktop systems quickly. Those technologies can help physical educators determine assessment performance quickly and easily through calculation formulas and allows them to create and customize individualized fitness plans, as well as offering many other uses. Motion-analysis software and digital video make student performance evaluation easier, thereby enhancing teacher, peer, and individual assessment. Many pieces of technology, such as heart rate monitors, pedometers, and active games, have the ability to track performance, allowing students to document and monitor their progress. However, physical educators must consider the reliability and validity of such devices when selecting the technologies to use. Students also should be well-versed in using the devices, to prevent an increase in management time and a reduction in student activity levels. Implementing technology appropriately into physical education can enhance teaching and learning and contribute to providing a quality physical education program. Technology can aid in content presentation and can help students becoming physically educated individuals who have the knowledge, skills, and confidence to enjoy a lifetime of physical activity practical use of technology in the teaching and learning of physical education opines that the use of technology in the learning process of physical education may not be a goal of its own, but it is a tool with which to reach objectives.

The following is the use of technology in learning physical education.

Computer

Computer is an electronic device that has the capacity to store, retrieve, and process both qualitative and quantitative information fast and accurately. Computers-we used to produce documents, lesson plans, and to convert scores management. It also involves video units PC heart rate monitor, remedy heart rate monitor, and educational software. Computer also aids learning experiences when they are used for motion analysis. This involves using computer to examine the way learner moves and then determine ways, in which this movement can be improved in a practical physical education class. This device stresses how human motor abilities can be perfected and controlled. For example, if you ask a softball pitcher how he/she throws a fastball, they may not be able to tell you. Motion analysis visually shows the rudiments and sequence of actions involved in arm, leg movements to enhance the performance of skills. Videotape images are also transferred into computers. Special application software analyzes the images. It measures the exact angle at which the player s holding his or libraries, including formal instruction to share strategies for coaching sport skills. A very attractive multimedia tool determining students' enthusiastic participation in physical education lessons is represented by audio aids. Direct or indirect aids such as drums and piano, respectively. Radio cassette recorder equipped with CD/DVD can be used to reline the movement pace and get students familiarized with some sonorous competitive conditions. The digital camera use in the instructive educative process allows a quick verification of students' placement and posture, being at the same time a very good mean to stress body segment positions when performing sonic motor elements. These are the potentials used to enhance teaching and learning of physical education.

Challenges of Technology are Using Physical Education

Although technology has attractive potentials for improving teaching of physical education, it also has challenges, especially in developing nations of the world. Physical educations are not technology compliant. The reports indicate that many do not still appreciate the use of technology in teaching and learning and complaint. Nowadays, it is uncommon to see physical education computers in the classroom and on sport playground. These could be either ignorance of technology use or affordability of technology devices. Similarly, most educational institution in Nigeria is not providing enough funds for equipping schools with technology devices. Technology devices are becoming more and more mobile and affordable, and this could eventually turn into a reality making the study of human movement in physical education a reality. Other challenges include the availability of regular power supply, staff training and development on technology software's, assessing software's, and packages for teachers. Other challenges include crashing of computers corruption of files.

CONCLUSION

Physical education essentially requires performing physical activity. This is associated with the development of motor skill. Physical education within the school system requires time, facility space, and interactive lesson plans. Technology provides access to information, compresses information, motivate learners, and connect learners to teachers and teacher to their colleagues. There are nowadays many available technological innovations that could be inserted into the physical education lesson. The visual physical education lesson is essentially based on the connected learning environment which uses technology that is networked in structure. Physical education should avail themselves of these technology opportunities to make their lesson more real and dynamic.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Media and journalism in sports

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ABSTRACT

The sports columns in modern newspapers have become extremely popular. There is probably more universal reader interest in the sports pages than in any of the other parts of the modern newspapers. Sports throughout the world have assumed an importance beyond the recreational aspect. As a result, readers are demanding more and more reading matter on sports events. It is heartening to note that of late sports have received a strong impetus in India. Our people are now taking more interest in games, sports, and athletic events than they were doing formerly. Government's interest in sports, once lukewarm, has also heightened to an appreciable degree. The formation of the Sports Council and Sports Authority of India and establishment of the National Institute of Sports are all illustrative of the changed trend. A number of Stats have introduced sports as compulsory subject in schools and some of them have started sports schools and sports hostels, etc. Almost all newspapers of standing in our country, particularly English language newspapers, are devoting at least one full page to sports news. Some of the bigger newspapers are devoting two to three pages regularly. This demonstrates the tremendous pull sports command on the minds of newspaper readers.

Keywords: Journalism, Journalists, Media, Newspapers, Sports

INTRODUCTION

Media is a mosaic of different mediums such as print, television, and internet. Sports and the media enjoy a very symbiotic relationship. Sport is one of the well-published issues in the media and journals. Sports channels have consistently been the second most watched genre after mass entertainment. Sports columns are the most awaited in the newspapers. New technologies are used everywhere in coverage of sports: Sports news is the best possible entertainment, and watching sport online or on TV is the best possible way to witness the actual thing happening.

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Sports journalism is a form of journalism that reports on sports topics and events or sports journalism is a form of writing that reports on sporting topics and competitions. Sports journalism is an essential element of any news media organization. Sports journalism includes organizations devoted entirely to sports reporting – newspapers such as L'Equipe in France, La Gazzetta dello Sport in Italy, Marca in Spain, and the defunct Sporting Life in Britain, American magazines such as Sports Illustrated and the Sporting News, all-sports talk radio stations, and television networks such as Eurosport, ESPN, and The Sports Network (TSN). While the sports department (along with entertainment news) within some newspapers has been mockingly called the toy department, because sports journalists do not concern themselves with the "serious" topics covered by the news desk, sports coverage has grown in importance as sport has grown in wealth, power, and influence.

The media includes any form of promotion of sport, such as:

- TV and radio – Show (or commentate on) matches and competitions. There are also highlights; documentaries and quiz show about sports!
- Cable and satellite TV – These show events on a pay-per-view basis
- Ceefax and Teletext – Have up-to-date information about events in the world of sport
- Internet – All teams and major athletes have their own websites where you can find all kinds of information about the team/athlete/matches
- Newspapers and magazines – Print predictions and results, as well as articles about athletes and clubs
- Books and films – Biographies are big business for ex-sports players.

Technology is really important to the coverage of sport in the media. Not only does it allow all of these forms of media to be possible but it also allows features such as photo finishes, instant replays, and split times

DEFINITION OF SPORTS MEDIA

Sports media refers to various means of communication on sports, such as television, radio, and newspaper which are different types of media. The term can also be used as a collective noun for the press or news reporting agencies.

ROLE OF MEDIA AND JOURNALISM IN SPORTS

Deliver multiple sport events often multiple languages. Media provide us often with live matches. Detailed information journals' provide us with the biography of a player, records, and crucial moment of the game. Spectator Sports Entertainment.

SPORTS AND PRESS

Newspaper was started in the year 1780 in India. In the late 30s of the 19th century, sports became a topic in newspapers. The press is the oldest medium regularly informing people about sports.

SPORTS MAGAZINES

- Sports illustrated – USA (1954)
- Le Auto – France (1900)
- La Gazzetta dello Sport – Italy (1896)
- La velo – France(1891)
- Kicker – Germany (1920)
- Sportstar – India
- Sportstar is a popular sports magazine published in India
- Recently Sportstar shifted from the magazine format to a tabloid one.

SPORTS AND RADIO

In the year 1927, the radio took advantage of reporting live sports over newspaper in India. Results and scores can be diffused instantaneously in a very flexible program. Anywhere accessible, in the car, garden, etc.

TELEVISION

Television programs began in 1959. Television has clearly become the leading medium in context of sports .Transmits not only sound but also live images, the feeling of "being there" close up shots, replays, slow motion, and different angles.

INTERNET

Since the mid-1990s, not only television but also the internet can transmit live pictures of sports events. The internet allows a fast worldwide transfer of data, so it is well suited to the transmission of sports news. Official websites of sports organizers, events, and players.

ROLE OF UNIVERSITIES IN SPORTS MEDIA

Various universities in India offer courses on media and journalism. The course objectives are ….Today career in sports is at its boom and which also brings wonderful career opportunities for sports journalists as well. Degree in journalism prepares students to sports reporting career and also introduces them with the writing of a sports writer and media professionals use. The career opportunities in sports journalism are match reporter, freelance sports journalist, and sports writer.

UNIVERSITIES AND SPORTS JOURNALISM COURSE

- M.Sc. in sports journalism
  - Tamil Nadu Physical Education and Sports University.
- P.G Diploma in sports journalism course
  - Certificate course in sports journalism
  - Alagappa University, Karaikudi.
- Diploma in sports journalism
  - Sri Guru Teg Bahadur Khalsa College, University of Delhi .

ADVANTAGES OF MEDIA OVER JOURNALISM IN SPORTS

- The speed of live coverage and the ability to show the moving highlights.
- As in journal, distribution of message not limited to geographic area.
- Long shelf life. With update.

Positive Effects

The media coverage of sport has good effects:

- Money – Media companies pay for the rights to show a sporting event. Furthermore, sports shown on the TV generate more sponsorship
- Education – People learn the rules of the sport from watching it on TV
- Role models – Seeing good sports people on TV and in newspapers makes them a role model for people to look up to
- Inspiration – Media brings sport to people who may not normally get to experience it otherwise. This can encourage people to get involved
- Coaching aid – Watching professionals on the TV can help you see how a technique should be performed which could help your performance.

DRAWBACKS IN INDIAN SPORTS MEDIA AND JOURNALISM

- Unbalanced sports coverage prevalent in the Indian media (online, television, and print).
- Sport journals neglects non-cricket Indian sports.
- Medias generally ignores Indian sports women.
- There are not enough good sports magazines in Indian languages.

Negative Effects

The media can also have a negative effect on sport:

- Bias – Only the really popular sports get much attention on the TV and in newspapers, etc. This does not help encourage people into the less popular sports
- Lack of Attendance – For matches that are shown on TV, ticket sales often drop
- Overload – There is a lot of sport on TV nowadays, some say too much!
- Attention – Sport stars often complain of too much attention being paid to their private lives
- Demands – The media can put pressure on the organizers of sporting competitions to make the viewing experience better for TV audiences. For example, in a previous Olympics, the marathon was run at a time which suited TV companies, even though it was at the hottest time of day!

CONCLUSIONS

Sport is one of the well-published issues in the Net. Sport issues gain a lot of publicity and discussions in the media. Media intensify and extend the process and effects of commercialization of sport. They bring us information, interpret it for us, and entertain us. Sport is not shaped by the media in general or by television in particular requires interaction of athletes, agents, sport team owners, event sponsors, media representatives, advertisers, and a collection of spectators with varied interests. Existence of sport does not depend on media or journalism but its success as a form of commercial entertainment. Sport requires the media to provide both coverage and news.

All in all, sports journalism and media seem to be more accepted and integrated today than before.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

General and specific physical fitness in avoiding injuries

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"Those who think they have not time for bodily exercise will sooner or later have to find time for illness" ~Edward Stanley.

General fitness is a state of health and well-being.

Specific fitness is a task-oriented definition based on the ability to perform specific aspects of sports or occupations.

Physical fitness is a general state of health and well-being or specifically the ability to perform aspects of sports or occupations. Physical fitness is generally achieved through correct nutrition, exercise, hygiene, and rest. It is a set of attributes or characteristics that people have or achieve that relates to the ability to perform physical activity.

DEFINITION

Physical fitness is considered a measure of the body's ability to function efficiently and effectively in work and leisure activities, to be healthy, to resist hypokinetic diseases, and to meet emergency situations.

COMPONENTS OF PHYSICAL FITNESS

Health-Related Components

Those factors are related to how well the systems of your body work:

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1. Cardiovascular fitness: The ability of the circulatory system (heart and blood vessels) to supply oxygen to working muscles during exercise.
2. Body composition: The relative percentage of body fat compared to lean body mass (muscle, bone, water, etc.).
3. Flexibility: The range of movement possible at various joints.
4. Muscular strength: The quality of force that can be produced by a single contraction of a muscle.
5. Muscular endurance: The ability of a group to continue muscle movement over a length of time.

Skill-Related Components

Those aspects of fitness which form the basis for successful sport or activity participation are as follows:

1. Speed: The ability to move quickly from one point to another in a straight line.
2. Agility: The ability of the body to change direction quickly.
3. Balance: The ability to maintain an upright posture while still or moving.
4. Coordination: Integration with hand and/or foot movements with the input of the senses.
5. Reaction time: Amount of time it takes to get moving.
6. Power: The ability to do strength work at an explosive pace.

BENEFITS OF PHYSICAL FITNESS

- Your heart becomes stronger and works more efficiently.
- You can lose weight if you combine exercise and healthy eating.

- You feel better about yourself.
- You are less likely to be anxious or depressed and feel more positive.
- You may be able to bring down a slightly raise blood pressure to normal.
- You are likely to drink less alcohol and cut down or stop smoking.
- You are less likely to suffer from low back pain.
- You will feel positive benefits if you have a specific health problem such as lung disease, diabetes, arthritis, or renal disease or have had an organ transplantation.

Sports Fitness Training for Peak Performance

- Sports fitness training is designed to prepare athletes for the physical demands of competition. Physical fitness for one sport is not exactly the same as for another. What exactly does it mean when coaches and sport scientists talk about training programs that "match the demands of sports"?
- They mean that training activities must closely simulate the specific nature of each sport. For example, training for is very different from training for marathon running because what it takes to be great for each is very different. Intermittent bursts of speed for basketball running tap different energy sources.
- Programs can be built to target basic fitness components of strength, power, endurance, agility, and flexibility. Motor (movement) also comes into play to develop coordination or skill another performance-related component of fitness.
- Fitness programs are adjusted for intensity (how hard), duration (how long), recovery (how much rest), and other training variables.
- An effective strength and conditioning program is a carefully designed regimen of activities progressively intensified to prepare athletes for peak performance. Strength-targeted training improves joint stability, increases muscle size, and contributes to power development.
- The overall positive effects of cardio-based sports fitness training include (a) more efficient use of oxygen, (c) increased muscle size to exert greater force,(d) improved blood flow, (e) greater lung capacity, (f) increased size of the heart to pump more blood in one stroke, (g) better coordination, and (h) stronger bones, ligaments, and tendons to reduce injuries.

HOW DO YOU TEST YOUR PHYSICAL FITNESS?

Fitness tests help you check how fit you are, and see how your fitness improves with exercise.

- Cardiovascular endurance: The cycle ergometer test, the Cooper test, PACER the multistage fitness test, etc.
- Muscular endurance: Push-ups, curl-ups, pull-ups, flex-arm hang.
- Muscular strength: Vertical jumps, standing broad jumps, grip strength.
- Flexibility: Deep-flex, sit and reach, shoulders stretch, trunk lift.
- Body composition: Body mass index.
- Speed: 6×9, 40 m.

Sedentary Lifestyle

- A type of lifestyle with no or irregular physical activity (a couch potato).
- Sitting, reading, watching television, and computer use for much of the day with little or no vigorous physical exercise.
- A sedentary lifestyle and lack of physical activity can contribute to or be a risk factor for cardiovascular disease, mortality, depression, obesity, etc.
- National guidelines recommend that young people spend no more than 2 h each day using electronic media for recreation.
- Why not make a deal to keep your body fit and healthy? Even exchanging 30 min of TV viewing for some physical activity will deliver real health benefits.

Alternative Physical Activity

- Recreational sports: Hockey, paddle, jumping ropes.
- Body-mind activities: Yoga, relaxation.
- Weight lifting, body pump.
- Fitness walking, jogging, hiking.
- Traditional games.
- Alternative games and sports: Floor Ball, Indiaca, Frisbee, KingBall, Ultimate, Flag Football….
- Music activities: Aerobic, dance.
- Cycling, swimming, skating, sailing, kayaking .
- Sports school, gym, outdoor, clubs…

General and Physical Benefits of Exercise

- Regular moderate physical activity is good for your body – physically and mentally!
- Physical activity can help alleviate and prevent common conditions and diseases.
- 30% of breast cancers could be prevented by lifestyle changes, including eating a plant-based diet and taking regular exercise.
- Aim for at least 30 min of moderate intensity, which includes any activity in which you can still hold a conversation, such as brisk walking.
- Walking 10,000 steps a day burns 1260 kilojoules (300 calories).

There is no shortage of evidence that regular physical activity is good for us. Flick through the pages of any health report and there's sure to be a section outlining the benefits of exercise on our physical well-being. And many of us have experienced ourselves just how satisfying it can be to climb into bed, pleasantly tired after a day of strenuous activity.

According to government studies, physical activity reduces the risk of death or ill health from many diseases and conditions, especially:

1. Heart diseases and strokes
2. Some cancers
3. Type 2 diabetes
4. Osteoarthritis and osteoporosis
5. Falls in older people
6. Obesity
7. Depression and anxiety
8. High blood pressure.

There is a whole range of other health benefits, including help with digestion and poor posture. Perhaps more significantly, exercise can promote regular sleep and a healthy body weight, avoiding the poor health effects associated with insomnia and obesity.

Regular Exercise Achieves Health Benefits By

- Increasing "stamina" or cardiorespiratory endurance – making your heart and lungs deliver oxygen-rich blood to your muscle cells. Your heart rate will not rise as high with equivalent exertion and will return to normal more quickly following exercise. You will also have increased your stamina for the everyday activities of life, not just for exercise.
- Increased muscular endurance – your muscles will be able to work longer and harder before they lose strength or feel exhausted ("fatigued"). This effect can also see you feeling more able to cope with everyday physical tasks.
- Lowering blood pressure.
- Increasing good cholesterol levels.
- Improving bone health.
- Providing social benefits – whether you walk with a friend, play tennis with workmates, or form a social cycling team.
- Weight control – low intensities of aerobic exercise have the potential use up the body's fat stores. Interestingly, short bursts of high intensity muscular activity are more likely to use the body's stores of glucose rather than its stores of fat as a source of energy for the exercise. Regular sessions of 30–60 min of low to moderate intensity aerobic exercise (at around 55–70% of maximum heart rate) can be an important part of a weight loss or weight management program.

AVOIDING SPORTS INJURIES: WHAT EVERYBODY SHOULD KNOW

There have been countless studies demonstrating the physical, emotional, and psychological benefits of sports, which are an important part of a healthy lifestyle at any age – whether you are involved in youth football, basketball, drills, you have witnessed the positive impact sports can make in anyone's life. However, to reap the full benefits, athletes, parents, coaches, and other fitness professionals must work to minimize the risk of injury inherent to athletics.

What's the Risk?

In general, the risk of injury is greater during a competitive athletic event than a practice or scrimmage. Half of all injuries are related to the legs, such as ankle sprains, anterior cruciate ligament (ACL) injuries, and nonspecific knee pain. Comparatively, 20% of injuries are related to the arms and upper extremities, the most common of which are shoulder injuries. Head-and-neck injuries account for another 10%, most commonly concussion. Spinal cord injuries make up the smallest percentage. Other injuries include heat illness and skin infections. Finally, certain medical conditions can put an athlete at greater risk for injury, such as a heart condition.

Good Ideas for Injury Prevention

- Participate in a conditioning program to build muscle strength and endurance gradually, overtime
- Be sure to follow an appropriate warm-up and cool-down regimen, including flexibility exercises
- Keep a first aid kit handy, and learn how to treat minor cuts, bruises, and strains
- Have an emergency plan in place for major injuries while playing and practicing for any sport. Injury can be minimized with immediate medical help
- Dress in the most appropriate clothing and safety gear to prevent common injuries. Make sure uniforms and protective equipment fits properly, and wear all protective gear correctly at all times
- Stay hydrated
- Eat a well-balanced diet
- Use proper technique and follow the rules of your sport, as well as the rules of the facility in which you are practicing/playing
- Encourage immediate reporting of injuries
- Check your sporting equipment prior to participation for damage and proper function, and clear away any debris from your playing area.

SPORT-SPECIFIC RULES TO LIVE BY

Baseball/Softball

Baseball and softball injuries can be a result of both acute and traumatic events, as well as chronic overuse injuries. Soft-tissue injuries can include bruises, scrapes, and cuts. Shoulder and elbow injuries are particularly common, especially for young pitchers, due to repeated stress from throwing. These injuries include those to the muscle of the rotator cuff, biceps tendon, ligaments of the elbow, bone underlying the joints, and the ligaments of the shoulder socket. Usually, rest, medication, and a rehabilitation program will enable return to play.

Helpful Tips on Injury Prevention for Softball/ Baseball

1. Use proper technique for batting and pitching. Make sure you and your fellow teammates are not pitching or hitting excessively, as this can lead to overuse injury
2. Implement breakaway bases instead of the stationary type. This drastically reduces the risk of injury when players are sliding into the bases.

Gymnastics

Fractures of the wrist, fingers, and toes are the most common gymnastics injury followed by sprains of the ankle and knee. Nearly 40% of sudden-onset injuries happen in the floor event. Most injuries occur with moves that are considered basic or moderately difficult by well-established gymnasts. There is also an increased chance of injury when a gymnast works on a single apparatus for an extended period of time. One major source of injury is loss of concentration; a key to injury prevention may be the awareness of when to end the practice session.

Body parts most injured by gymnasts vary by gender and include the ankle, knee, wrist, elbow, lower back, and shoulder. Ankle sprains are a particular concern. Overuse and nonspecific pain conditions, especially the wrist and lower back, occur frequently among advanced-level female gymnasts. Factors associated with an increased injury risk among female gymnasts include greater body size and body fat, periods of rapid growth, and increased life stress. Furthermore, eating disorders, such as anorexia nervosa or bulimia, are among the serious problems faced by female gymnasts.

Helpful Tips for Preventing Injury in Gymnastics

1. Warm up and stretch before gymnastics practice and competition
2. Never attempt new or advanced skills without an experienced coach to spot you
3. Know the correct way to use mats, belts, pits, and trampolines
4. Eat a well-balanced diet
5. Avoid rapid increases in skill difficulty and training load
6. Encourage immediate reporting of injuries.

Basketball

Basketball is the sport that most frequently causes sports-related emergency department visits for youth and adolescents. Females are more likely to be injured than males, especially with ankle and knee injuries, and their injuries are more likely to be severe. In basketball, acute injuries such as wrist, finger, and ankle strains or sprains are the most common types of injuries. Chronic overuse injuries are less common; however, tendonitis of the knee, Achilles tendon, or shoulder frequently occur.

Helpful ideas on injury prevention for basketball:

1. Wear mouth guards, as they reduce facial and dental injuries
2. Incorporate neuromuscular training (training designed to promote the mind-muscle connection) into your fitness routine, as this can reduce the risk of knee injury: Ask your coach, trainer, or fitness professional about different ways to practice this
3. Wear supportive shoes with skid-resistant soles specifically designed for basketball.

Football

Common football injuries include concussion, ankle sprains and strains, Achilles tendonitis, ACL and PCL injuries, and torn cartilage in the knee joint. Sprain is the leading injury type, while the ankle was the most affected anatomical site. Factors such as weather, previous injury, experience, position, and activity tend to influence injury occurrence. The use of joint supports and proprioceptive/neuromuscular coordination training, which teaches the athlete to be more aware of his/her body in space and to avoid positions which might increase the risk of injury, is especially important in athletes with prior injuries and has shown some benefits. Finally, improvement of jumping and landing techniques seems to decrease the incidence of ACL injuries, especially in female athletes.

Helpful Tips on Injury Prevention for Football

1. Use protective equipment
2. Use ankle support, especially if previously injured
3. Employ proprioceptive/coordination training
4. Learn proper jumping and landing techniques.

CONCLUSION

Regular physical activity is one of the most important things you can do for your health. Finally, it can help:

- Control your weight
- Lower your risk of heart disease
- Lower your risk for type 2 diabetes and metabolic syndrome
- Lower your risk of some cancers
- Strengthen your bones and muscles
- Improve your mental health and mood
- Improve your ability to do daily activities and prevent falls, if you are an older adult
- Increase your chances of living longer.

Fitting regular exercise into your daily schedule may seem difficult at first. But even 10 min at a time is fine. The key is to find the right exercise for you. It should be fun and should match your abilities.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Comparative study of physical fitness between Kho-Kho and Kabaddi players

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PHYSICAL FITNESS

Physical fitness involves performance of the heart, lungs, and the muscles of the body.

Fitness is the condition of the body that helps us look, feel, and do our best.

Fitness is the ability to perform daily tasks vigorously and alertly and it is the ability to endure, to bear up, to with-stand stress to carry out daily activities.

According to Bucher

"It is the ability of an individual to lead a full and balanced life. It involves physical, mental, emotional, social and spiritual factors, and a capacity for their wholesome expression."

It enables people to perform up to their potential.

For one to be considered physically fit, the heart, lungs, and muscles have to perform at a certain level for the individual to continue feeling capable of performing an activity.

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STATEMENT OF THE PROBLEM

Comparative study of physical fitness between Kho-Kho and Kabaddi players.

De – Limitation

The study was de-limited to 100 players, 50 Kho-Kho players and 50 Kabaddi players those who are represented in any of the recognized competition in School Sports and Games.

The study is restricted to the players not beyond 12 and 16 years of age.

The assessment of physical fitness is delimited to the AAHPER Youth Fitness test and its norms.

Limitation

The study is limited to children who have participated at least twice in the Inter-School competitions like Taluk/District/ Division/State/National.

This study is purely limited to the subjects of the Tumkur city High-school Boys studying in different schools and participated in competitive games and sports, respectively.

Hypothesis

It was hypothesized that the Physical Fitness of Kho-Kho players is higher than that of Kabaddi players.

SIGNIFICANCE OF THE STUDY

The study brings the light on the parents to make their children physically active and its importance in the present day life.

COMPONENTS OF PHYSICAL FITNESS

Speed

It is the capacity of the individual to perform successive movements of the same pattern at a fast rate.

For this 50 Yard Dash is taken as a component to measure time taken for performance of speed in seconds.

Strength

It is the capacity of the muscle or group of muscles to exert forces with an ability to do higher motor performance.

For this Pull-Up is the component to measure the strength of an individual in numbers.

Endurance

It is the result of physiological capacity of the individual to strain movement over a period of time.

To measure the Endurance Sit-Up is the component performed by an individual in numbers.

Flexibility

It is the ability of each individual to move the body and its parts through a wide range of motion as possible without undue strain to the articulations and muscle attachments.

The distance covered in Ankle Flexion is taken as the tool to measure this flexibility of an individual in centimeters.

Agility

The physical ability which enables an individual to rapidly change body position and direction in a precise manner.

Shuttle run is the activity to check the agility of the individual in seconds.

Power

It is the product of force and velocity, the ability to apply force at a rapid rate.

Standing Broad-jump is considered for studying this component of an individual in meters.

METHODOLOGY

To check the speed, the individual had to run 50 yard dash and the time taken is recorded up-to $1/100^{th}$ of the second.

To check the strength, pull-up is introduced and total number of pull-ups in one stretch is considered as the performance of an individual.

To check the endurance, sit-up is conducted and an athlete in a single stretch how many number of Sit-Ups performed is taken in numbers.

To check the flexibility, ankle flexion test is taken such that an individual standing near the wall and touching both the foot to wall, with both heels on ground and athlete is instructed to move both foots away from the wall up to such a distance when athlete wanted to lift his heel from the ground, this distance from wall to toe of the athlete's leg is the flexibility of the individual which is measured in centimeters.

To check the agility, shuttle run is conducted by keeping three stations at an interval of 6 m each, when an individual starts his activity from starting, the stop watch is started and when he finishes, the stop watch is closed. The time taken to perform this activity is taken up to $1/100^{th}$ of the seconds.

To check the power (explosive power), standing broad jump is done. From the line drawn near the broad jump pit, an athlete will stand behind the line and jump into the pit with both legs. The distance covered from starting line to nearer jumped leg is taken as the measurement in meters.

After getting the results, the Statistical Data such as Mean, Median, Mode, Standard Deviation, Co-efficient of Variation, and Correlation are conducted.

Physical components	Section	Mean	Median	Mode	Standard deviation	Coefficient of variation	Correlation
Shuttle–run	Kho-Kho boys	16.62	16.65	16.71	0.38	2.29	0.9870
	Kabaddi boys	17.18	17.20	17.24	0.39	2.27	0.9990
Standing broad jump	Kho-Kho boys	1.69	1.69	1.69	0.089	5.27	0.9992
	Kabaddi boys	1.51	1.52	1.54	0.075	4.97	0.9995
50 Yard dash	Kho-Kho boys	6.40	6.41	6.43	0.22	3.44	0.9995
	Kabaddi boys	7.36	7.44	7.60	0.44	5.98	0.9977
Pull-ups	Kho-Kho boys	9.02	9.60	10.76	1.17	12.97	0.9900
	Kabaddi boys	6.94	7.42	8.38	1.33	19.16	0.9858
Sit-ups	Kho-Kho boys	17.10	17.54	18.42	2.26	13.22	0.9540
	Kabaddi boys	9.18	9.73	10.83	1.22	13.29	0.9880
Ankle flexion	Kho-Kho boys	77.36	78.36	80.36	3.83	4.95	0.8580
	Kabaddi boys	59.86	60.25	61.03	4.89	8.17	0.8000

RESULTS AND CONCLUSION

When Statistical data are conducted and results analyzed. The Physical Fitness of Kho-Kho Boys is higher in all components compared to the Physical Fitness of Kabaddi boys.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Level of anxiety, motivation of kho-kho players at inter university level

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ABSTRACT

The purpose of this study was to study physical fitness, mental health, and teaching ability of teacher trainer. The participants were obtained from two of B.Ed. College Teacher Trainer (n = 300) who were the subjects of this study. The subjects were selected on the basis of stratified random sampling technique. The names of all the B.Ed. Colleges in Pune city were listed region-wise as strata. Statistical Tools (Mean), (Standard Deviation) (Two tailed test). **Conclusion:** Health-related physical fitness is significantly associated with one's mental health. There exists a positive relationship between teaching ability and mental health. Health-related physical fitness has significant relationship with teaching ability.

Keywords: Mental health and teaching ability, Physical fitness, Teacher Trainer

INTRODUCTION

Background of the Study

Due to scientific invention and explosion of knowledge in every sphere of human society, the life has become more sedentary and is habituated to be in the state of more comfort. The intensity of struggling for basic human needs (cloth, food, and Shelter) has comparatively declined than our last generations. Along with the comfortable life and sedentary lifestyles, the grace in physical movement and tenacity for more physical activity has become questionable (Casperson *et al.*, 1986; Stephens *et al.*, 1985). As per the Darwin's principle of use, that is, "*less use less strengthens of the organ and systems of human being*," the human today has become a depot of various psychosomatic ailments associated with declined state of physical fitness and immunity too. This, in fact, results into a low-fit society not only representing a poor state of physical health by exhibiting poor muscular as well as organic development but also indicating a declined state of mental health.

Although the factors, namely, stress, social support, life events, education, and childhood traumas are the positive as well as negative indicators of mental health, its status is relatively poor among youth and it, in fact, improves with age. However, there is no independent relationship between mental health and income adequacy. Similarly one's ability of adjustment is negatively associated with the level of insecurity (Kavitha, 1993); it has positive association with total self-esteems, physical health, daily functioning, social interaction, and overall quality of life. Stephens *et al.*, (1999), have revealed that along with some potential demographic and psychosocial

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determinants one's sound physical condition is positively associated with mental health.

As the physical fitness is positively associated with one's mental health and well-being (Morgan and Goldstone, 1987), recent trend of extremely comfortable as well as sedentary lifestyle is bound to affect the coordinated functioning of body and mind. As a result, a person loses his psycho-physical homeostasis and persistent state of such an imbalance resulting to decline one's physical and mental health.

Many investigators (Stephens *et al*.,1985; Stephens and Craig, 1990) support that level of leisure physical activity is positively associated with general well-being and mood and negatively associated with depression and anxiety. Such result, in turn, reveals the existence of positive relationship between exercise and mental health.

United States of America, therefore, chalked out a program of "National Health Awareness 2000" and recommended the profession of physical education to take over the challenge. Various investigators (American College of Sports Medicine, 1988; Malina, 1987; Sallis and McKenzie, 1991) also suggest improving the health and fitness of the low-fit individuals in our society so as to facilitate one's level of mental health.

However, considering the complex and complicated nature of Indian socio-cultural setting and as the lifestyle of various socio-culture groups of Indian society is different, the level of "*socio-economic and psychosocial factors*" in relation to physical fitness and mental health has become an interesting area of research.

Literature reveals that lot of works has been done on different dimensions of mental health; however, no report regarding the association of "*health-related physical fitness and mental health*" is available so far. Moreover, no attempt has been made to predict one's level of mental health based on the performance on physical fitness. The topic undertaken for investigation in this piece of research, therefore, seems to be justified.

Table 1: Statistical analysis of physical fitness, mental health, and teaching ability

Variable	M	Mdn.	S. D.
S.UPS	25.29	25.00	9.70
P.UPS	25.42	23.00	12.80
CVE	1765.99	1684.50	516.85
FLX	39.43	40.00	11.26
BMI	20.04	19.83	3.05
AGE	22.66	24.00	2.41
MH	22.82	23.00	4.46
TA	75.25	78.44	7.7

Table 2: Corelation of variable physical fitness, mental health, and teaching ability

Variable	Mental health	Teaching ability
Height	−0.133**	
Weight		0.168**
BMI		0.170**
CVE	−0.115*	−0.122**
Mental health	0.005	

n = 300. *Correlation is significant at the 0.05 level (two-tailed).
**Correlation is significant at the 0.01 level (two-tailed)

Statistical Techniques

Mean, standard deviation two-tailed test, and ANOVA.

RESEARCH METHODOLOGY

Three hundred (n = 300) B.Ed. college, age ranged from 22 to 35 years, were the subjects of this study. The subjects were selected on the basis of stratified random sampling technique. The names of all the B.Ed. Colleges in Pune city were listed region-wise as strata and then ten colleges were selected randomly. College by applying fisher's random sampling technique without considering caste, creed, and color.

Tools

Since all the subjects, participated in this study, were well-versed with Marathi language, a standard "*Mental Health Scale*" (Marathi version) as developed by Agashe (1988) has been administered to measure the status of subjects' mental health. Although this questionnaire is reliable and valid for the subjects of this study, the researcher instantly determined its reliability ($r = 0.76$, $P < 0.01$) which is statistically significant.

Findings

Results on Relationship between Variables

1. Negative correlation between height and mental health was positive and statistically high ($r = -0.133$) ($P > 0.01$)
2. There exists a highly significant and negative correlation between *weight* and teaching ability coefficient ($r = -0.168$) ($P > 0.05$)
3. **C**orrelation between BMI and teaching ability was positive and statistically significant coefficient ($r = 0.170$) ($P > 0.01$)
4. Negative correlation between cardiovascular *endurance* and *mental health* was evidently seen coefficient ($r = -0.115$) ($P > 0.05$)
5. Positive as well as not significant correlation between teaching ability and *mental health* was evidently seen coefficient ($r = -0.122$) ($P > 0.05$).

CONCLUSION

Health-related physical fitness is significantly associated with one's mental health. There exists a positive relationship

between teaching ability and mental health. Health-related physical fitness has significant relationship with teaching ability.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Changes and challenges-integrating information and communication technology skills in classroom

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ABSTRACT

A number of studies have argued that the use of new technologies in education is essential in the information age. The integration of information and communication technology (ICT) in teaching and learning provides more opportunities for teachers and students to work better in an information age. The use of educational technology is significantly altering access to higher education. New technologies are lessening geographical barriers to education. Individuals and institutions with access to the internet have an enormous volume of educational materials at their disposal, regardless of their physical location. When two technologies are converging, together they will generate some great opportunities and challenges. The paper discusses about the utility of ICT Skills in Teaching and learning, various issues of the integrations of ICT Skills in Education, analyzing the emerging changes, and challenges in the field of ICT which critically looks at application of ICT tools in classrooms and more about the practical issues of ICT skills implementation and a better understanding about the changing ICT practices across the globe.

Keywords: Classroom, Education, Information and communication technology, Information, Learning, Teacher

INTRODUCTION

Information and communication technology (ICT) has become one of the basic building blocks of modern society. Many countries have now begun understanding the importance of ICT and mastering the basic skills and concepts of it as part of the core of education. The use of ICT skills in education makes teaching-learning process effective and interesting. The ICT is an umbrella term that includes any communication device or application, encompassing: Radio, television, cellular phones, computer, and network hardware and software, satellite systems and so on, ICT can be considered as a subfield of educational technology. Education encompasses teaching and learning specific skills, and also something less tangible but more profound the imparting of knowledge, positive judgment, and well developed wisdom. Education has as one of its fundamental aspects the imparting of culture from generation to generation. Education means "to draw out" facilitating realization of self-potential and latent talents of an individual. It is an application of pedagogy, a body of theoretical and applied research relating to teaching and learning and draws on many disciplines such as psychology, philosophy, computer science, linguistics, neuroscience, sociology, and anthropology. In view of ICT, education can be classified in three main categories: E- Learning, blended learning, and distance learning.

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INTEGRATING ICT SKILLS IN CLASSROOM

Attempts to enhance and reform education through ICTs require clear and specific objectives, guidelines and time-bound targets, the mobilization of required resources, and the political commitment at all levels to see the initiative stage. Some essential elements of planning for ICT are listed below.

A rigorous analysis of the present state of the educational system. ICT-based interventions must take into account current institutional practices and arrangements. Specifically, drivers and barriers to ICT use need to be identified, including those related to curriculum and pedagogy, infrastructure, capacity-building, language and content, and financing.

- The specification of educational goals at different education and training levels as well as the different modalities of use of ICTs that can best is employed in pursuit of these goals. This requires of the policy-maker an understanding of the potentials of different ICTs when applied in different contexts for different purposes, and an awareness of priority education needs and financial and human resource capacity and constraints within the country or locality, as well as best practices around the world and how these practices can be adapted for specific country requirements
- The identification of stakeholders and the harmonizing of efforts across different interest groups
- The piloting of the chosen ICT-based model. Even the best designed models or those that have already been proven to work in other contexts need to be tested on a small scale. Such pilots are essential to identify, and correct, potential glitches in instructional design, effectiveness, and the like
- The specification of existing sources of financing and the development of strategies for generating financial resources to support ICT use over the long term.

CHALLENGES WITH RESPECT TO TEACHER PREPARATION

Various competencies must be developed throughout the educational system for ICT integration to be successful.

Teachers

Teacher professional development should have five focus areas, namely:

- Skills with particular applications
- Integration into existing curricula
- Curricular changes related to the use of IT (including changes in instructional design)
- Changes in teacher role; and
- Underpinning educational theories.

Ideally, these should be addressed in pre-service teacher training and built on and enhanced in- service. In some countries, such as Singapore, Malaysia, and the United Kingdom, teaching accreditation requirements include training in ICT use.

WILL ICTS REPLACE THE TEACHER?

In fact, with the introduction of ICTs in the classroom, the teacher's role in the learning process becomes even more critical. What can and should change is the kind of role that the teacher plays. The role of students, in turn, also expands. Moreover, since ICTs can open up the classroom to the outside world, the community can also play a new role in the classroom. As learning shifts from the "teacher-centered model" to a "learner-centered model," the teacher becomes less the sole voice of authority and more the facilitator, mentor and coach-from "sage on stage" to "guide on the side."

The teacher's primary task becomes to teach the students how to ask questions and pose problems, formulate hypotheses, locate information and then critically assess the information found in relation to the problems posed. Moreover, since ICT-enhanced learning is a new experience even for the teachers, the teachers become co-learners and discover new things along with their students.

Both formal and informal roles as teachers of their peers and younger students, sometimes even of their own teachers. Teachers and students from different schools, subject-matter experts, parents, community and business leaders, politicians, and other interested parties also become involved in the learning process – as resource persons, critics, and mentors. They also comprise a public, and hopefully critical, audience for students' work published on the Web or through other media.

Education administrators play a key role in ICT integration in education. Many teacher-or student-initiated ICT projects have been undermined by lack of support from above. For ICT integration programs to be effective and sustainable, administrators themselves must be competent in the use of the technology, and they must have a broad understanding of the technical, curricular, administrative, financial, and social dimensions of ICT use in education.

Technical support specialists are essential to the continued viability of ICT use in a given school. Integrating ICT in education is not an easy task, as it requires a wide range of support including higher management, and teachers. Therefore, it is necessary to properly convince them for their support, and for this task a leader is required. Leadership is necessary before, during and after project implementation. Before the project is initiated, leadership is needed to explain the model, the concept and create awareness; during the project, leadership

is needed to manage change and support the project; and after the project, it is needed to pledge the required adaptability and flexibility of the initiative.

E-learning has rendered convenience of online learning to thousands of learners who can not avail the benefits of higher education due to several constraints, such as, time, cost, geographical location, and age. ICT has enhanced distance learning. The teaching community is able to reach remote areas and learners are able to access qualitative learning environment from anywhere and at anytime.

CHALLENGES IN INTEGRATING ICTS IN EDUCATION

Infrastructure-related Challenges

A country's educational technology infrastructure sits on top of the national telecommunications and information infrastructure. Before any ICT-based program is launched, policy-makers, and planners must carefully consider the following:

- In the first place, are appropriate rooms or buildings available to house the technology? In countries where there are many old school buildings, extensive retrofitting to ensure proper electrical wiring, heating/cooling and ventilation, and safety and security would be needed
- Another basic requirement is the availability of electricity and telephony
- Policymakers should also look at the ubiquity of different types of ICT in the country in general, and in the educational system in particular.

In view of integrating ICTs in education have following key challenges:

Language and Content

English is the dominant language of the internet. An estimated 80% of online content is in English. A large proportion of the educational software produced in the world market is in English. For developing countries in the Asia-Pacific where English language proficiency is not high, especially outside metropolitan areas, this poses a serious barrier in maximizing the educational benefits of the World Wide Web. Even in countries such as the Philippines, Malaysia, Singapore, and India where English is the second language; it is desirable that teaching and learning materials, preferably be developed in the local languages.

Teachers with ICT Skills

Lack of teachers equipped with ICT skills is another problem for the use of ICT in education. The institutes where ICT is going to be integrated in education, first of all their teachers must be well trained in ICT tools in education. Before going to teach students, teachers must know about how and when to use ICT tools to achieve particular purposes.

Change Management

Managing the change is one of the biggest problems, as teachers do not want to accept change easily. Change management issues must be addressed as new work practices, new ways of processing and performing tasks are introduced. In general a large number of teachers in educational institutes are non-ICT proficient, and resistance to change. Research has shown that the strategy of adding technology to the already existing activities in institutes and in the classroom, without changing habitual teaching practices, does not produce good results in student learning.

OPPORTUNITIES OF INTEGRATING ICTS IN EDUCATION

Modern universities and institutes have a mission to make teaching learning process effective and interesting. Study of use of ICTs in education, reveals the following opportunities:

- Improved teaching learning process: The traditional way of teaching learning process can be made more effective and interesting using information and communication technologies. For example, when a teacher uses audio, video, or power point presentations in his/her lecture, the whole class becomes more attentive about the lecture. Such activities also help students to understand the things easily
- Increased Availability of Study Material: In traditional learning system, students and teachers are limited to get knowledge on a particular topic through printed materials only. However, use of ICT facilitates them to get variety of study materials on a particular topic using internet from anywhere and at any time
- Support for distance education and e-learning: The use of ICT supports distance education and e-learning. Each of the different ICTs – prints, audio/video cassettes, radio and TV broadcasts, computers, or the internet may be used for this purpose. There is a minor difference between distance education and E-learning. The use of ICTs is higher in E-learning than distance learning
- Improved admission and examination process: Using ICTs universities and institutes can improve the admission process by putting admission form online and receiving completed form online. They can also generate admit cards for entrance examination online. Even they can conduct entrance and semester/annual examination online. This will speed up admission and examination process. It also helps in faster result declaration
- Help in research activities: Application of ICT in education enriches the research activities. Researchers can get information about recent developments in different segments, collect variety of information on a particular topic, and can generate innovative ideas and new findings. Using appropriate software, we can easily calculate complex calculations and generate variety of graphs.

In wealthier societies, such as Australia the United States and Singapore, a large proportion of the population have access to such networks. Public education systems in these countries are connected to global flows of information, although with inferior machines and lower bandwidth than the private education sector. In poorer countries, much smaller segments of the popular are able to participate. Public education systems are stretched providing more basic services across the country.

SUMMARY

Today, these complex technologies are converging together. Technology then should not drive education, rather educational goals and needs, and careful economics, must drive technology use. Only in this way can educational institutions in developing countries effectively and equitably address the key needs of the population, to help the population as a whole respond to new challenges and opportunities created by an increasingly global economy. ICTs, therefore, cannot by themselves resolve educational problems in the developing world; as such problems are rooted in well entrenched issues of poverty, social inequality, and uneven development. Prudence requires careful consideration of the interacting issues that underpin ICT use in the school-policy and politics, infrastructure development, human capacity, language and content, culture, equity, cost, and not least, curriculum, and pedagogy.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

A study on stress management employees at K.G.F among the bank

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ABSTRACT

The efficiency of the work force is the most important factor as far as the success of an organization is concerned. The output and efficiency of employee dependents on the psychosocial well-being of the employees. The banking organization has been facing many challenges in terms of technological revolution, service diversification, and global banking. Stress is unavoidable on the part of the employees as the systems, procedures; techniques are getting complicated with the use of advance technology. Every employee cannot adapt themselves with such rapid changes taking place in their jobs. This leads the employees to have stress. The high stress can affect one's health, work performance, social life, and the relationship with family members. The stressors and its consequences are to be understood at individual and organizational level. Hence, an attempt has been made by the researcher to know the reasons of stress among the bank employees and the techniques used by them to cope with the stress at workplace The aim of this paper is to help the reader to improve his/her management competencies in managing stress at the workplace.

Keywords: Employees, Stress management, Yoga and meditation

INTRODUCTION

Stress is a natural human response to its environment. Stress has become significant due to change in the social factor and change of lifestyles. Stress is man's adaptive reaction to an outward situation which would lead to physical, mental, and behavioral changes. In deed, moderate levels of stress are considered as essential motivators. However, high levels of stress have the capacity to harm physical and psychological health, not all stresses are harmful in nature. Moderate level of stress can influence the individual to work zeal, tap the potential to work. Stress can make a person productive and constructive, when it is identified and well managed.

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Objectives

The objectives of the study are as follows:

1. To study the causes of stress among employees
2. To know the level of stress on employees
3. To study the effects of stress on the health of employees
4. To analyze the importance of interventional strategies to manage stress among bank employees.

To study effectiveness of stress management program organized by the banks.

RESEARCH METHODOLOGY

Both primary and secondary methods are used to collect information. The sample size is 25. It was collected from the employees of various bank situated in K.G.F. Data were collected through questionnaire Books, internet web sites, journals, etc., were used to collect secondary data.

Percentage analysis method was used to analyze and interpret results.

Findings

Most of the employees fear with the fact that they lack quality in their work. This puts the stress on them. It is found that maximum number of employees in banks remains in stress.

60% employees feel that they are overloaded with work.

35% employees feel tensed due to their non-achievement of their target of work.

45% employees accepted that they will obey the order of their boss by sacrificing their important domestic function. It indicates fear and stress among employees.

35% employees feel stress due to their family related problems. It means such employees feel higher level of stress as compared to other employees. 50% of the employees accepted that there is conflict among the employees.

Only 50% employees feel that strategies used by banks to manage stress of employees are effective. The majority of the employees try to find solution to relieve them from stress.

60% employees use YOGA or other ways to relieve them from stress. In spite of stress, majority of the employees balance in their social life. Causes and consequences of workplace stress

Causes Consequences

a. Work-related stressors: Psychological
b. Inter-personal stressors heart diseases
c. Role-related stressors ulcers
d. Task control stressors high blood pressure
e. Organizational-physical environment stress heart diseases ulcers blood tress.

Stress Management

Stress management is the need of the hour. However, hard we try to go beyond a stress situation; life seems to find new ways of stressing us. Stressors, if not escapable, are fairly manageable. Effective management of job stress can only be achieved under two conditions. First, the individual worker must be able to recognize stressors and understand their consequences and second, organizations must develop stress prevention, as well as stress reduction techniques.[4] Stress management is important for both individual and from the point of view of the organization. It is generally assumed that there are two basic approaches to cope with stress, that is, individual oriented approach and organizational oriented approach.

Individual-Oriented Strategies for Coping with Stress

- Solo-active - reading, writing, photography, art, playing a musical instrument, Collection of different things, running, hobbies, and vacations
- Group- Activities: sports, games, eating out, and vacations
- Solo-Passive/Group-Passive: Television, movies, shows and theater, listening to music, concepts, opera, sporting events, and vacations
- Yoga and Meditation: - it is helpful in overcoming the.

Organizational Oriented Strategies for Coping with Stress

1. Flexibility in time: Allowing workers to start or end the workday earlier or later can reduce work/life stress, especially for working parents. Flex time can also reduce the stress of commuting in rush hour traffic
2. Job sharing: This allows at least two people trained to perform each job, enabling each employee to have time off without losing productivity
3. Work from home: Working from home results in higher morale and job satisfaction and lower employee stress and turnover, the prime reason is that working at home provides employees more control over how they do their work, Working at home also helps workers better manage work/family demands
4. Sufficient time allowed to the employees may also help time for calming or other stress reduction activities
5. Health-care advocacy. Offering an expert who can personally address health-care issues, such as helping to resolve medical bills and interacting with insurance and providers, can help employees reduce worry and stay focused on their job
6. Employee Assistance Programs (EAPs): EAPs are typically offered by the HR department as part of the employer's health insurance plan to assess and address personal issues that affect employee performance and productivity. EAPs often include counseling benefits. EAPs for substance abuse can reduce workers' compensation claims, employer health-care costs, and absenteeism
7. Stress management programs conducting stress management programs at organizational level, with the objective of creating awareness about stress and making employees to learn stress management technique.

CONCLUSION

Stress can make an individual productive and constructive when it is identified and well managed. In times of great

stress or adversity, it's always best to keep busy, to plow anger and energy into something positive. Positive attitude and meditation will be helpful for coping the stress. Stress can be minimized if companies take the right steps. Stress–free employees perform better, work harder, and feel happier and have a long-term commitment to the organization as compared to their counterparts. Having broader perspective of life will definitely change the perception of stress. Let us hope that we will be successful in making distress into eustress for our healthy lifestyle as well as organizational well-being.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

The effect of sportsmen participation on emotional intelligence among undergraduate level students of Karnataka University

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ABSTRACT

Many educators and psychologists believe that students who receive an exclusively academic environment may be ill equipped for future challenges, both as individuals as well as members of the society. Certain instances come in our day-to-day life, wherein the brightest students in a class did not succeed later in their lives as individuals having well-rounded personalities as compared to their less intellectual counterparts. These examples are particularly evident in various fields such as politics, business, and administration (Singh, 2002). However, then a question arises what is it that helps a person to succeed in life other than intelligence? Which human quality is it that helps people to function better in all spheres from career to personal life? With the dawn of 21st century, the human mind added a new dimension which is now being held responsible more for success than intelligence. This is termed as Emotional Intelligence and is measured as emotional quotient.

INTRODUCTION

Concept of emotional intelligence – over the past several years, the term emotional intelligence has received much attention as a factor that is useful in understanding and predicting individual's performance at work, at home, at school, etc. The concept of emotional intelligence was first introduced by Salovey and Mayer in the early 1990's and made popular by Daniel Goleman with publication of his book: "Why it can matter more than IQ" in 1995. Emotional intelligence is the capacity to create positive outcomes in relationships with others and with oneself. According to Mayer and Salovey (1993), emotional intelligence is the ability to monitor one's own and others feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and actions. Thus, emotional intelligence is an umbrella term that captures a broad collection of interpersonal and intrapersonal skills. Interpersonal skills consist of the ability to understand the feelings of others, empathies, maintain, and develop interpersonal relationships and above all our sense of social responsibility. On the other hand, intrapersonal skills comprise the ability to understand one's own motivation. Emotional intelligence plays a key role in determining life success.

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Statement of the Problem

To study the effect of sportsmen participation on emotional intelligence among undergraduate (UG) Level students of Karnataka University.

Objectives

The objectives of the study are as follows:

- To assess the emotional intelligence among UG Level students who are active in sports

Table 1: The mean, standard deviation, and *t*-test of sport participants and non-participants

	n	Mean	SD	*t*-ratio
Sports persons	50	47.16	10.467	
Non-sports Persons	50	37.14	7.959	5.38

- To compare the level of emotional intelligence among UG Level students who are active in sports and non-active sports.

Hypothesis

"Sports participation enhances emotional intelligence among UG Level students of Karnataka University"

Research Design

Between two group research design is used.

Sampling

The data were collected from a sample of 100 UG Level students who come under the age group of 18–23 years. Among them 50 were boys who are actively involving in competitive sports and other 50 boys who are not involved into any kind of competitive sports.

Variables

- Independent variable: Sports participation
- Dependent variable: Level of emotional intelligence.

Measures

- A detailed interview schedule is prepared to collect the demographic details of the subjects
- Mangal emotional intelligence inventory Mangal and Mangal (2004).

METHODOLOGY

To collect data, the survey method was used. The sample of the study consisted of 100 students who were studying in different Colleges situated in Haveri District. Only students of classes of UG students were taken for the study. Among them 50 boys who were actively involving in competitive sports and 50 boys who are not involved in any kind of competitive sports for the study. To collect necessary information for this study, investigator specially designed interview schedule was used along with emotional intelligence inventory developed by Dr. S.K. Mangal and Mrs. Shubra Mangal. Emotional intelligence inventory has 100 items, 25 each from the four areas to be answered as "yes" or "no." The mode of response to each item is either "yes" or "no" indicating complete agreement or disagreement with the proposed statement. Tool has both positive and negative items. For scoring one mark is provided for the response indicating the presence of emotional intelligence and zero for the absence of emotional intelligence. To test the hypotheses, investigator applied *t*-test.

ANALYSIS AND INTERPRETATION

In the present study, researcher intends to examine the level of emotional intelligence among students who participate in competitive sports and students who do not participate in any kind of competitive sports.

Graph showing the mean value of the boys who participate actively in sports and who do not take part in any kind of sports.

It is observed from Table 1 that *t*-value of 5.38 was found significant at 0.01 levels. Based on the obtained results, it can be observed that the students who are actively involving in competitive sports have higher emotional intelligence level when compared with nonparticipants. In other words, it is implied that participation in sports positively influence on emotional intelligence.

Limitation and Suggestions

- Sample restricted to only boys and chosen from Haveri district
- Since the sample was small the study cannot be generalized
- The study was restricted only to state level players. It could have been including higher level participation also
- Study is confined only to the secondary school children.

CONCLUSION

On the basis of the results which were obtained it can be concluded that sports play an important role in the increasing the emotional intelligence of an individual and in turn in helps him to cope with the environment in which he lives.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Empowering information technology sector woman health- related physical fitness with yogic practice for live hood

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INTRODUCTION

In this century, can any woman lead a happy and healthy life? This question has been raised and debated all over the world for decades. There are myriads of definition for health. Health can be defined in many ways. To layman health means the absence of disease. If one is free from diseases can we say that the person is healthy? The answer will be "No"! Today, generally, health problems in physical and mental health are due to the development of science and technology. In this study, physical fitness is done through analysis with reference books and experimental way through practical way. Right labor; there is a general move away from physically demanding work. This, together with the increasing use of automated transport, technology at home, and more passive leisure time, all contribute to the lower levels of physical activity. Inactivity is one of the contributing factors of disease.

The aim of yoga is to develop the human consciousness from lower level to higher level. For these purpose, various yogic practices are offered at different levels to train the body and mind. This brings about positive changes and harmonious functioning in the body and mind complex. Yoga is a way of life. It has its own significant impact positively in developing Information Technology (IT) sector women by physically, mentally, and spiritually. Although varies modes of yogic practices, the IT sector women can overcome the health-related physical fitness components that are required for day-to-day life, especially for IT sector women's. The purpose of present study is to find out the effect of yogic exercise practice on health-related physical fitness variables of IT sector women's.

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Objective

The objective of the study was to find out the effect of yogic exercises on health-related physical fitness variables of IT Woman.

Hypothesis of the Study

It was hypothesized that the yogic exercise training group would significantly improve the health-related physical fitness variables when compare with control group.

METHODOLOGY

The purpose of the study was to find out the effect of yogic exercises on female to know the changes in health-related physical fitness variables shown by both the groups and to serve this purpose 40 sedentary women's who were selected from participating in 8 weeks yogic exercise training program from global village, Kengeri. Their age ranged from 22 to 30 years. The importance of the study was explained to the subjects before getting their consent for the study and researcher gave orientation to yoga instructor and subjects. They were divided in to two groups of 20 female each. Group "A" underwent training

(experimental group) and Group "B" acted as control group. In a week Group "A" underwent selected yogic exercises, namely, Tadasana, Vakrasana, Padhastasana, Trikonasana, Padmasana, Paschimothanasana, Vakrasana, Ustrasana, Shasankasan, Gomukhasana, Mathsyasana, Sarvangasa, Salabasana, Halasana, Dhanurasana, Suryanamaskar, and shavasana. Group "B" was not given any specific training, but they are doing general exercises. All the subjects underwent cardiovascular endurance (9 min run\walk test) and flexibility (sit and reach test). They assessed before and after the training period of 8 weeks. The analysis of "*t*-test" was used to analyze the data. The study revealed that the above said criterion variables were significantly improved due to the influence of Yogic exercises on selected health-related physical fitness variables among IT woman, the data of these variables were paired sample *t*-test statistical techniques used. In all these statistical tests, level of significance was fixed 0.05 levels. All statistical analyses were carried out with the help of statistical package SPSS 16.0 for Window.

STATISTICAL ANALYSIS AND DISCUSSION

Table 1 indicates the pre- and post-test scores of the subjects on cardiovascular endurance for the experimental and control group. Mean score of the experimental group pre-training was 1389.25 and post-training in yogic exercise was 1484.00, the standard deviation was 93.31 and 102.67, respectively, and their *t*-test value of 3.0543. There was significant difference between the pre-test and post-test subjects on cardiovascular endurance among experimental group.

It was observed that the mean scores of the control group pre-test are 1364.00 and post-test are 1370.42, the standard deviation was 81.52 and 89.24, respectively, and their *t*-test value of 2.086. There was no significant difference in the pre-test and post-test score of cardiovascular endurance among control group.

Table 1 indicates the pre- and post-test scores of the subjects on for the fixability experimental and control group. Mean score of the experimental group pre-training was 13.90 and post-training in yogic exercise was 17.70, the Standard deviation was 1.07 and 1.66, respectively, and their *t*-test value of 8.611. There was significant difference between the pre-test and post-test subjects on fixability among experimental group.

It was observed that the mean scores of the control group pre-test are 13.60 and post-test are 14.00, the standard deviation

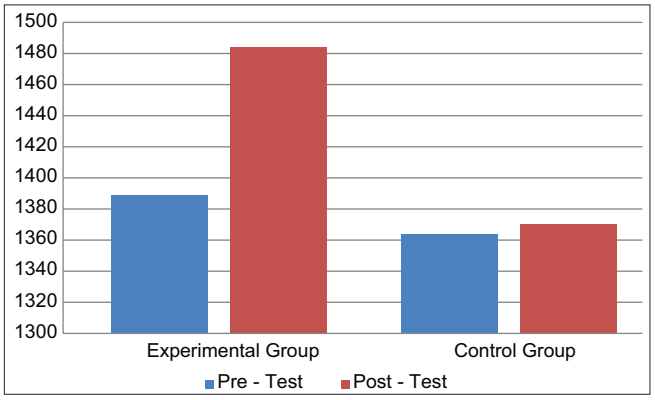

Figure 1: The comparison of cardiovascular endurance of pre-test and post-test mean score among experimental and control groups

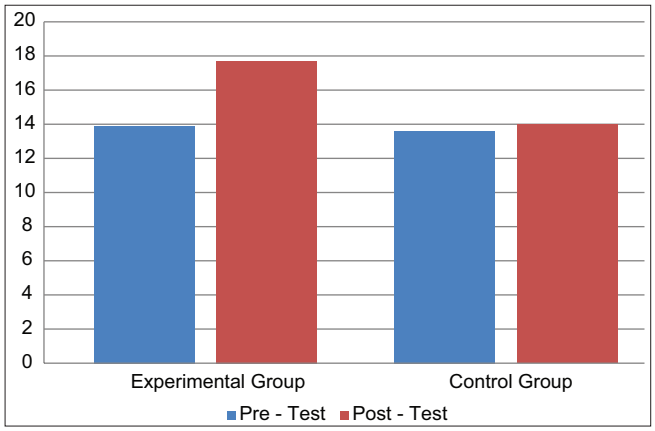

Figure 2: The comparison of fixability pre-test and post-test mean score among experimental and control groups

Table 1: "*t*-test" analysis between pre-test and post-test scores for yogic exercise group and control group (*n*=20 each group)

Health Related Physical Fitness	Test	Control group			Experimental group		
		Mean	SD	*t*-test	Mean	SD	*t*-test
Cardiovascular endurance (score in m)	Pre	1364.00	81.52	0.2348	1389.25	93.31	3.0543
	Post	1370.42	89.24		1484.00	102.67	
Fixability (scores in cm)	Pre	13.60	1.31	0.827	13.90	1.07	8.611
	Post	14.00	1.72		17.70	1.66	

*Significant at 0.05 level. Table value = 2.086

was 1.31 and 1.72, respectively, and their *t*-test value of 2.086. There was no significant difference in the pre-test and post-test score of fixability among control group.

DISCUSSION ON FINDINGS

Cardiovascular Endurance

The finding of cardiovascular endurance showed that there was significant improvement in cardiovascular endurance due to the influence of yoga. Cardiovascular endurance is considered to be a key component of health-related physical fitness it is the ability to perform daily activity without undue fatigue. Cardiovascular endurance was increased due to the regular yogic practice and pranayama practice. The findings of the above study supported the present study.

Flexibility

The finding of flexibility showed that there was significant effect in flexibility due to the influence of yogic exercise training. Yogic practices help to stretch various joints and muscles in the body and that helps to increase the dynamic flexibility. The finding of the above said study supports the present study.

CONCLUSION

Within the limitations of present study, the following conclusion was drawn

There was significant improvement in selected health-related physical fitness components such as cardiovascular endurance and flexibility due to the influence of yogic exercise practice among IT women.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Tips on stress management

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ABSTRACT

Stress is a feeling of emotional or physical tension. It is an outcome from any event or thought that makes you feel frustrated, angry, or nervous. Stress is your body's reaction to a challenge or demand. Effective techniques for stress management are varied. They typically include behaviors that improve physical health, such as nutrition and exercise, but may also incorporate strategies that improve cognitive and emotional functioning.

INTRODUCTION

Stress is the "psychological, physiological, and behavioral response by an individual when they perceive a lack of equilibrium between the demands placed on them and their ability to meet those demands, which, over a period of time, leads to ill-health" (Palmer, 1989).

What happens when we continue "burning the candle at both ends" until we reach physical and emotional exhaustion? Just like the candle itself, we risk burning ourselves out when we are open to stress.

Symptoms of Stress

- Difficulty in sleeping
- Weight gain or weight loss
- Stomach pain
- Panic attacks
- Headaches
- Sweaty hands or feet
- Heartburn
- Excessive sleeping
- Social isolation
- Fatigue
- Nausea.

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Tips on Stress Management

Focus on your breath

Stress relies on our imagination and thought patterns too so focus on your breath such as deep breathing and proper form of inhalation and exhalation as per the requirement and yoga with appropriate guidance will be a major source of stress reliever. Breathe in deep, hold the breath for a five-second interval, exhale, and repeat. This practice may seem to be simple to work but science has now proved us that concentrated breathing allows us to focus, stay calm, and tackle the obstacle at hard.

Exercise more

Regular and simple exercise provides our brain some much-needed love by providing a release of "feel good" chemicals. These chemicals such as Serotonin, Dopamine, and Oxytocin allow us to move throughout our day with relative ease. Each of which act as a cocktail of happiness and joy that can single handedly squeeze our stress.

Positive habits

Cultivating positive attitude and habits help to reduce stress to a great extent. When the daily actions are chaotic stress loves it. Committing to daily habits that push you further along in life will, inevitable, reduces stress, and gives you hope for the near future.

Laughter

When we laugh our entire biology changes and stress seems to melt away from out mind and soul Laughter is the most important medicine for a person to lead a happy and contented life.

Meditate

Meditation is one of the best techniques to learn and explore how to relieve stress and anxiety. Find a calm place, to sit remove distractions and pay attention to the intricate details that surround you in the room. Do not worry if negative thoughts and ideas pop into your head – that is normal and better instead of engaging with the mind to chat, bring your focus back to the moment hand. Doing this, on a routine basis will remove unwanted stress from your lifestyle.

Eat right and sleep well

Eating badly will stress your system so eat a high protein and low sugar diet. And when you are not sleeping well you are losing the rejuvenating effects. Sleep is the recovery period for the body. If you do not get back your right sleep then cover your right nostril and breathe through your left for 3–5 min.

Cool down quickly

Instead of reacting or overacting try a cool breathe technique. Breathe in through your mouth as if sipping through a straw and then breathe out normally through the nose. If this is done in the right way you will feel a cooling, drying sensation over the top off your tongue. It is like hitting the pause button and give you time to think about the response which will even calm down the other person opposite to you.

To shift toward self confidence

Do not depend on others to approve your thoughts all the time cultivate self-confidence than seeking other's approval.

Prioritize your priorities

Our priorities are fast changing due to competing deadlines, and it is crucial to define what is truly important and why it is so. It is important to know the individual role in the family or in the organization and prioritize the goals accordingly.

Do not panic

Do not panic and fall short of breath due to anxiety instead reduce it with the acupressure point. Positioning your thumb on the side of your middle finger and applying pressure instantly helps regulate your blood pressure.

Time management

It is the process of planning and exercising conscious control of time spent on specific activities especially to increase effectiveness and productivity. Using time effectively gives the person choice on managing activities at their own time and expediency Time management system is a designed combination of processes, tools, techniques, and methods.

Prayer

Prayer is an invocation or act that seems to activate a rapport with an object of worship through deliberate communication. Prayer can take the form of hymn, incantation, formal creedal statement, ritual, or liturgy. It can be performed alone or in groups. Scientific studies regarding the use of prayer have mostly concentrated on its effect on the healing of sick or injured people. The efficacy of prayer in faith healing has been evaluated in numerous studies.

Music

Music as a coping strategy involves the use of music through listening or playing music to reduce stress, as well as many of the psychological and physical manifestations associated with it. Rather than focusing on the stressor itself, music therapy is typically geared toward reducing or eliminating the emotions that arise in response to stress. In addition, music therapy programs have been repeatedly demonstrated to reduce depression and anxiety symptoms in the long term.

A hand exercise or a stress ball

A stress ball or hand exercise ball is a malleable toy, usually not more than 7 cm in diameter, which is squeezed in the hand and manipulated by the fingers, to relieve stress and muscle tension or to exercise the muscles of hand.

Progressive muscle relaxation

PMR is a non-pharmacological method of deep, muscle relaxation, based on the premise that muscle tension is the body's psychological response to anxiety-provoking thoughts and that muscle relaxation blocks anxiety. This technique involves learning to monitor the tension in specific muscle groups by first teaching each muscle group. This tension is then released, as attention is directed toward the differences felt during tension and relaxation.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Effect of skill-based training on vaulting table performance of female gymnasts

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ABSTRACT

The study was conducted to test the effect of skill-based training on the performance of female gymnasts on vaulting table performance. It was conducted for the duration of 16 weeks, 5 days a week during the evening training session. The study consisted of 15 gymnasts of elite and sub-elite level from Chandrashekhar Agashe College Pune. The gymnasts were randomly selected for the study. They were instructed to replace their conditioning session and include the skill based training module into their training schedule the study operated in three phases, that is, a pre-test before the intervention, the intervention phase and lastly the post-test after the completion if the intervention and thus the data for the study were collected. The collected data were then statistically analyzed using the paired "*t*-test" and the study showed a significant difference at 0.05 levels. It can thus be concluded that skill-based training improves the performance of female gymnasts on vaulting table. These applications can also be extended to improve the performances on other gymnastics apparatus and disciplines and also on male gymnasts as well as other sportsmen form various skills oriented games and sports.

INTRODUCTION

In the present times, there has been a lot of importance give to fitness, health, and well-being. There has been a wide variety of fitness forms and trainings that have been developed in recent times. Every individual has a large range of options to choose as to which type of training one could opt based on the need, comfort, availability, and desire. The emerging sector of fitness training and health has been undergoing tremendous development and scientific advances with regard to formation of new training forms and trends, from weight training to Pilate training, from water workouts to TRX training, from functional to cross fit, etc., such a wide range of training forms each having their very own contributions to fitness and health. Some of these training programs have made their way into the training modules of elite athletes in various games and sports. The researcher aim to study the effect of traditional skill based training on vaulting table performance of female gymnasts. As gymnastics is highly skill oriented game, it given a greater scope to study the effect of skill-based training on such a sport. Furthermore, vaulting table in gymnastics is an event where the gymnasts have to perform a single skill within 30 s of the gong signal with utmost precision and perfection. It is an event that is common to both men and women gymnasts and is also known as the event with high speed, power, muscle tension, amplitude, and directional awareness.

Hence, the researcher had chosen this event to be treated with skill-based training and thus the study was conducted to find

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out the effect of skill-based training on performance of female gymnasts on vaulting table.

Objective of the Study

The objectives of the study are as follows:

- To study the effect of skill-based training on vaulting table performance of female gymnasts
- To prepare skill-based training module for improving vaulting table performance of gymnasts.

Hypothesis

H_1: There will be a significant improvement with regard to vaulting table performance due to skill-based training in female gymnasts.

METHODS

A single group experimental design was designed for this study. Fifteen female gymnasts were randomly selected as subjects from 20 gymnasts from the age group 11 to 16 years, from a single club from Chandrashekhar Agashe College of Physical Education, Pune. The selected 15 subjects formed a single experimental group. A pre and post on vaulting table performance was conducted using the standardized scoring used by the federation international gymnastics on the subjects mentioned in the code of points. The complete scoring pattern was applied to the vaulting table skill performance and the pre-test data were collected. After the scores were obtained the skill-based training was designed and applied to the training schedule of the subjects. The training was given 5 days a week in the evening training session for a period of 16 weeks. The duration of training was 90 min. The session involved only skill-based practice after general warm up and flexibility and concluded with a cool down. The variables that were trained during the session were the performance of handspring vault (Yamasita) on vaulting table. After completion of every week, there were modifications made in the apparatus landing arrangement to ensure progression in the skill training. The final modification included performing the handspring skill on the standardized height and arrangement of the apparatus.

Statistical Analysis and Findings

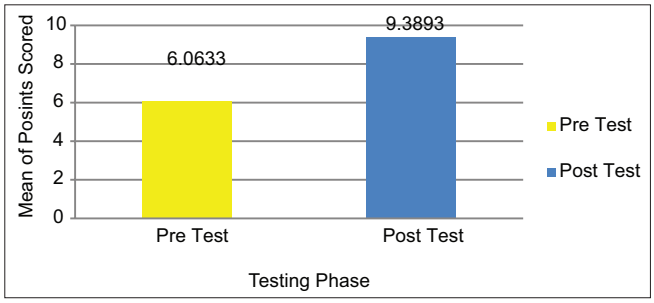
The data obtained during the pre- and post-test were then analyzed using statistical procedure of "*t*-test" for further understanding and interpretation of the scores obtained.

From the above tabulation of the vaulting table performance measured by the evaluation of the performances of mean score of the pre- and post-test of the selected subjects are 6.06 (standard deviation [SD] = 5.13) and 9.38 (SD = 1.40). The standard error of mean for the pre- and post-test is 1.32 and 0.36, respectively. The standard error of difference is 1.03. The degree of freedom was 14 for the sample size $n = 15$. The "*t*-value" is 3.22 which is significant at 0.05 level. Since the calculated value is greater than the tabulated value, the result is significant at 0.05 levels.

Group	Mean	SD	SEM	N	*t*	df	Standard error of difference
Pre test	6.06	5.13	1.32	15	3.22	14	1.03
Post test	9.38	1.40	0.36	15			

SD: Standard deviation, SEM: Standard error of mean, df: Degree of freedom

The graphical presentation of the result of skill-based training on vaulting table performance of female gymnast



From the above graphical presentation, it can clearly be inferred that there has been a significant improvement in the vaulting table performance of female gymnasts due to skill based training and there is a considerable growth in the mean score of the post-test in comparison to the pre-test. Hence, H_1 – there will be a significant improvement with regard to vaulting table performance due to skill based training in female gymnasts is accepted. It indicates that the selected subjects have benefitted from the functional training program.

FINDINGS AND DISCUSSION

From the analysis and interpretation of the data, the following findings may be drawn. Skill based training program contributes significantly toward vaulting table performance. As seen in the pre-test scores obtained by the application of the evaluation procedure is score is lower than that of the post-test. Thus, showing significant improvement in the performance of female gymnasts on vaulting table due to skill-based training by increasing the total score.

CONCLUSION

From the statistical analysis, it has been concluded that has been a significant improvement in the performance of female gymnasts on vaulting table due to skill-based training.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

A glimpse on 'Endorphins' – the natural stress relieving hormones

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ABSTRACT

The word stress includes many "S" but people always opt NO to have it with them, having it is easy but relieving it is a challenging task. The field of physical education had contributed significantly for relieving stress among individuals. In this paper, we had attempted to throw light on the God gifted stress fighting hormone that is "Endorphins." Endorphins are among the brain chemicals known as neurotransmitters, which function to transmit electrical signals within the nervous system. At least 20 types of endorphins have been demonstrated in humans. Endorphins can be found in the pituitary gland, in other parts of the brain, or distributed throughout the nervous system.

Keywords: Brain, Endorphins, Neurotransmitters, Pituitary gland, Stress

INTRODUCTION

The word endorphin derives from merging the words "endogenous," meaning from within the body, and "morphine," which is an opiate pain reliever. In other words, endorphins got their name because they are natural pain relievers.

Endorphins consist of a large group of peptides. They are produced by the central nervous system and the pituitary gland. Since endorphins act on the opiate receptors in our brains, they reduce pain and boost pleasure, resulting in a feeling of well-being. Endorphins are released in response to pain or stress, but they are also released during other activities, such as eating, exercise, or sex.

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Meaning of Endorphins

- A neurochemical occurring naturally in the brain and having analgesic properties
- Endorphins are chemicals produced by the body to relieve stress and pain. They work similarly to a class of drugs called opioids
- Opioids relieve pain and can produce a feeling of euphoria. They are sometimes prescribed for short-term use after surgery or for pain-relief.

Purpose of Endorphins

- Minimize discomfort
- Maximize pleasure

- Reinforce social attachment
- Reduce and relieve stress.

Endorphins and Stress

Exercise and other physical activity produce endorphins chemicals in the brain that acts as natural painkillers and also improves the ability to sleep, which, in turn, reduces stress.

Types of Endorphins

Four types of endorphins are created in the human body. They are named alpha, beta, gamma, and sigma endorphins. The four types have different numbers and types of amino acids in their molecules; they have between 16 and 31 amino acids in each molecule. Beta-endorphins are the most powerful endorphins in the body.

RESEARCH METHODOLOGY

Objectives

The objectives are as follows:

- To know and understand the concept and importance of endorphins
- To make SWOC analysis on endorphins and relate it with stress management tool
- To offer valid suggestion and frame a route map for further research.

Scope

- Concept of endorphin subjected to the technique of stress management
- Research was on free-lance basis.

Limitation

- Due to lack of essential resources, the concentration was not provided in a macro level
- Time was another constraint
- Data relevancy was also a point of limitation.

Source of Data

- Primary data – Personal interview
- Secondary data – Online and offline media.

Tool of Analysis

- Tabulation
- Observation.

ANALYSIS AND FINDINGS – ENDORPHINS- SWOC ANALYSIS

Benefits of endorphins (Strengths)	Endorphin deficiency (Weakness)
Alleviates depression	Depression
Reduces stress	Fibromyalgia
Boosts self esteem	Chronic headaches
Reduces weight	Impulsive behavior
Help to deal with labor Pain, etc…	Trouble sleeping, etc…
Boosting endorphins (Opportunities)	Understanding endorphins (Challenges)
Regular exercise	Psychologically associated
Giving	Involves in-depth research and analysis
Yoga and meditation	Behavioral changes
Spicy food	Differs from one person to another
Dark chocolate	To be clinically proven as stress
Laughing	Management technique

CONCLUSION

God has created this world with all blessings to mankind but the greed of humans turned all their blessings into disguise, our human system was honored with gifted immune system but today to get immune, we need to summon ourselves to medical professionals.

One such wonderful divine gift for us is Endorphins. One need to understand the importance of endorphins, get it through physical activity and use it to relieve his/her stress.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Financial impact of coronavirus disease-19 on Indian sports

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ABSTRACT

The outbreak and spread of the novel corona virus have impacted almost every sector. Sports and entertainment sectors are one of the worst affected as they have lost a significant amount of revenues as all their activities are halted completely. Sports, in particular, will continue to be under some stress in the coming months even after the world starts adapting to living the new normal life. Once the economy is fully opened, seeing people wearing masks, gloves, and practicing social distancing would be normal. However, there are questions around as to how the sporting world is going to cope with their operations post the latest pandemic. Its just a matter of a few weeks that things would flow back to normal and the world opens up.

Keywords: Corona virus, Economy, Sports sector

INTRODUCTION

Sport is a major contributor to economic and social development. Its role is well recognized by governments, including in the Political Declaration of the 2030 Agenda, which reflects on "the contribution sports make to the empowerment of women and of young people, individuals and communities, as well as to health, education, and social and financial inclusion objectives."

Since its onset, the coronavirus disease (COVID)-19 pandemic has spread to almost all countries of the world. Social and physical distancing measures, lockdowns of businesses, schools, and overall social life, which have become common place to curtail the spread of the disease; have also disrupted many regular aspects of life, including sport and physical activity. This policy brief highlight the challenges COVID-19 has posed to both the sporting world and to physical activity and well-being, including for marginalized or vulnerable groups. It further provides recommendations for governments and other stakeholders, to support the safe reopening of sporting events, as well as to support financial activity during the pandemic and beyond.

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Objectives of the Study

The objectives are as follows:

- To understand the concept of financial aspect of sports sector
- To find out remedial measures for improvement of financial inclusion to Indian sports sector.

RESEARCH METHODOLOGY

This paper is a descriptive study in nature. The study has been carried out based on the collection of the secondary data from

various sources such as newspapers, periodicals, government website, and different websites.

DISCUSSION

Following are some of the financial impact and measures to be followed for improving the existing system of sports sector in our country;

Financial Impact

Indian cricket saw the series against South Africa abandoned due to the virus and could see the IPL washed out; however, it could still emerge with a bigger role to play going ahead. Cricket is likely to see a return of the Big 3 revenue-sharing model, with the lion's share going to India, England, and Australia, a financial model originally devised to tide over the 2008 recession.

Even the richest cricket boards are bracing for big losses. Cricket Australia stands to lose $174 million should the corona virus outbreak derail the high-profile home Test series against India later this year. It now remains to be seen if India will play an extended series instead. There is also the potential cancellation of the World T20 tournament.

The cancellation of the IPL will cost the BCCI, the tournament's broadcasters and the franchises at least Rs. 3000 crore. "All IPL franchises combined hire around 600 people, which include freelancers and people on the payroll. Without any revenue coming in, their jobs will be impacted. That figure would be approximately Rs. 10 crore," an IPL team executive had told Indian Express. Then there is the television deal with star sports with the board potentially having to return Rs. 1500 crore.

This, in turn, will have an effect on the Indian economy as well. The 2015 IPL contributed Rs 1150 crore to the Indian GDP, the BCCI had revealed. Deloitte's Desai pointed out that the loss would also be felt by industries linked to the tournament. "Even more than the cancellation of the IPL, the breaking of the chain of industries supporting sports is likely to hurt the Indian economy. Support staff, logistic companies, airlines, and hotels are some of the sectors which could face the brunt," he said.

The Indian Super League final was held in an empty stadium in Goa on March 14. The I-League season was halted on March 15, with the Neroca versus Chennai City 2-2 draw becoming the last match of the season. The season was eventually called off with 23 matches left and Mohun Bagan was crowned champions. With many months to go before the start of the next season, Indian clubs have continued making moves on the transfer market during the lockdown.

Olympic sports are divided into five categories, and each international federation receives money from the International Olympic Committee (IOC) depending on their audience and size, with those in top-most bracket receiving around $40 million and the lowest getting $7 million. With the postponement of the Games, the IOC is likely to freeze these payments. This, in turn, is set to affect the ecosystem of several sports in India.

Remedial Measures

- Managing cash flows, which are so closely planned to established calendars
- Enticing fans to return to stadiums and venues with the threat of additional outbreaks and societal uncertainty
- Asking athletes to return to training and competition when they may rather be with family
- Ensuring that relationships between athletes and fans are protected
- Resuming operations, having suffered significant financial losses and with an uncertain future financial situation
- Mutually supporting partners in an ambiguous macroeconomic climate
- Resuming global operations, possibly in countries still struggling with outbreaks
- Asking employees to return to work when they still may be uncomfortable being in large groups
- Continuing large portions of their operations remotely, on technology ecosystems which have not been prepared for such levels use.

CONCLUSION

The COVID-19 pandemic has had and will continue to have very considerable effects on the sporting world as well as on the physical and mental well-being of people around the world. These recommendations seek to both supports the safe re-opening of sporting events and tournaments following the pandemic, as well as to maximize the benefits that sport and physical activity can bring in the age of COVID-19 and beyond.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Career in physical education and sports

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ABSTRACT

Physical Education degree/diploma is beneficial for any profession where you deal with the education, development, and need of people, and for occupations which require a presentation, interpersonal management, and leadership skills. In this paper, physical education graduates and postgraduates obtain skills which furnish them for employment in a broad range of career opportunities, including other sections of education, national and regional sports and recreation organizations, local government, the health and fitness industry, and sports coaching.

Keywords: Physical education, Career opportunities, Management, and Leadership.

INTRODUCTION

Physical education deals with the frame of the human body, taken during basic and secondary education that encourages psychomotor learning in a play or movement exploration setting to promote health. The aims and objective of physical education depend to a great extent on the political, economic, and social changes that take place in a society such as the development of organic fitness, the development of neuromuscular skill, and the development of character and personality, to prepare highly qualified leaders in the field of physical education and sports. Physical education has a major role to play a role in school system. Without a physical education program, we can never hope for a child's wholesome development. Nowadays, professionals in the field of physical education and sports have a good opening in these areas. In the C.B.S.E, curriculum physical education is a compulsory subject in the +2 level. Moreover, physical education is of equal importance for all students from class's nursery to the 10th standard. Thus, with respect to job opportunity, schools are lucrative and wide ranging. Most of Government, semi-government, public, and private institutes recruit physical education teachers for handsome pay and perky. For this, the candidates should have some skills such as information of human movements, health and physical activity, information of another academic discipline of interest to individual, awareness of the holistic nature of health and movement, coaching motivation and teaching skills, interpretive and analytical thinking, leadership and organization skills, interpersonal skills, and critical reflection.

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PHYSICAL EDUCATION AND SPORTS SCIENCE EXPERTS AS COACHES

Coaching is a wide area of engagement of the experts in the field of physical education and sports. Sports proficient in a particular game or sporting event can undergo coach training in the National Institute of Sports under the sports authority of India (SAI). A person with a degree or master's degree in physical education is considered to be more being suitable for a professional. Coaches are great demand in government,

semi-government, and private institutes such as SAI, Sports school, various state-sponsored association and organization clubs, gymnasiums, and fitness centers. Nowadays, most of the general academic schools also employ coaches for imparting training in specific games or sporting events.

SCOPE IN COLLEGE TEACHING

Physical education occupies a dignified position in the higher education sector, apart from teaching in colleges, physical education has been include as an elective subject in the degree course (B.A, B.Sc.). Level professionals with masters who have qualified NET, SLET, or having M.Phil or Ph.D. degrees may get a job as Asst. Professor or Lecturer in colleges.

JOBS OPPORTUNITY OF PHYSICAL EDUCATION IN SPORTS FIELDS

There are various opportunities of physical education in sports fields, for example, physical education teacher, outdoor education teachers, school sports director, recreational programmer, personal trainer, policy analyst-recreation, sports development officer, and youth worker.

PHYSICAL EDUCATION AND SPORTS SCIENCE ESCAPE BEYOND SCHOOLS AND COLLEGES

Professional scope of physical education and sports science is vast and vivid such as in spas, fitness and health club, yoga centers, physical education escape in the technical institutes (IIT, NIT), and also in mass media (sports journalism). The subject physical education is composed of principle derived from physics, chemistry, biology, social science, etc. Hence, there is a valid scope of research work in various areas such as biomechanics, exercise physiology, anthropometry and sports, sports psychology, and sports sociology.

TOP COLLEGES OFFERING UG/PG/ OTHER COURSES

There are several academics and institutes under the SAI that impact training to young students to transform them into talented sportsperson. Some prominent sports institutes in India are Lakshmibai National Institute of Physical Education, Gwalior; Lakshmibai National College of Physical Education, Thiruvananthapuram; MRP Pace Foundation, Chennai; Tata Football Academy, Jamshedpur; National Cricket Academy, Bengaluru; and Gujarat University, Ahmadabad.

The remuneration of sportspersons totally depends on the sporting activity chosen. In this vigorous and spirited field, what matters is not merely the number of years of experience in the field, but also the capability of the sportsperson to deliver excellent performance consistently.

CONCLUSION

The sports have many open up career opportunities for young talents in India. After acquiring training in various sports academies, one can optional for building a career as a sportsperson and play at the state level first and then explore authorities national and international levels. Apart from serving as a player, an experienced sportsperson can also work as a coach, team manager, fitness instructor, umpire or referee, sports commentator, sports photographer, sports equipment supplier or manufacturer, and consultant.

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Volume 39 • Issue 1 ISSN 2231-3265

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International Journal of Health, Physical Education and Computer Science in Sports
A Peer Reviewed (Refereed) International Research Journal - ISRA Journal Impact Factor 7.217

Research Article

Benefits of participating physical activity

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ABSTRACT

Physical activity is defined as any bodily movement produced by skeletal muscles that require energy expenditure. The term "Physical activity" is not equal to "exercise." Exercise is a subcategory of physical activity which is structured, repetitive, and purposeful (WHO 2006). Regular participation in physical activity (PA) is imperative for good health. Physical inactivity is the fourth leading cause of death worldwide studies clearly demonstrate that participating in regular PA provides many health benefits.

Keywords: Health, Physical activity

INTRODUCTION

Physical activity (PA) is defined as any bodily movement produced by skeletal muscles that require energy expenditure. The term "Physical activity" is not equal to "exercise." Exercise is a subcategory of PA which is structured, repetitive, and purposeful (WHO 2006). PA maintained throughout life is associated with lower incidence and prevalence of chronic diseases such as cancer, diabetes, cardiovascular, and coronary heart diseases (CHD) (Booth *et al*., 2000 and Myers *et al*., 2002). Broadly defined, PA refers to activity that is part of one's daily life involving bodily movements and the use of skeletal muscles. Physical exercise is a subcategory of PA that is planned, structured, and purposive to improve specific physical skills or physical fitness (Bherer *et al*., 2013). Want to feel better, have more energy, and even add years to your life? Just exercise. PA or exercise can improve your health and reduce the risk of developing several diseases. PA and exercise can have immediate and long-term health benefits. Most importantly, regular activity can improve your quality of life. A minimum of 30 min a day can allow you to enjoy these benefits.

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Everybody knows that the need of exercise or PA in our daily lives, but we may not know why or what exercise can do for us. Exercise means the daily practice of doing some physical work. Exercise is the key to good health and fresh mind (Gulhane, 2015).

People of all ages can improve the quality of their lives and reduce the risks of developing CHD, hypertension, some cancers, and type 2 diabetes with ongoing participation in moderate PA and exercise. Daily exercise will also enhance one's mental well-being and promote healthy musculoskeletal function throughout life.[9]

PA INCREASES THE HEALTH

Regular participation in PA is imperative for good health. Active people benefit from higher levels of health-related fitness and

are at lower risk of developing many different disabling medical conditions than inactive people. It is widely acknowledged that the health benefits of participation in PA are not limited to physical health but also incorporate mental components.[6,7] Extensive research has resulted in clear recommendations of the level of PA required to produce health benefits.[8]

Hypertension

Hypertension is the most common risk factor for heart disease, stroke, and renal disease and has been identified as a leading cause of mortality.[9] In a recent meta-analysis of 13 prospective cohort studies, high-level recreational PA was associated with decreased risk of developing hypertension when subjects were compared to a reference group with low-level PA (RR 0.81).[10] In another meta-analysis that included 30 studies involving patients with existing hypertension, aerobic endurance training was shown to reduce blood pressure by 6.9/4.9 mm Hg.[11]

Diabetes

Type 2 diabetes is a worldwide problem with significant health, social, and economic implications. Diabetes results from a complex interplay of environmental and genetic components. There is strong evidence that such modifiable risk factors as obesity and physical inactivity are the main nongenetic determinants of the disease.[12]

A randomized controlled trial sought to determine whether lifestyle intervention or treatment with metformin would prevent or delay the onset of diabetes in patients with impaired fasting glucose levels. Participants assigned to the intensive lifestyle intervention were able to achieve and maintain a reduction of at least 7% of initial body weight through a healthy low-calorie and low-fat diet and to engage in moderate-intensity PA such as brisk walking for at least 150 min/week. When compared with placebo, lifestyle intervention reduced the incidence of diabetes by 58%, and the metformin intervention reduced the incidence by 31%.[13] This translates into a number needed to treat of 7 for the lifestyle intervention and 14 for the metformin when attempting to prevent one case of diabetes over a 3-year period. Thus, PA represents a major public health opportunity to reduce the cost of a major source of morbidity.

Stroke

Stroke is the third leading cause of death in Canada, where 5.5% of all deaths are due to cerebrovascular diseases.[14] Physically inactive people have a significantly elevated stroke risk (RR 1.60).[15] In a systematic review, high levels of PA were associated with a 31% risk reduction. The reduced risk of stroke is seen in both men and women, and it appears that this benefit may be present for both ischemic and hemorrhagic stroke.[16]

Depression

The antidepressant action is one of the most commonly accepted psychological benefits of exercise. Individuals with clinical depression tend to be less active than healthy active adults and have a reduced capacity for physical exertion (Fox, 1999). As such, it is challenging for the personal trainer and fitness professional to introduce PA to this population, as people suffering from depression are not predisposed to participating in exercise. However, patients diagnosed with depression have credited exercise as being the most important element in comprehensive treatment programs for depression (Dunn *et al*., 2002).

Anxiety

According to Webster's Unabridged Dictionary, anxiety is "distress or uneasiness of mind caused by fear of danger or misfortune." It is a stage of apprehension. The results of over 30 published papers substantiate a link between acute and chronic exercise and the reduction of anxiety (Scully *et al*., 1998).

Self-esteem

As with the other psychological health variables, exercise has a positive influence on improving self-esteem (Callaghan, 2004). The effect of exercise also appears to be more potent in those who have lower self-esteem. Current research provides little direction regarding the type of exercise and dose recommendation for improved self-esteem (so perhaps follow 2006 ACSM guidelines in Side Bar 1. for now). In relation to exercise, it is interesting to note that important factors influencing a person's self-esteem are perceptions of their body attractiveness and physical condition (McAuley *et al*., 2000).

Cognitive Function

The benefits of PA in maintaining cognitive function in older age and promoting healthy aging have been well documented. In the third decade of life, the human brain starts to show a loss of gray matter that is disproportionately large in the frontal, parietal, and temporal lobes of the brain.[17]

In a meta-analysis of 33,816 nondemented subjects from 15 prospective cohorts, PA was found to protect against cognitive decline. The most fit subjects had a reduced risk of cognitive decline of 38%. Even low-to-moderate-level exercise showed a significant reduction in risk (35%).[18] In addition to reducing risk factors associated with the incidence of vascular dementia, PA appears to increase the production of neurotrophic factors in the brain[19] and can potentially mitigate against the loss of gray matter.[20] High levels of physical fitness (as measured objectively by maximal oxygen consumption) are associated with greater gray matter volume in frontal and temporal lobes independent of age.[21] There is a consistent association between higher levels of fitness and greater gray matter, and between PA and a reduction in accelerated brain aging or neuron loss.

Physical Inactivity and Risk Factors

Physical inactivity is the fourth leading cause of death worldwide.[22] It is estimated that over a third of cancers and

about 80.0% of heart disease, stroke, and type 2 diabetes could be prevented by eliminating behavioral risk factors such as physical inactivity, unhealthy diet, tobacco smoking, and alcohol use.[23] In a study designed to examine the population attributable risk of physical inactivity on death from diseases such as CHD, cancer, and diabetes, 6.0–10.0% of all deaths from non-communicable disease worldwide were attributed to physical inactivity.[25]

CONCLUSION

Studies clearly demonstrate that participating in regular PA provides many health benefits. Many conditions affected by PA occur with increasing age, such as heart disease and cancer. Reducing the risk of these conditions may require years of participation in regular PA, however, other benefits such as increased physical and mental fitness.

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Volume 39 • Issue 1 ISSN 2231-3265

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A Peer Reviewed (Refereed) International Research Journal - ISRA Journal Impact Factor 7.217

Research Article

Effective teaching methods for physical education in classroom

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ABSTRACT

The paper focused on the teaching methods as a panacea for effective approaches to physical education in the classroom. Teaching methods denote various strategies that the teacher uses to deliver his/her subject matter to the students in the classroom based on the instructional objectives to bring about learning. Teaching methods help to communicate ideas and skills to the students. There are several teaching methods for physical education. It is left for the teacher to use the ones most appropriate for the lesson. These methods if properly used will enhance teaching and learning and bring about desired changes in the students. While the teacher's task is to ensure that learning is effective, one major way to achieve this is the use of appropriate teaching methods. This paper examines the concept of teaching, the teacher, learning, and discussed various teaching methods that can be used in the classrooms. The paper further discussed approaches to implementation and its implication for teaching and proffered the way forward for effective use of teaching approaches for better results in the classroom teaching. In institutionalized education, the main goal has been developing children's cognitive capacity in the sense of learning knowledge in academic disciplines. This goal dictates a learning environment in which seated learning behavior is considered appropriate and effective and is rewarded. Physical education as part of education provides the only opportunity for all children to learn about physical movement and engage in physical activity.

Keywords: Classroom, Physical education, Teacher, Teaching methods

INTRODUCTION

Teaching is to cause the pupil to learn and acquire the desired knowledge, skills, and also desirable ways of living in society. It is a process in which learner, teacher, curriculum, and other variables are organized in a systematic and psychological way to attain some pre-determined goals. Teaching is an important part of the process of education. Its special function is to impart knowledge, develop understanding and skill. Teaching is communication between two or more persons who influence each other by ideas and learn something in the process of interaction teaching is a process in which learner.

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MEANING OF TEACHING

Dictionary defines teaching as "the profession or practice of being a teacher; the art of giving instruction." Teaching is the art of a teacher in which on the basis of knowledge and experiences puts the subject matter before the students in a meaningful and effective manner.

According to Morse and Wingo (1968) viewed teaching as "understanding and guiding of children as individual and as groups. It means the providing of learning experiences that

will enable each learner to grow continuously and sequentially toward his delt role in society."

Gage (1963) in his book "Handbook of Research on Teaching" tried to give a concise account of information on teaching which at places is so fragmentary and diverse that no conclusion can be drawn for the nature of teaching. It is assumed that the teaching processes are merely images of the learning process.

Principles of Teaching

- Principle of self-preparation: Teacher should prepare himself every time before entering the class
- Principle of notes preparation: Teacher should bring prepared notes in the class for emergency references
- Principle of quoting examples: Teacher should try to quote maximum number of examples form practical life
- Principle of sincerity and punctuality: Teacher should always report in the class at least a few seconds/minutes before the prescribed time. If another teacher is already in the class, then supposed to wait for a while
- Principle of movement: Teacher should always move around in the front so that the student's attention may not be diverted
- Principle of using teaching aids: Teacher must use the blackboard for better understanding
- Principle of healthy teaching atmosphere: Teacher should take the matter positively if any questions are raised in the class by the students. That doubt question must be cleared in the class itself and if not, one should not feel shy to say that at a present answer is not known and the same shall be cleared in the next class after consulting the references instead of giving wrong justification
- Principle of we-feeling: Teacher should treat the students as their own wards and must know every student by name; it causes "we feeling"
- Principle of method selectivity: Teacher should choose that method of teaching which is most suitable for that particular class, subject, and group of students
- Principle of simple to complex: Teaching should always be progressive from simple to complex
- Principle of correction and evaluation: Timely evaluation of the subject contents
- Principle of teaching behavior: Finally, a teacher should be of good character and well behaved.

Factors of Effecting Teaching

- Teacher's personal readiness
- Teacher's technical preparation
- Subject matter to be discussed
- Available facilities for teaching
- Maturity level of the students
- Age and sex of the students
- Background of the students
- Place and time of the class
- Skill of the teacher
- Overall personality of the teacher, etc.

Necessity of Various Teaching Methods in Physical Education

- In the classroom
- In the playfields/courts
- In the gymnasium
- In the track and field
- In the swimming pool
- In teaching combative sports
- In teaching recreational activities
- In teaching yogic exercises
- In teaching weight training exercises, etc.

Methods of Teaching

- Lecture method
- Demonstration method-imitation method
- At-will method
- Observation method
- Visualization method
- Command method
- Etc.

RECOMMENDATION

1. To provide a high quality education, the Government should be committed to ensuring that every student has the opportunity to learn from a qualified and inspiring teacher
2. To provide a high quality education, there is a need to develop a professional culture that respects teaching and learning, professional staff are supported in their effort to continually improve their effectiveness in promoting student learning, school sites are well maintained, school leaders build and maintain effective partnerships with parents, community groups, and local business, and instructional material is current and aligned with the academic content standards
3. The Government should provide grant funding to develop the quality of human resource by providing enough expenditure for education development
4. The Government should promote recognition that becoming a qualified and professional teacher is a long term and developmental process
5. The Government should pay enough attention to teacher's welfare to attract the good potential students to enter the teacher profession through the institution of teacher education and retain qualified experienced teacher for schools.

CONCLUSION

Global challenges that influence all areas of human life in the world are the conditions that are naturally going on as

a consequence of the rapid development of science and technology. It is impossible to be avoided but has to be faced by using methods with the high quality especially human resources. To face the global challenges successfully, we need the qualified human resources that can only be produced through an authentic educational program and authentic educational process with high quality. Teachers' quality is the keyword for ensuring the quality of education that indicated by the quality of output and outcome. Without qualified, competent teachers, it is impossible to build a high-quality education. On the other hand, qualified competent teacher will not able to carry out their task professionally without the proper conditions that support their task. Hence, on the one hand, we need to continually improve teachers' quality, and on the other hand, we need to provide a proper condition to support teachers in their teaching methods.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Health and fitness

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ABSTRACT

Physical activity and exercise can help to stay healthy, energetic, and independent as to get older. Exercise plays a vital role in preventing health diseases and stroke. The health benefits of doing regular exercise have been shown in many studies. This paper reviews the evidence of the benefits and exercise for all types of body systems. Physical activity and exercise can reduce anxiety and stress, increase brain power, boost the happy chemicals, sharpen the memory, improve self-confidence, and increase our muscles and bones strength. It also helps in preventing and reducing heart disease, obesity, blood sugar fluctuation, cardiovascular diseases, cancer, and (latest Issue) corona COVID-19.

IMPORTANCE

Health and physical fitness have a vital role in the life of human from time immemorial. The progress of the Nation lies in the hands of the people, who are healthy and physically fit. Every individual should develop physical fitness for a happy and effective living. To get physical fitness, one has to involve in physical activities. Physical activity is essential for the development of a wholesome personality from childhood depend on the opportunities provided for the wholesome development of the mental, physical, social, and spiritual aspects. Hence, a well-organized and properly administered physical education programmed for school children is very essential. Physical activity throughout the ages has been acclaimed for health and recreation. It provided fun and enjoyment. It also provided youthful exuberance and elderly care. Physical activity and movements are as old as human existence. It played numerous roles from struggle for existence to struggle for excellence. A sports is an activity in our lives where pursuits of different movement achieved through the total investigation of neuromuscular co-ordination. In this modern era, we can see that each and every individual directly or indirectly related to sports. Modern physical education commonly known as there is sports where pursuit of discipline freely formed such as biological, social, and physical sciences. Over a decade, society, in general, has realized the need for keeping fit and health through organized physical activity programs. Scientific evidence has made with a clear and that unless man engages himself in organized vigorous physical activity programmed. The real benefits would not come to many researchers strongly support the regular exercises helps one to keep a strong and healthy and to prevent cardiovascular diseases. Physically fit persons, heartbeats at a lower rate, and pumps more blood per beat at rest. As a result of regular exercises and individual's capacity to use oxygen increases systematically energy production depends on internal chemical or metabolic changes in health, fitness and performance are poorly correlated phenomena. Health is generally defined as

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the freedom from disease, fitness strictly relates to a man's ability to meet the demands of his environment and excellence in performance.

SOME BASIC COMPONENTS OF PHYSICAL FITNESS

Strength

Most people think that to be fit is to be strong. This is true, in a way, but strength is not all there is to fitness. Strength is the capacity of a muscle to exert maximal force against a resistance. Strength training (exercising to develop strength) will result in some enlargement of muscle fibers and a relatively increase in your ability to apply force. Properly conducted weight resistance programs (exercise with barbells, for example) are the most efficient ways of gaining rapid strength.

Muscular Endurance

Endurance is the capacity of a muscle to exert force repeatedly over a period of time. It is not the same as strength! Muscular endurance can also refer to holding a muscle contracted for a period of time. Your ability to do sit-ups or pull-ups is a measure of your muscular endurance. The distance which you can jog without stopping to walk is a measure of your muscular endurance. By doing these types of exercises and gradually increasing the repetitions, you will be able to increase your muscular endurance.

Flexibility

Flexibility is your ability to use a muscle throughout its full range of movement. It is essentially your ability to move your joints. Someone who can touch their toes is much more flexible than someone who cannot. Exercises such as touching the toes which stretch muscles to their full extent are the best way of increasing flexibility.

Motor Skill Performance

This is the ability of the nerves to receive and provide impulses which result in smooth, co-ordinate muscular movement. This is evident in your ability to dodge, control balance, react, and move quickly, etc. Motor skill exercises include such things as the vertical jump, agility run, squat thrusts, etc.

Cardiorespiratory Endurance

This refers to the capacity of your heart, blood vessels, and lungs to deliver nutrients and oxygen throughout the body. Vigorous exercise increases the cells need for oxygen. This means you must breathe more oxygen and the heart must pump more oxygen through the body. Vigorous exercise is the best way to increase cardiorespiratory endurance. Be careful, though – too much too soon is dangerous.

SCOPE OF THE HEALTH AND FITNESS CENTERS

The following are just some of the organizations/businesses which might employ people with management skills in the health and fitness industry:

- Recreation canters
- Gymnasiums
- Swimming pools
- Sporting clubs
- Medical practitioners
- Chiropractors or naturopaths
- Health food shops
- Health food manufacturers.

CONCLUSION

Over the years, physical fitness has become the well-built foundation of a structure that supports many concrete blocks on it, which represents all the activities that make life worth living: intellectual life, spiritual life, love life, and social life. In the modern era, considerable interests have been shown in both public and private sectors to develop physical efficiency and physical fitness by making physical education programs compulsory in many educational and social service institutions. The concept of wellness has taken a mode of broader, more holistic, and more proactive view of health. The factors that define wellness include not only traditional criteria, of freedom from disease but also a number of positive criteria, such as adaptability to cope up with everyday stress, feeling of accomplishment and personal growth, ability to express a positive and creative lifestyle, and a feeling of contentment and happiness. To be well in a more holistic sense, a person needs to be active, good in spirits and must be free from disease and pain, to an extent. Fitness and wellness have been approached primarily as if they were personal and individual issues. More recently, however, health has become a national issue; for no other reason than that, an increasingly large part of our national wealth goes for health care. Physical fitness tends to vary from one individual to another. Apparently, it varies in accordance with the nature of a person, depending on whether he is sedentary or dynamic. Regular exercise is a prerequisite for physical fitness, which leads to a healthy life. Physical fitness can be classified into two – those pertaining to health and those pertaining to motor skill performance. Health-related fitness is concerned with the development of those qualities that offer protection against diseases that are associated with physical activity. Performance-related physical fitness, on the other hand, is associated with those qualities which are conducive to better performance in sports and other physical activities such as those requiring speed, strength, endurance, and coordinative abilities.

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Volume 39 • Issue 1 ISSN 2231-3265

International Virtual Conference on
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Collaboration with
International Federation of Physical Education,
Fitness and Sports Science Association

International Journal of Health, Physical Education and Computer Science in Sports
A Peer Reviewed (Refereed) International Research Journal - ISRA Journal Impact Factor 7.217

Research Article

Psychological importance of yoga

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ABSTRACT

Good health is one of the greatest resources for creativity and wealth. Health is not a static state – it is a dynamic ever-changing. We can never claim that we are always healthy but only that we are healthy at a particular moment. Health is like a live wire. Now we feel it, the sensation is energizing, the absence is a state when the body and mind are dull and slow. Disease exists when there is an imbalance. Good health results from the right diet, adequate physical activity, and mind, which is stress-free. The dramatic changes in our lifestyle, sedentary way of working, wrong dietary habits, lack of physical activity, smoking, and alcoholism leading to many psychological and psychosomatic problems. Oxyhemoglobin deficiency or lack of sufficient oxygen in blood level is one of the cardiorespiratory disorders. Oxygen is very essential for life. Because of some cardiac or respiratory disorder some are not able to get sufficient oxygen for their body cells. By that, they are straggling in between life and death. By proper yogic practices, this disorder could be brought under control. Furthermore, many other complications associated with this problem are also kept at a lower level and thus one can leady healthy, wealthy life. Yoga therapy is a system that prevents and cures various diseases and disorders through yogic practices. The yogic practices concentrate on the purification of the body and mind, and through this integrated, holistic approach, one can overcome several kinds of afflictions in life.

Keywords: Healthy life, Physiology, Yoga

PHYSIOLOGY

The branch of biology dealing with the functions and activities of living organisms and their parts, including all physical and chemical processes, the organic processes or functions in an organism or in any of its parts (Sarada et al., 2004).

IMPORTANCE PHYSIOLOGICAL

However, the physiologic importance of these prolactin-stimulating factors is not well-defined. One example of a prolactin-stimulating factor for which a role has been identified is estrogen, which stimulates prolactin synthesis and secretion in the late stages of pregnancy to prepare the mammary glands for lactation.

- Lowers the level of blood lactate, reducing anxiety attacks
- Improves the immune system
- Increases the energy level, as you gain inner sources of energy
- Lowered blood pressure and heart rate
- Reduced levels of stress hormones in the blood
- Balanced levels of oxygen and carbon dioxide in the blood.

Improves the Immune System

Breathing is an automatic function of the body that is controlled by the respiratory center of the brain. When we feel stressed,

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our breathing rate and pattern changes as part of the "fight-or-flight response." Fortunately, we also have the power to deliberately change our own breathing. Scientific studies have shown that controlling your breath can help to manage stress and stress-related conditions.

Relaxation Response

When a person is relaxed, they breathe through their nose in a slow, even, and gentle way. Deliberately copying a relaxed breathing pattern seems to calm the nervous system that controls the body's involuntary functions.

Increased Physical Energy

Take notice of how your upper chest and abdomen are moving while you breathe. Concentrate on your breath and try to gently breathe in and out through the nose. Your upper chest and stomach should be still, allowing the diaphragm to work more efficiently with your abdomen rather than your chest. With each breath, allow any tension in your body to slip away. Once you are breathing slowly and with your abdomen, sit quietly, and enjoy the sensation of physical relaxation.

Special Considerations

Some people find that concentrating on their breath actually provokes panic and hyperventilation. If this happens to you, look for another way to relax. Abdominal brae, there are different breathing techniques to bring about relaxation. In essence, the general aim is to shift from upper chest breathing to abdominal breathing. You will need a quiet, relaxed environment where you would not be disturbed for 10–20 min. Set the alarm if you do not want to lose track of time. Sit comfortably and raise your ribcage to expand your chest. Place one hand on your chest and the other on your abdomen.

CONCLUSION

The present study found improvement in the study to assess the effect of yoga phonological on the blood oxygen level. By this can conclude that yogic practice is very effective in blood oxygen deficiency. The study can be done with more impermeant for longer duration may yield better than yoga develop meant indusial.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Digitalization of rural entrepreneurship

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ABSTRACT

The main primary purpose of this chapter is to present new established understanding and knowledge of the digitalization of rural entrepreneurship, how it can help entrepreneurial survival and growth in rural industries, and what are the theoretical and practical implications. The digitalization concept of businesses is the issue of interest in the world today. The mixed questionnaire of quantitative and qualitative was used as the survey instruments. The questionnaire was distributed at the entrepreneur's business premises, and they were given 7 days to respond while researcher and research assistants were always available to assist where necessary. The findings of this survey revealed that the large number of participants is not using their digital technology for the business purpose, but rather they use it for other things such as private communications and social friendship. This study has indicated some recommendation and suggested further research which may include other provinces as well as other countries.

Keywords: Rural, Entrepreneurship, Digitalization, Orientation, Entrepreneurs, Digital technology

INTRODUCTION

Digitalization means turning interactions, communications, business functions, and business models into digital ones which often boils down to mix of digital and physical as in Omni channel customer service, integrated marketing, or smart manufacturing with a mix of autonomous, semi-autonomous, and manual operations. In business, digitalization most often refers to enabling, improving and transforming business operations and business functions and business models by leveraging digital technologies and a broader use and context of digitized data, turned into actionable, knowledge, with a specific benefit in mind. It requires digitalization of information but it means more and at the very center of it is data. While digitization is more about system of record and, increasingly system of engagement and system of insight, leveraging digitized data and processes.

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What digital technologies and tactics are the company making use of, which is helping them reach a better audience and gain more leads. How must be their digital strategy to connect with consumers and business organizations as well of course, being a brand is everyone's dream, be it an individual brand or organizational brand. But to be famous is what everyone wants. Digital Media and Social Media are increasing at an extraordinary rate and communicating with people has never been so easy. Hence, in this phase, each one of us wants to achieve the position where the world can reach to us. Moreover, this will be done with the help of Digital Media, with digitization and implanting digitalization in your company and organization.

- "The What?" of Digitalization.
- "The Why?" of Digitalization.
- "The How?" of Digitalization.

What is Digitalization?

Digitalization is Integration of digital technologies in everyday life by the digitization of everything. Everything includes all the stuff which can be conveniently digitized and used in a more efficient manner. Talking in terms of business, digitalization is the use of digital technologies to change a business model and provides new revenue and value-producing opportunities; it is the process of moving to a digital business. Briefing it in very simple terms, "the adoption or increase in use of digital or computer technology by an organization, company, or individual is digitalization."

Why Digitalization has Become so Important?

"Digitize your Business." This is not because of having own company but instead it is believed that digitizing the business will surely help to succeed in a better way. Digitization, the usage of digital media and electronic goods is increasing and this in turn leads to increase in more and more technology. When technology increases, digital mediums increase. Moreover, it is quite a simple logic that if digital medium increases, people will use it more and thus it might turn fruitful for your business.

Businesses and organizations need more reach of their brand/product/services, more footfalls on their store or industry, so as digital mediums will increase, consumption them will help you reach better audience and more audience too. Every youth, wanna be entrepreneur, an aspiring start-up founder today start their business either by a website or by first building their presence online. Building trust is very important. Honestly today, the customers like you, I and we all have been spoilt by all the big companies. This has largely affected small and medium enterprises (SMEs) and thus they now need to use the digital platform to sustain this cut throat competition.

How Digitalization can be Done?

Digitalization represents an essential incentive to increase the enterprises ability to play a greater role on international markets and there are multiple ways to realize it. Besides having simplified our daily life, digital has created new possibilities of development for all those enterprises that can keep up with changes and know how to take advantage of new opportunities, with the result that today more and more companies decide to progress to not be left out and have the possibility to emerge on the markets.

1. Build your online presence on all the major social media platforms.
2. Register your business on Local search Engines.
3. Website helps you have a better impression and great impact on the consumer.
4. Every business, every product, and every service have a particular set of audiences who are interested in, focus on them and target them first.
5. Its a mobile world. Yes, indeed it is. Get a responsive website.

Rural Entrepreneurship

Entrepreneurs establishing business ventures in pre-dominantly rural areas are called rural entrepreneurs. This is emerging as a national and also as a national opportunity. Rural entrepreneurship caters to the rural needs such as employment generation, income generation, rural development, build up village republics, and curbing rural – urban migration. There are huge opportunities rural areas to tap – the demand for graded, packaged, fresh fruits, and vegetables in the urban areas and the rural youth can be trained to undertake entrepreneurial initiatives to get-into the supply-chain of these rural products. We need to create rural infrastructure, rural jobs, rural roads, schools, and other facilities so as to support rural entrepreneurship and rural prosperity. Government of India, and all the State Governments are highly sensitive on this issue, and all of them want to support rural entrepreneurship. Learning the lessons from success of urban entrepreneurship all state governments are now working-out strategies to promote rural entrepreneurship. In fact, this is the best time for the establishment and growth rural entrepreneurship.

STATEMENT OF THE PROBLEM

The modern business is successful only if there is a digital transformation in the activities of the business, no matter if it is rural. In fact, rural business needs more dependency on digitalization as there may be a lack of infrastructure and there may exist a gap between the buyer and seller. Digitalization is simpler and convenient way of doing a business in an efficient and cost-effective manner. In general, the transformation is observed in urban areas. The present study is an attempt to analyze the effectiveness of digitization of entrepreneurship in rural areas.

OBJECTIVES

- To study the impact of parents occupation on entrepreneurship
- To study the impact of digitalization on entrepreneurship
- To offer suggestions

METHODOLOGY

The present study is an analytical one which is based on the firsthand information collected by the researcher.

HYPOTHESIS

1. There is no relationship between occupation of the parents and its impact on entrepreneurship.
2. There is no relationship between educational qualification and favorable demographic and economic factors

3. There is no relationship between Business and Digitalization Benefits

H_1: There is no relationship between occupation of the parents and its impact on Entrepreneurship.

Chi-square tests			
	Value	df	Asymp. Sig. (two-sided)
Pearson Chi-Square	21.856[a]	12	0.039
Likelihood Ratio	29.062	12	0.004
Linear-by-Linear Association	0.044	1	0.834
N of Valid Cases	60		

a. 18 cells (90.0%) have expected count less than 5. The minimum expected count is 1.60

The calculated value is less than the table value, so the hypothesis is rejected. It signifies that there exists a relationship between occupation of the parents and its impact on entrepreneurship.

H_2: There is no relationship between educational qualification and favorable demographic and economic factors

Chi-square tests			
	Value	Df	Asymp. Sig. (two-sided)
Pearson Chi-Square	34.583[a]	28	0.182
Likelihood Ratio	49.583	28	0.007
Linear-by-Linear Association	0.000	1	0.987
N of Valid Cases	60		

a. 40 cells (100.0%) have expected count <5. The minimum expected count is 0.80

The calculated value is more than the table value, so the hypothesis is rejected. It signifies that there is no relationship between educational qualification and favorable demographic and economic factors.

H_3: There is no relationship between Business and Digitalization Benefits

Chi-square tests			
	Value	df	Asymp. Sig. (two-sided)
Pearson Chi-Square	40.685[a]	22	0.009
Likelihood Ratio	52.358	22	0.000
Linear-by-Linear Association	0.468	1	0.494
N of Valid Cases	60		

a. 34 cells (94.4%) have expected count <5. The minimum expected count is 0.27

The calculated value is less than the table value, so the hypothesis is rejected. It signifies that there exists a relationship between business and digitalization benefits.

CONCLUSION

The findings reveal that entrepreneurship in rural areas can prosper with the digital transformation of the activities; it can also fulfill the gap between the buyer and seller. Technological enhancement reduces the cost and time involved and thus gives an efficient and effective functioning of businesses. It can be concluded that digital transformation is a better solution to overcome the problems faced by rural entrepreneurs.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Impact of sports on social manner of university students

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ABSTRACT

Every individual is naturally introduced to a social setting family, group, social class, dialect, religion, and in the end creates numerous social associations. The qualities of a youngster's social setting influence how he or she figures out how to think and carry on, method for guideline, prizes and discipline, and illustration. This setting incorporates at home, school, neighborhood, and religious organizations as lawful authorization. It is generally acknowledged that to accomplish a decrease in social manner and in the trepidation of wrong doing a blend of elements is required. Inside of this game is perceived as having an imperative part to play. Sport exercises and rivalries, sports volunteering, sports initiative, sports preparation, and vocational plans create people and groups, energize more beneficial and more profitable ways of life, and make comprehensive groups and neighborhoods that give a common personality and feeling of spot.

Keywords: Social manner, Sports, Students

INTRODUCTION

In human science and physiology, the process of socialization permeates among the same species. Practices, for example, predation which includes people from various species is not social. The umbrella term manner sciences are in like manner used to suggest sciences that study conduct. Conduct that is especially social is masterminded towards diverse selves. Such direct catches another as a seeing, considering, moral, intentional, and acting individual; considers the planned or sensible significance of the other's field of expression; incorporates suppositions about interchange's showings and exercises; and demonstrates an intend to summon in another self-certain experience and points. What isolates social from non-social manner, then, is whether another self is considered in one's shows, exercises, or sharpens. For example, avoiding and weaving through a gathering is not social manner, as a general rule. Others are considered as basic physical articles, as human impediments with certain reflexes. Nothing is keeping in endeavor in a parade social manner. Diverse marchers are physical things with which to sort out one's improvements. Nor is a surgical operation social manner. The patient is only a biophysical object with certain related potential outcomes and dispositions. Regardless, let the performing craftsman get the chance to be incorporated with another's self, as a man pushing through a gathering seeing a partner, a marcher trusting another is endeavoring to get him out of step, or an expert taking a shot at his tyke, and the whole importance of the condition changes. Social exercises then are composed toward satisfying a social exhibit. In light of the fact that their inspiration is a social exhibition, exercises are social whether including diverse selves or not, whether suspecting

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another's shows, exercises, or practices. When as it is found nonexistent among the diverse and heterogeneous spaces. The study of manner falls in the realm of manner sciences. Manner divulges because of certain specific intent, personal soothing, climate coincidence, and satisfaction of the counter parts of the specie. Manner may be categorized as social and non-social manner. Social manners are normally appealing, pleasing, stress removing, and accommodating. Non-social manner may be otherwise which may be making a way through the mob, pushing others for making a space of your own. Research finds that in addition to physical health sports play role in the development of youth in terms of academic achievement and higher self-esteem. In addition to it sports at to competence, connections, confidence, character, and caring. Training in sports divulges into discipline, learning team working, leadership, and management skills. It may be said that sports reveal character and go beyond the development of it. Those who not involved themselves may be identify from those who remain may from it in terms of attainment, peer relationships, interaction with parents, avoiding risk behaviors involvement in volunteer work. Sports contribute toward self-control, persistent, and undertaking responsibility through adapting their sports skill to the real-life situation.

Sports equip the individual to safely navigate and negotiate between right and wrong through the interaction with peer and adults. Sports make the people live peacefully and let other live with all comfort and joy. Since the sports activate form a compendium of conduct; the conduct which stretches the lifelong activates. The quality of conduct does not remain the same. There are certain ingredients of the conducts that make it more enduring among those in the attitude. Attitude is the bent or inclination of mind that one excesses with the exposure to experiences. Sports are not only for completion but are rather for learning is sharing the social behavior. Sportspersons are urged to express their joy in case the win and show tolerance on losing and go for improving the inadequacies. Group formation is leadership trait as well as a social behavior eliminates into sacrifice for the group not for the personal cause, these groups are urged to go by the standard. Human manner is encountered all through an individual's entire lifetime. It consolidates the way they act in light of various segments, for instance, genetic qualities, social norms, focal point of certainty, and mind set. Manner is influenced by particular traits each individual have. These qualities change from individual to individual and can make particular exercises or lead from each person. Social models serve as the regulating balance for the manner to happen. In view of the naturally duplicate feline nature of human society when all said is done, individuals are obliged into taking after particular rules and demonstrating certain practices in the general population enclosure, which conditions the way individuals act. Grouped practices are thought to be either adequate or illegal in unmistakable social solicitations and social requests. Centre assurance can be seen through the religion and speculation of the person. It shapes the way a man thinks and acknowledges unmistakable human practices. Mean can be portrayed as "the extent to which the individual has a conventional or unfavorable examination of the conduct being implied." One's perspective is essentially an impression of the manner he or she will delineate specifically circumstances. Accordingly, human manner is uncommonly affected by the perspectives we utilize once per day. Social brain science considers individual's connection with other individuals, positive and negative social conduct. Affections for others and positive conduct are essential in each individual's life and cause positive feelings. Conversely, hostility and harming others are unsuitable conduct.

FACTORS EFFECTING SOCIAL BEHAVIOR

Genetic Factor

Among many factors that contribute toward socialization are the language acquisition. Through language individual socialize to the optimum if at all they have to have competence. Certain researches have being conducted on the twins, the twins behave in a similar way than in their interaction with the alien people alien people social norms. They were found to have the similar traits as that of their parents social norms due to the practices allied with the content and environment that shape our behaving patterns. Get to gathers very now and then supports in the development of behaving pattern in the particular environment. When there exists a lifestyle, people very safely follow that whereas there would be problem for those who alien to the situation in their learning. Individual wants to be like that is they do their best to learn the desired way of the culture so as to enable them to fit in these situations such as dressing, eating, walking, talking, and interacting.

Creativity

Innovation and creativity are something innate in the people without which living in a cutting edge era would not be possible. Imagination term into creativity but it takes some time as the various segment of the mind are to be operationalized, the example of the development of flying machine and turning it into an instrument of daily use took about 50 years after the first experiment by wright brothers. Instant example is that of seeking the root alternative to the one where there is turmoil.

Core of Faith

The core of faith may be the zest in the religious individual's convections on the basis of capability and confidence. Most of the people believe that there is some super power that controls the action and deeds. Feeling associated with ethics takes different shape when there are demonstration and individual feel difficulty in restructuring the desire, if they go wrong, they start attributing the change in their behaving pattern to

the pulling environment. Such situations are though odd but enable the individual to fit in the culture where they move to, but at the same time, they retain confined to the periphery of their own culture which they were taught and groomed in for a long time staring from childhood.

Attitude

Attitudes are learn and the changes with the exposures to knowledge and experience and expertise. The charming thing is learned and retained, whereas the odd things are casted in to the acceptable ways which are soothing and mollifying. A perspective is a statement of backing or disrespect toward a man, spot, thing, or event. The charming thing around a perspective and individual is that it changes between each individual. Everyone has a substitute perspective towards particular things. A guideline component that chooses perspective is likes and severe dislikes. The more one inclined toward something or some individual the more one would be willing to open up and recognize what they convey to the table. Exactly when one could not care less to something, one will likely get watched and shut down. A specimen of how one's perspective impacts one's human manner could be as direct as taking a tyke to the entertainment focus or to the pro. Adolescents know that they have an astounding time at the entertainment focus so their disposition gets the opportunity to be prepared and positive, however, when a pro is determined, they shut down and get the opportunity to be irritated with the considered desolation. Perspectives can shape personalities and the way people view who we are. People with near attitudes tend to stick together as leisure activities and side hobbies are normal. This does not infer that people with particular perspectives do not team up; the reality of the situation is they do. What it means is that specific perspectives can unite people (e.g., religious social affairs). Dispositions have an impressive measure to do with the mind which uncommonly relates to human manner. The way a human depends on an extraordinary arrangement on what they look like at the condition and what they would like to get from it. Persuasive perspectives are better than anything negative ones as enmity can bring on negative sentiments that as a rule can be avoided. It is up to individuals to guarantee their demeanors completely reflect the practices they have to show up. This ought to be conceivable by assessing their auras and genuinely showing them in people in general eye.

Social Development

Social development insinuates how people make social and energetic aptitudes over the lifespan, with particular respect for youth and energy. Sound social progression licenses us to shape valuable relationship with family, partners, instructors, and different people in our lives. As we create, we make sense of how to better manage our own specific notions and needs and to respond suitably to the slant and need of others.

Social change can be influenced by youth's character, the open entryways they have for social affiliation, rehearses picked up from people, and developmental issue. Case in point is a tyke who has peevishness and who witness viciousness in a terrible position making sense of how to play well with various youngsters. Social progression is about for a people at the point of convergence of change. This suggests a surety that progression frames need to point to the preference of people, particularly the poor people, with an affirmation that people, and the way they team up in get-togethers and society, the benchmarks they pursue such participation, shape change frames, because change is always steady and methodical. Trans-theoretical model/stages of change: Whole deal changes well-being conduct incorporate various exercises and conformities after some time. A couple of people may not be arranged to attempt changes, while others may start realizing changes in their smoking, diet, development levels, and so on. The creation of "period of advancement" is a key segment of the trans-speculative model (TTM) below, of manner change, which prescribes that people are found to be at various periods of planning to get stimulating practices. The levels thought of readiness to change, or period of advancement, has been dissected in the well-being of conduct asked about and found elucidating and anticipating changes for a variety of works including smoking, physical activity, and dietary patterns.[9] The TTM has been associated in various settings.

Stages of change are a heuristic model that describes a sequence of steps in successful manner change:

1. Pre-contemplation;
2. Inspection;
3. Training;
4. Accomplishment;
5. Preservation.

The phases of progress model can be utilized both to comprehend why individuals at high hazard for diabetes will not be prepared to endeavor behavioral change and to enhance the accomplishment of well-being advised. Another use of the phases of progress model in associations and groups includes conceptualizing associations along the phase's of progress continuum as per their pioneers' and individuals' (i.e., workers') status for change. Behavior change stages and their characteristics pre-contemplation: No recognition of need for or interest in change at this stage (in the next 6 months).

1. Thought: Thinking about change (in the following six
2. Arrangement: Planning for change (by and large in the following month)
3. Activity: Adopting new propensities (for no <6 months)
4. Continuous routine of new, more advantageous conduct (more than 6 months and opportunities to come back to old conduct are few). Individuals do not generally travel through the phases of progress in a direct way they frequently reuse and rehash certain stages, for instance people might backslide and backpedal to a prior stage contingent on their level of inspiration and self-viability.

Social Effects of Sports

In spite of the fact that group activities can give sensational recollections that can last in your tyke a lifetime, they are likewise an instructing device for the improvement of essential social aptitudes. Games make the participants focused, yet reasonable and legitimate. Figuring out how to consolidate intensity with respectability will offer your tyke some assistance with cultivating significant connections as he advances through school, and in addition, all through his grown-up life. These social abilities advancements areas are as follows:

Teamwork Skills Development

By playing wears, your tyke discovers that you do not work alone; however, there is a piece of a gathering that should coordinate to accomplish a typical objective. As the American Academy of Pediatrics says, sports show youngsters such abilities as taking after set up principles for the purpose of everybody. Surely, these abilities will offer your kid some assistance with getting along with individuals to become more established, whether in own connections or those are constructed in the working environment.

Long-term Commitments

Another impact of games in the improvement of youth is the building of character. One part of character improvement is having the capacity to respect a long haul duty, whether it is to a group, to the choir at schoolwork. This is a positive quality that will help sometime down the road as someone enters the occupation advertised or develops a long haul relationship. By playing sports, he discovers that he's a piece of a group that is depending on him to remain by them, through the great and terrible times.

Table 1: Reliability statistics

	n	%	Cronbach's alpha	Number of items
Cases				
Valid	15	100.0	913	25
Excluded	0	0		
Total	15	100.0		

Fair Play

Yet, another social expertise that games instruct is that of having the capacity to play reasonably. A diversion, for example, kickball, softball, or baseball, for case, will instruct your tyke the benefit of hanging tight. In softball, for example, he will discover that he should sit tight for the mentor to let him know it is his swing to bat. Prior to that point, he should hold up and watch his colleagues as they are at bat.

Coping with Wins and Losses

Another characteristic that will advantage your tyke as it develops, as indicated by the sports and development site, is the way to benevolently acknowledge a triumph or crush. Focused games will open him to both. It will give him the chance to watch how not to be taking after a win. He will witness the shunning confronted by other kids who boast to individuals from the losing group that they have won. He will likewise discover that there are times when the contradicting group will be better and will beat his squad.

METHODOLOGY

This study was quantitative in nature and survey method was used for the data collection from respondents. Population: The population of the study was comprised all the athletes and the regular students of University of the Punjab. Sample of study researcher selected 50 students enrolled in University of the Punjab on merit base and 50 of these students enrolled on sports base and were professional athletes. Research Instrument Data utilized for this study were acquired by utilizing survey methods. The principle information gathering instrument utilized in this study was a rating scale comprised of a 25 statements. The configuration of rating scale included statements on Likert-scale rating from 5 for strongly disagree to 1 for strongly agree.

Validity and Reliability of Research Instrument

Validity and reliability of the examination instrument was guaranteed by utilizing pilot testing and expert assessment. To guarantee the unwavering quality of the instrument, the Cronbach's alpha (reliability coefficient) was finished through SPSS.

Table 2: Mean±SD and t-values of athletes and regular students about effects of sports on social manner

#	Statements	Athletes *n*=50		Regular students *n*=50		*t*	*P* value
		S	SD	S	SD		
1	I feel comfortable working with others.	2.62	1.244	2.66	1.319	.192	.662
2	I feel comfortable by developing authority by someone.	2.80	1.309	2.84	1.05	3.31	0.72
3	I usually go with others and refrain from making suggestions.	2.98	1.363	3.26	1.29	.025	.875
4	I take lead and let other do the same.	3.28	1.44	3.08	1.44	.081	.777
5	I enjoy social gatherings just to be with people.	2.58	1.31	2.40	1.19	.69	.406
6	I feel to be a learner of skill.	3.42	1.18	3.56	1.14	.370	.544

Table 1 shows that reliability value of the research tool. Fifteen questionnaires, the purpose of pilot testing was to put the data into SPSS to reliability coefficient, that is, Cronbach's alpha which stands 0.913 mean, thereby a highly reliable researching tool.

Table 2 shows that mean of athletes with respect of "I feel comfortable working with others" is 2.62 and mean value of regular students about the statement is 2.66 and table also reveals that the significant value is 0.662 that is >0.05, which shows that there is no significant difference between athletes and regular student's manner about feeling comfortable with others. While the mean values show that as compare to the athletes, the regular student's usually feels comfortable while working with others. Table shows that mean of athletes with respect of "I feel comfortable by developing authority by someone" is 2.80 and mean value of regular students about the statement is 2.84 and table also shows that $P = 0.72$ which is >0.05. Hence, there is no significant difference between athletes and regular student's manner in this case. While the mean value shows that as compare to the athletes, the regular student's feels comfortable being approached by someone in a position of authority. Table shows that mean of athletes with respect of "While in a group of people, I usually go with others and refrain from making suggestions" is 2.98 and mean value of regular students about the statement is 3.26 and table also shows that $P = 0.875$ which is >0.05. Hence, there is no significant difference between athletes and regular student's manner about their decision-making power. While the mean value shows that as compare to the athletes, the regular students usually do that thing that the other wants. Table shows that mean of athletes with respect of "I take lead and let other do the same" is 3.28 and mean value of regular students about the statement is 3.08 and table also shows that $P = 0.777$ which is >0.05. Hence, there is no significant difference between athletes and regular student's manner about this statement. While the mean values show that as compare to the regular students, the athletes feel hesitation while starting a conversation. Table shows that mean of athletes with respect of "I enjoy social gatherings just to be with people" is 2.58 and mean value of regular students about the statement is 2.40 and table also shows that $P = 0.406$ which is >0.05. Hence, there is no significant difference between athletes and regular student's manner about the social gathering. While the mean value shows that as compare to the regular students, the athletes enjoy social gatherings just to be with people. Table shows that mean of athletes with respect of "I feel to be a learner of skill" is 3.42 and mean value of regular students about the statement is 3.56 and table also shows that $P = 0.544$ which is >0.05. Hence, there is no significant difference between athletes and regular student's manner about this statement. While the mean value shows that as compare to the athletes, the regular students usually describe their self as skill learner.

Table 3: Mean±SD and *t*-value of male and female students about effect of sports on social manner

Variable	Male *n*=44		Female *n*=56		*t*	*P* value
	Mean	SD	Mean	SD		
	278	0.580	278	0.668	1.01	0.317

Table 3 shows the difference of social manner of athletes and regular students. Table 3 shows that mean value with respect of male students is 2.78 and mean value of female students is 2.78 and table also shows $t = 1.01$ and $P = 0.317$ which is >0.05. Hence, there is no significant difference between athletes and regular student's according to their gender.

CONCLUSION

This study was conducted to see the effect of sports on the social manner of athletes and regular students. On the basis of findings, researcher concluded that majority of the respondents are agreed with that they have no doubts about their social competence; similarly, respondents are strongly agreed that they would describe their selves as one who attempts to tackle situations. Demographic variables of students are not playing any significant role in their social manner. Comparison of athletes and regular students showed that athletes enjoy social gatherings just to be with people. As compare to the athletes, the regular students usually look their self as other people look them. Regular students usually enjoy in front of large audiences. Athletes and regular students both do not take responsibility for other people. As compare to the athletes, the regular students usually describe their self as socially unskilled. As compare to the athletes, the regular students usually frequently find it difficult to defend their self when confronted with the opinions of others. Overall, it can be concluded that there is a difference of social manner of athletes and regular students, and after careful analysis, it can be said that in some cases, athletes are more social while in other cases, regular students are more social.

Recommendations

- Education department should frequently organize meetings of in regard of social behavior.
- Teachers should be trained students regarding and social behavior.
- Importance of social behavior should be highlighted in curriculum of educational sector.
- Panel discussions about social behavior should be arranged with collaboration of both teaches and student.
- Government should provide all the basic facilities to the students for their personal development.

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Volume 39 • Issue 1 ISSN 2231-3265

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Collaboration with
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Fitness and Sports Science Association

International Journal of Health, Physical Education and Computer Science in Sports
A Peer Reviewed (Refereed) International Research Journal - ISRA Journal Impact Factor 7.217

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Research Article

A way toward improve immunity power during COVID-19 pandemic

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ABSTRACT

COVID-19 or coronavirus was declared as a global pandemic by the World Health Organization. And while the countries are grappling with the imminent dangers that this virus poses to humanity, there are few key measures that individuals can take to fight this pandemic. While it is crucial to mention hygiene standards like washing your hands frequently, especially if you have traveled by public transport. Using an alcohol sanitizer in case you are traveling to disinfect your hands, wearing a mask (cover your nose and mouth), and avoiding touching your hand or mouth. There are also certain methods to improve your immunity which is paramount at this juncture. Individuals in certain pre-existing illnesses such as diabetes, hypertension, cardiovascular disease, and respiratory issues are at a higher risk of having COVID 19 complications, it also aggravates with age as the general immunity reduces as you get older. In the younger generation with no underlying illnesses, COVID 19 can result in a minor infection, provided you have a robust immunity, and do not engage in activities like smoking or vaping to combat the onslaught of the virus. Here is a list of measures you can undertake to improve your immunity. The immune system is a set of composite networks of cells and proteins that protect our body from germs and infection. It keeps the record of each germ that the system has destroyed so that it can recognize and defend the germs immediately the next time they try to enter the body. There are a number of components that comprise the immune system; they include white blood cells, antibodies, bone marrow, thymus, spleen, complement system, and lymphatic system. One important lesson that COVID-19 has taught us is that we cannot rely too much on our health-care systems. While modern medicine has come a long way, there are still plenty of diseases that we do not have the slightest idea about, and the only sane measure that we can take against these unseen enemies is to strengthen our immune system as much as possible by examining and augmenting it at regular intervals.

Keywords: COVID-19, Illnesses, Pandemic and immune system

OVERVIEW

Immunity or immune system is that innate defense mechanism which shields your body from a majority of infections and illnesses. This mechanism can be nourished and maintained with healthy food and good exercise.

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WHAT IS IMMUNITY?

We are always used to taking expensive and insane levels of different types of medicines whenever we fall ill or have any disease. What we tend to forget every time is that we are God's most elaborate creation and that we as humans have been naturally gifted with the innate ability to ward off any disease without the help of any medicine or pill. It is only when, due to our incompetency, our innate ability weakens that our

body becomes more prone to contracting any sort of disease. Immunity or immune system is that innate defense mechanism which shields your body from a majority of infections and illnesses. This mechanism can be nourished and maintained with healthy food and good exercise. Especially now when we are in the wake of a pandemic and respiratory illnesses are on the rise, it is very important for individuals to know how to increase immunity power. This will be beneficial in keeping them safe from any disease or illness.

TIPS TO IMPROVE IMMUNITY POWER

Now that we know how important it is to increase your immunity let's understand some ways in which we can increase the immune system power of the body. Before we begin with discussing the tips on how to increase immunity power, one must understand that increasing or simply maintaining your body's immune defense is not rocket science and just requires mere discipline and unconditional commitment toward your own health. We will be segregating these tips into three primary categories, where we'll be talking about foods, exercise, and general guidelines to be followed for increasing immunity while staying at home.

EXERCISES TO IMPROVE IMMUNITY POWER

Yoga

Yoga is one of the best forms of exercise to keep you fit and healthy, which can also be practiced easily at home without the hassle of moving out. Following are some ways to practice yoga:

- Meditation
- Surya Namaskar
- Several forms of asana (postures) dedicated to a particular body part for exercise.

Treadmill Workout

This is a form of cardio that can be pursued daily for a limited duration to improve stamina and strengthen your immune system. You can keep a target of running on a treadmill for at least 30 min daily, you may increase the speed or duration of the workout based on comfort and stamina.

Aerobics

An interesting form of exercise combines the best of dance with workout. It is instrumental in keeping you active throughout the day and also sweating a few calories, thus causing loss of weight.

Pilates

Pilates is one of the simplest and best forms of stretching exercise that helps you shed off those extra kilos, improve your core balance and muscle endurance. You can follow the below-mentioned steps to achieve the best results.

SUPINE PILATES MOVEMENTS

- Bridge: Press your weight evenly onto the feet, shoulders, and arms as you squeeze and lift your hips into the air until your body forms a straight line between your shoulders and knees hold the pose as you inhale and exhale three times, lower yourself back to the floor.
- Leg circles: Keep your hips stable as you trace circles in the air with your right leg, reverse the direction of the circle, and trace five circles going the other way. Put your leg back on the ground.
- Abdominal criss-cross: Pull knees to the chest. Raise your head and neck and place your hands behind your head. Extend your right leg out straight and gently twist your body, so your right elbow moves toward your left bent knee. Bend your right knee and bring it back to your chest again, and as you do so, straighten your left leg out and gently twist your body, so your left elbow moves toward your right bent knee.

PRONE PILATES MOVEMENTS

- Swan: Place hands under shoulders, press pubic bone and palms against the ground as you lift the face, neck up to chest off the ground, bending the lower back. Inhale, exhale, and put yourself back down.
- Swim: Straighten the arms in front, press the thighs and heels, and lift face and neck off the ground, lift your arms and legs as you complete a swim stroke in air.
- T: Form a T with hands raised off the ground and spread perpendicular to the body, hips, and thighs pressed, with feet pressed together and raised above the ground.

PLANKS

One of the best forms of exercise that helps you improves body balance and tone down the extra flab in the abdomen region. One can perform any form of the plank based on the intention of workout.

- High plank – Rest your toes and palm on the ground keeping hands and legs straight in the push-up position, body lifted off the floor hold for at least 10–15 s.
- Forearm plank – Rest your toes, forearm, and elbows on the ground keeping back straight in the push-up position, body lifted off the floor hold for at least 10–15 s.
- Side plank – Rest your toes and right palm on the ground, rotate the body to the left, balance on the right arm with both feet stacked on one another, keeping the other hand raised in air and legs straight, hold for at least 10–15 s.
- Reverse plank – Sit up straight with your legs stretched out in front of you. Place your hands on either side of your body, with your fingertips facing toward your legs. Keep your feet on the floor, point your toes, and straighten your

legs as you lift yourself with your arms while maintaining contact of palms and heels to the ground.

EXERCISE BIKES

Workout on an exercise bike can help you tone your legs and give them a good shape. A simple or exquisite exercise bike can be bought online as per the individual's choice. Keep a target of at least 30 min daily varying speed of bike and duration of workout with respect to stamina and comfort.

FOODS TO INCREASE IMMUNITY POWER

Fruits

- Citrus fruits – Fruits such as oranges, lemons, sweet lime, and kumquat that are rich in Vitamin C help boost immunity power.
- Watermelon – It is packed with Vitamin A, B, and C and essential minerals, including potassium and magnesium. It can be consumed raw, diced into pieces or in the form of fresh juice without adding sugar.
- Pomegranate – It is rich in fiber, Vitamins C and K, and essential minerals like potassium. This fruit can be eaten raw or in the form of fresh juice without sugar.

Vegetables

- Garlic – Garlic is rich in flavonoids and packed with the goodness of antimicrobial properties that help combat sickness or any incoming infection.
- Mushroom – A good source of essential minerals such as zinc, magnesium, copper, and potassium, some amount of fiber, Vitamin B, and low on calories.
- Green veggies – Enriched with the goodness of carotenoids, fiber, and minerals such as iron and calcium and Vitamins C and K, respectively.

Dry Fruits

- Almonds – Contains Vitamin E, fiber, protein, and micro minerals such as manganese and magnesium.
- Walnuts – Contains antioxidant properties filled omega-3 fatty acids, Vitamins E and K, monounsaturated and polyunsaturated fats, iron, selenium, calcium, and zinc like minerals.
- Pistachios – Contains fiber, potassium, phosphorus, and some amounts of carbohydrates and fats.
- Cashews – Contains significant levels of carbs, fats, and some amounts of protein, calcium, and iron.

Beverages

- Tea – According to a study conducted in 2003, the naturally occurring chemicals in tea called alkylamines to help strengthen the immune system.
- Seeds.
- Chia – Packed with calcium, manganese, magnesium, phosphorous with some amounts of fiber and fats.
- Flaxseed – Loaded with carbs, fiber, proteins and saturated, monounsaturated and polyunsaturated fats.

Supplements

- Probiotics – Probiotics for those who are unaware of the term are basically live bacteria and yeast that provide health benefits to your body upon consumption. So how do you ensure the eating of items that you cannot see with your naked eye? Well, fermented foods such as yoghurt, sauerkraut, pickles, kimchi, or sourdough contain natural probiotics and should be consumed to maintain gut microbiota and eventually improve the immune defenses.
- Herbs – Herbs such as elderberry and Andrographis help reduce the incidence of illnesses and increase the resistance of the body toward incoming diseases.
- Raw Tulsi leaves – Tulsi contains anti-inflammatory properties that help relieve headache, cold, or flu and lower the risk of heart disease and inflammatory bowel conditions.

GENERAL GUIDELINES TO IMPROVE IMMUNITY POWER

Getting Enough Sleep

Research has shown that sleep deprivation can increase the levels of the hormone cortisol in the body, which upon prolonged elevation, can suppress the immune system. Thus, it is very important to get enough quality sleep at night.

Stress Management

Overload of stress has shown to create hormonal imbalances in the body, which eventually tend to weaken your immune system. Thus, remain stress-free, look out for activities such as meditation, dance, painting, or anything else that will help you bust your stress and attain mental peace.

Cut Down on Consumption of Alcohol

Before we talk about foods to improve immunity, it is essential to know all those things that cannot be consumed or whose proportions have to be restricted to help improve immunity. Alcohol is one of those things that need to be restricted when it comes to maintaining good health and immune system. Excessive consumption of alcohol impairs the immune system and increases the vulnerability of lung and other respiratory infections.

Avoid Smoking or Tobacco in Any Form

It is high time people understand that "Smoking Kills" is not merely a statutory warning but a reality. Smoking or tobacco consumption impairs your immune responses, raises the risk

of bronchitis, pneumonia, and other respiratory illnesses in adults, and causes middle ear infections in kids.

Soaking in the Sun

One of the best ways on how to increase immunity will always end at on the door of improving the levels of Vitamin D. It is basic textbook science that we all have read in school that early morning sun rays are amongst the best sources of Vitamin D. Hence, wake up early, bask in the sun's glory, let those rays fall on you for the duration of about 15–20 min. This much time is sufficient to let the magic of Vitamin D work and supercharge your immune system.

Hand Hygiene

Considering the fact that hands are always in contact with something, especially mobiles these days, it is a no brainer that they are prone to the maximum number of germs. When these hands touch your eyes, nose, or mouth, it becomes all the way easier for these germs to enter your body. Thus, to maintain good hand hygiene, ensures that you frequently wash your hands with soap water or sanitize them.

Maintain a Healthy Weight

There is no such thing as ideal weight, but definitely, something called 'healthy weight.' People tend to go on these enormous diets and restrict themselves from enjoying the delicacies they love. As a result, they tend to overeat, get overweight, or even in some cases, become very weak. Thus, it is very important to realize what is a healthy weight for your body type, height, and age. Maintaining a healthy weight overall ensures that you stay healthy with good immunity.

Laughter Therapy

Laughter is the best medicine', sounds cliche, right? But it is true! Laughing out loud, staying positive and calm, and worrying less over your problems can help you in ways you cannot even imagine. Hence, ensure that you always surround yourself with laughter, fun, and enjoyment. This is one of those weird sciences that will actually not be able to explain itself to you on how it eventually increases immunity power but something whose effects will eventually be experienced by you.

Thus, instead, if getting sick and then relying on expensive and not so tasty medicines, it is best you boost your immunity and empower yourself in this combat against any incoming disease or illness.

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Volume 39 • Issue 1 ISSN 2231-3265

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Research Article

Active mothers give birth to healthier children

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ABSTRACT

Introduction: Physical activity is one of the best investments to have good health. For pregnant mothers, engaging in physical activity during this period is even more important as it brings health benefits to them and the child, thus creating a range of positive values for a healthier society and lowering the costs of ensuring their health. This study seeks to shed light on the level of information of pregnant mothers about the benefits that mothers and children have from the mother's engagement in physical activity during this period. **Methods:** The research is based on the questionnaire distributed in Tirana to 436 pregnant mothers in their first birth. Respondents were asked about the level of information and physical activity they perform and to derive the relationship between physical activity and body weight index (BMI) before and at the end of pregnancy, statistical data processing was done using the SPSS program. **Results:** The results show a low level of information and engagement in physical activity during this period and can serve to lay the foundations in designing a national strategy in promotion by state structures that provide this type of service to this group, with the right quality and place, at the lowest possible cost. **Conclusion:** Based on the results, inactive mothers were more likely to give birth to unhealthy babies and active mothers gave birth to healthier babies. Recommendations should be made to women in general that physical activity is vital to a healthy lifestyle. Above all, this area should be one of the priorities due to the consequences COVID-19 has created.

Keywords: Economic status, Obesity, Physical activity, Pregnant mother

INTRODUCTİON

The situation COVID-19 made many people to reflect, to take attention on priorities. With the responsibility as specialists in physical activity and sport areas, we decided to publish this study that emphasizes the importance of the mother wellness for herself and the baby. There is one of the salient WHOs slogans of recent years "Children's health is tomorrow's wealth." This is one of the priorities all over the world. Children are to a great extent determined by factors that operate in utero. At birth, fetal weight is viewed as the crucial parameter that is directly related to the health and nutrition of the mother, and on the other hand, is an important determination of the chances of the newborn to survive and experience healthy growth and development in the future. Above all, physical activity and sport can support Agenda 2030 (SDGs). It plays an important role to contribute to achieving goals for sustainable development. This exploratory study highlights the real situation in which the product – physical activity and sports – contributes to improving the quality of life.

In Albania, the benefits of physical activity during pregnancy do not appear to be widely publicized, and some consider the

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theme a taboo. Based on our analysis, we will show that active women give birth to healthier babies.

SUMMARY OF LITERATURE

According to Dr. James F. Clapp III, a pioneer in this field of research, "I'm finding that women can continue a very vigorous regimen of exercise that is much higher than recommended by college guidelines, without any evidence of harm, and with some evidence of benefit." "Both women and babies tend to tolerate labor better, and the mothers have a higher rate of quick labor, and spontaneous birth, and recover faster." Inactivity contributes to heart disease, aches and pains, fatigue, osteoporosis, and unnecessary weight again. A large body of evidence suggests that pre-pregnancy weight and antenatal weight gain are important determinants of fetal growth (Maher *et al*., 1993). Current guidelines (ACOG, 2002; Davies *et al*., 2002) point out that if an active woman gets pregnant, there is no reason to discontinue exercising. However, precautions should be taken and some specific activities should be avoided such as scuba diving and those involving in a risk of falling. Most original studies (Clapp 3rd *et al*., 2000; Hatch *et al*., 1998; Sorensen *et al*., 2003; Spinillo *et al*., 1996) and reviews (Lokey *et al*., 1991; Pivarnik *et al*., 1998; Riemann *et al*., 2000; Wolfe *et al*., 2003) on physical activity and pregnancy focus on the effects of exercising through pregnancy, assessing possible risks or benefits to the mother and her baby. Until a few decades ago, pregnant women were advised to reduce their activities and even interrupt their occupational work, especially in the final stage of their first pregnancy (Batista *et al*., 2003). In fact, there appears to be a consensus that maintaining light to moderate physical activity during an uncomplicated pregnancy provides various benefits for the woman's health (Lima *et al*., 2005). This is explained by the fact that physical activity causes a thermal response and circulatory redistribution, shifting the blood concentration from the uterus and placenta to the extremities. This process helps reduce and prevent lower back pain, fosters lower liquid retention, reduces cardiovascular stress, increases the oxygenation capacity, decreases blood pressure, reduces the risk of gestational diabetes, prevents thrombosis and varicose veins, and helps control gestational weight gain (ACOG, 2002; Shills *et al*., 2003; Hills *et al*., 2004).

Especially during the second half of gestation, regular exercise may superimpose increasing iron and oxygen transport demands or sweating (Peeling *et al*., 2008). Maternal physical activity habits during pregnancy could also modulate fetal cardiovascular response to a single stimulus. There is a need of strong evidence providing further support to the notion that healthy gravidance can safely engage in regular physical activity even at late gestation (Barakat *et al*., 2008).

In Albania, the participation of the females in physical activities and sports is decreasing for many reasons. One of them is that they do not have the proper information about the benefits of PA before and during pregnancy and all these factors influence directly in their possible pregnancy.

Based on the above research, we expect to find in our study that active mothers give birth to healthier babies.

Origin of the Data and Methods

In Tirana, Albania, there are two main maternity hospitals from the public sector and most of the births take place in these hospitals. We analyzed the maternity hospital statistical data of the medical cards on January–February, May–June, and October 2019 period taken from the main maternity archives and two local maternity hospitals of Tirana only for the women that have had the first pregnancy. Women who delivered a live birth in this region between January and February 2019, May 2019, and September–October 2019 ($n = 648$) 18–45 years old were eligible for inclusion in this study.

Women were excluded from the analysis if they had heart disease, multiple gestation, preterm delivery, prior low birth weight infant, uterine bleeding, chronic hypertension, and those who self-reported heritages problems. From total 648 women, 122 of them were excluded from the analysis for these contraindications (116 of them missing information from the medical cards, most of them from the local areas, six others for the inheritance problems). Information regarding study variables was obtained from personal interview and from abstraction of the medical records. The total cohort studied was that of 436 pregnant women (women in their first pregnancy), 364 of them were from Tirana city and 72 from the local areas. Note that type of employment was taken as surrogates for mother's level of activity during pregnancy.

Study Variables

This study investigates the actual situation of pregnant women in these variables:

Age/height/weight in the first 3-mester/weight in the third 3-mester/baby birth weight/employment status before pregnancy/employment status during pregnancy/health problems/socioeconomical level/BMI/gestation weight gain.

Leisure activity based on the employment status among 436 pregnant women and explored the role of this variable on the gestation weight gain and kind of delivery. Mothers were interviewed soon after delivery.

BMI Variable

We have collected all the pre-pregnancy weight and height data, from the medical cards to calculate the BMI. We have divided them into three groups according to the new guidelines (IOM).

Statistical Analysis

The graphics below display relationships among the variables being studied. The first graphic is a scatterplot matrix that describes the relationships among the continuous variables, while in the trellis graphics following the scatterplot matrix, we view the relationship between the response variable, child's weight, and categorical predictors.

In the scatterplot matrix, here, a six-by-six arrangement of scatterplots, we see in the top row, the relationship between child's birth weight and each of the continuous predictors, mother's age, height, first and third trimester weight, and body mass index. There appears to be a slight negative relationship between child's birth weight and mother's age, while relationships between child's birth weight and mother's height, trimester weight, and BMI appear to be positive. In the lower right hand quarter of the matrix, we note the strong linear relationship among the trimester weights and BMI. This implies that only one of these three weight variables needs to be used in constructing a parsimonious model of child's weight [Figure 1].

In the three trellis diagrams below, we see that the distribution of child's birth weight in the low economic level, low work type, and normal delivery type appears to be Gaussian (i.e., normally distributed). It also appears that there is more variability in other economic levels, work type levels, and in C-section delivery type. In addition, mothers in low economic level deliver babies whose weights are slightly less than mothers in the other economic levels [Figures 2-7].

To verify our impressions with respect to variances and means gained from the above trellis graphics, we conducted a series of hypothesis tests (attached Tables 1-4). We conducted F-tests to compare variances and constructed 95% CI for the difference between means to test for equality of means. Table 1 summarizes the results of these tests. There was only one significantly different pair of means. The average birth weight of children delivered by C-section was significantly less than the average birth weight of children experiencing a normal delivery. This difference is between 6.82 and 212 g. To further describe differences in birth weights among various groups of women, we fit a multiple regression model regressing baby's birth weight on mother's age, height, first and third trimester weight, delivery type, health status, economic level, and BMI. This model confirmed what we noted above. Furthermore, the baby's birth weight is significantly correlated with the mother's weight in her third trimester.

On the other hand, there were five pairs of variances that differed significantly. The birth weights of children delivered by mothers who were employed in middle level work were more heterogeneous than those delivered by mothers who were employed in low level work.

Summary Statistics of Categorical Variables by Baby's Weight

To further investigate the relationship between our predictors and baby weight, we categorized baby weight into underweight, normal, and overweight and conducted a polychotomous logistic regression analysis. We used this approach because the

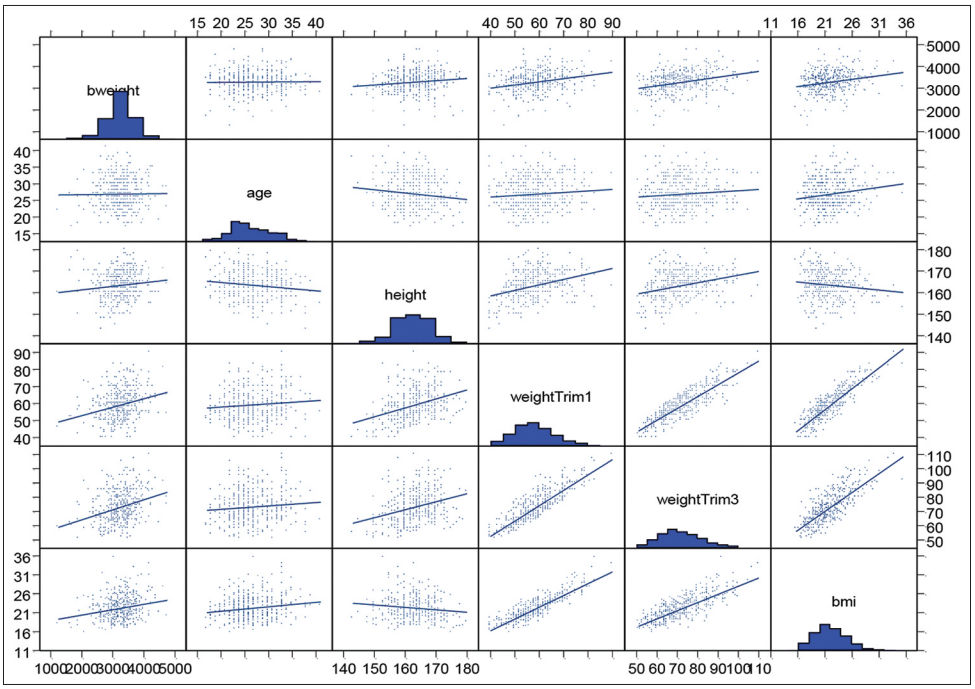

Figure 1: Scatterplot matrix depicting relationships among continuous variables

Table 1: Summary statistics of categorical variables by baby's weigh

	Mean	Variance	SD	F-test	95% CI
Employment before pregnancy: No	3271.58	226,357.57	475.77	1.04	(−107, 74.2)
Employment before pregnancy: Yes	3288.07	235,955.96	485.75		
Work activity: Low level	3312.82	218,236.71	467.16	1.24	(−124, 283)
Work activity: Middle level	3233.33	269,571.43	519.20	1.12	(−19.1, 242)
Work activity: Office workers	3201.60	245,459.31	495.44	1.10	(−190, 254)
Delivery type: Normal	3250.84	193,349.92	439.72	1.71*	(−212, −6.82)
Delivery type: Cesarean section	3360.35	329,778.45	574.26		
Employment during pregnancy: No	3312.82	218,236.71	467.16	1.24	(−124, 283)
Employment during pregnancy: Yes	3233.33	269,571.43	519.20	1.12	(−19.1, 242)
Employment during pregnancy: Office employed	3201.60	245,459.31	495.44	1.10	(−190, 254)
Health problems: No	3281.32	209,068.41	457.24	1.63*	(−109, 134)
Health problems: Yes	3268.77	340,355.40	583.40		
Economic level: Low economic level	3269.30	223,773.73	473.05	1.35*	(−149, 161)
Economic level: Middle economic level	3263.66	302,280.68	549.80	1.11	(−176, 88.7)
Economic level: High economic level	3313.06	201,739.17	449.15	1.50*	(−226, 127)

Table 2: Underweight babies versus normal weight babies

	t-value	*P*-value	OR	lclOR	uclOR
Age <35	0.01	0.99	See note	See note	See note
BMI obese	−0.01	1.00	See note	See note	See note
BMI overweight	1.98	0.05	3.48	0.99	12.26
BMI underweight	3.22	0.00	6.05	1.98	18.54
Weight gain good	−0.30	0.77	0.85	0.29	2.49
Delivery type normal	−1.43	0.15	0.45	0.15	1.38
Employ before unemployed	0.29	0.77	1.20	0.35	4.15
Employ during employ office	−0.07	0.94	0.94	0.19	4.67
Employ during unemployed	−1.06	0.29	0.42	0.08	2.18
Health problems yes	0.45	0.65	1.32	0.39	4.49
Econ level low	0.94	0.35	1.90	0.48	7.50
Econ level middle	0.74	0.46	1.77	0.38	8.34

Table 3: Underweight babies versus overweight babies

	t-value	*P*-value	OR	lclOR	uclOR
Age <35	0.01	1.00	See note	See note	See note
BMI obese	−0.01	0.99	See note	See note	See note
BMI overweight	0.99	0.32	1.91	0.52	7.07
BMI underweight	3.57	0.00	18.02	3.56	91.23
Weight gain good	0.17	0.86	1.11	0.32	3.93
Delivery type normal	0.16	0.87	1.13	0.25	5.09
Employ before unemployed	1.78	0.07	4.10	0.84	20.00
Employ during employ office	−0.53	0.60	0.61	0.09	4.04
Employ during unemployed	−1.71	0.09	0.21	0.03	1.30
Health problems yes	0.55	0.58	1.47	0.36	6.03
Econ level low	−0.76	0.45	0.49	0.07	3.26
Econ level middle	−0.23	0.82	0.80	0.12	5.49

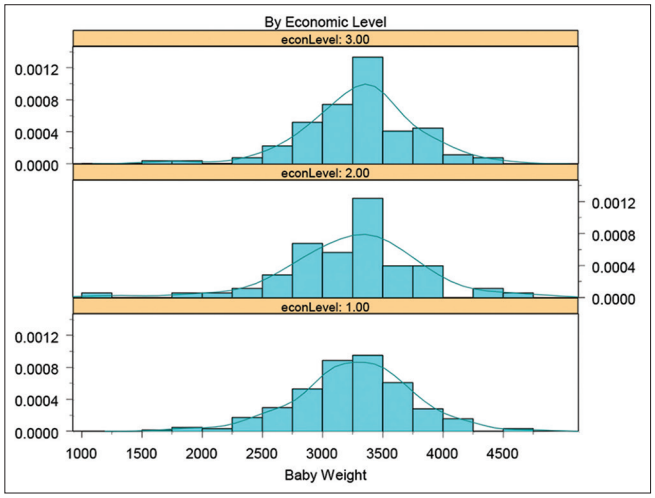

Figure 2: Trellis display depicting distribution of baby's weight (by economic level)

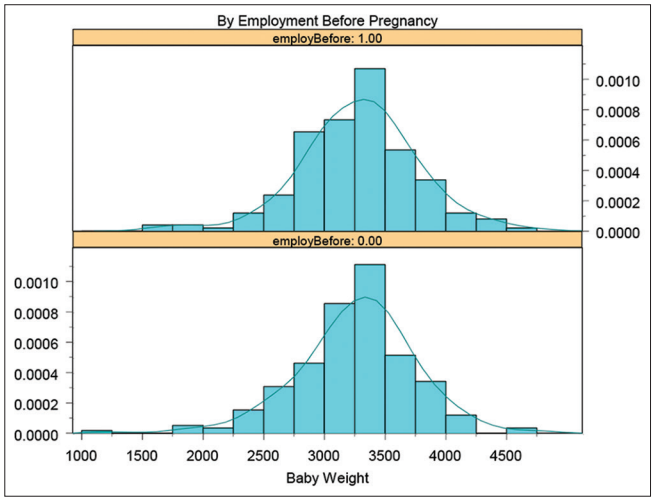

Figure 5: Trellis display depicting distribution of the baby's weight (by employment before pregnancy)

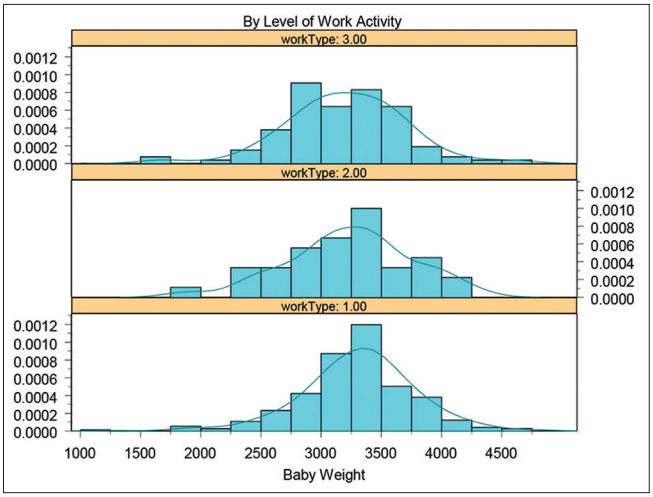

Figure 3: Trellis display depicting the distribution of the baby's weight (by level of work activity)

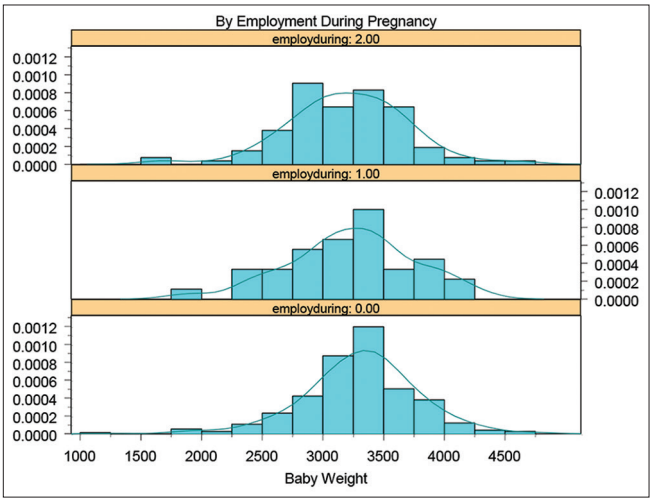

Figure 6: Trellis display depicting distribution of the baby's weight (by employment during pregnancy)

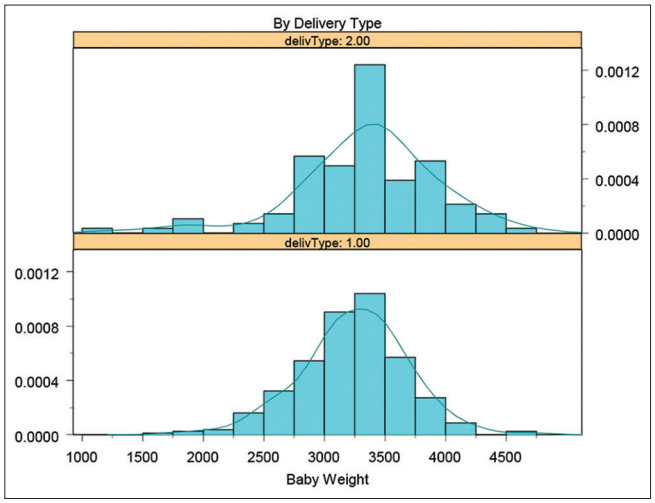

Figure 4: Trellis display depicting the distribution of the baby's weight (by delivery type)

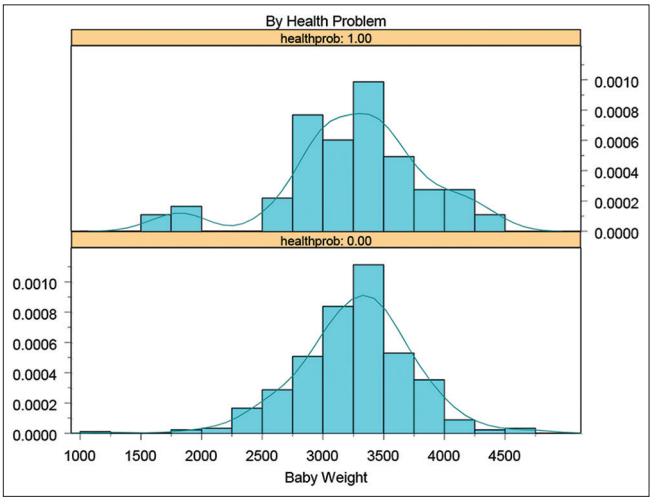

Figure 7: Trellis display depicting distribution of the baby's weight (by health problem)

relationship between predictors and birth weight was expected to be nonlinear, that is, both underweight and overweight babies are not normal thus we may be interested in predicting normal weight babies as opposed to those who are not.

As shown in Table 2 and caterpillar plots bellow, both BMI overweight and BMI underweight were significant predictors of the difference between underweight babies and normal weight babies. The odds of an overweight mother giving birth to an underweight baby are 3.48 times that of a normal weight mother and the odds of an overweight mother giving birth to an underweight baby are 6.05 times that of a normal weight mother. Both overweight mothers and underweight mothers were more likely to give birth to underweight babies. In distinguishing between underweight and overweight babies, BMI underweight was significant. The odds of an underweight mother giving birth to an underweight baby are 18 times that of an overweight baby. Underweight mothers were significantly more likely to

Table 4: Normal weight babies versus overweight babies

	t-value	*P*-value	OR	lclOR	uclOR
Age <35	0.78	0.44	0.63	2.05	0.19
BMI obese	2.48	0.01	0.19	0.73	0.05
BMI overweight	1.86	0.06	0.58	1.04	0.32
BMI underweight	1.55	0.12	2.20	0.80	6.05
Weight gain good	1.09	0.27	1.33	0.79	2.25
Delivery type normal	2.19	0.03	1.88	1.06	3.36
Employ before unemployed	1.28	0.20	1.45	0.81	2.58
Employ during employ office	0.84	0.40	1.51	0.56	4.08
Employ during unemployed	0.49	0.62	1.26	0.49	3.24
Health problems yes	0.17	0.87	0.95	1.82	0.49
Econ level low	1.65	0.10	0.58	1.12	0.30
Econ level middle	0.49	0.62	0.83	1.78	0.38

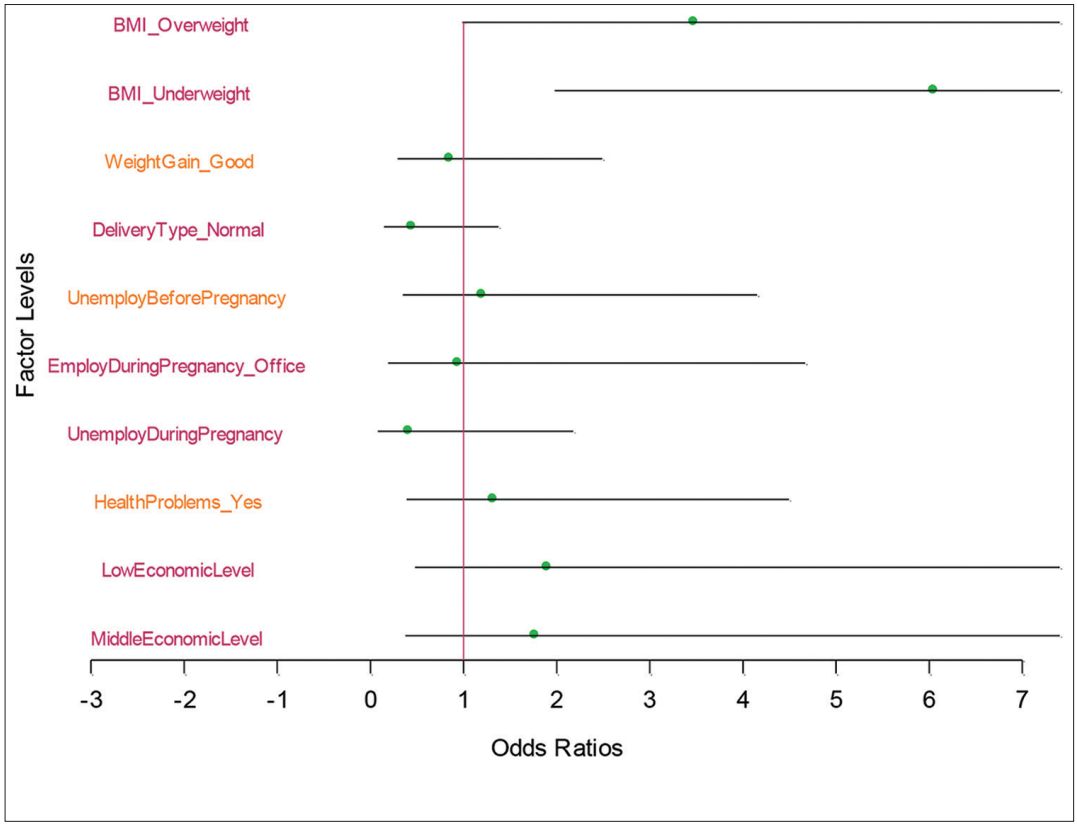

Figure 8: Caterpillar plot depicting estimated odds ratios underweight babies versus normal weight babies

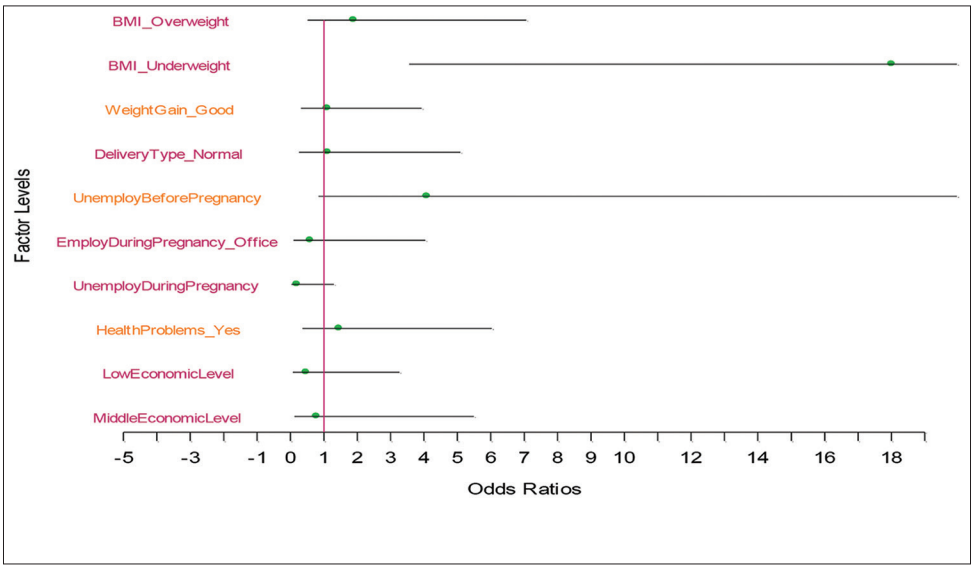

Figure 9: Caterpillar plot depicting estimated odds ratio underweight babies versus overweight babies

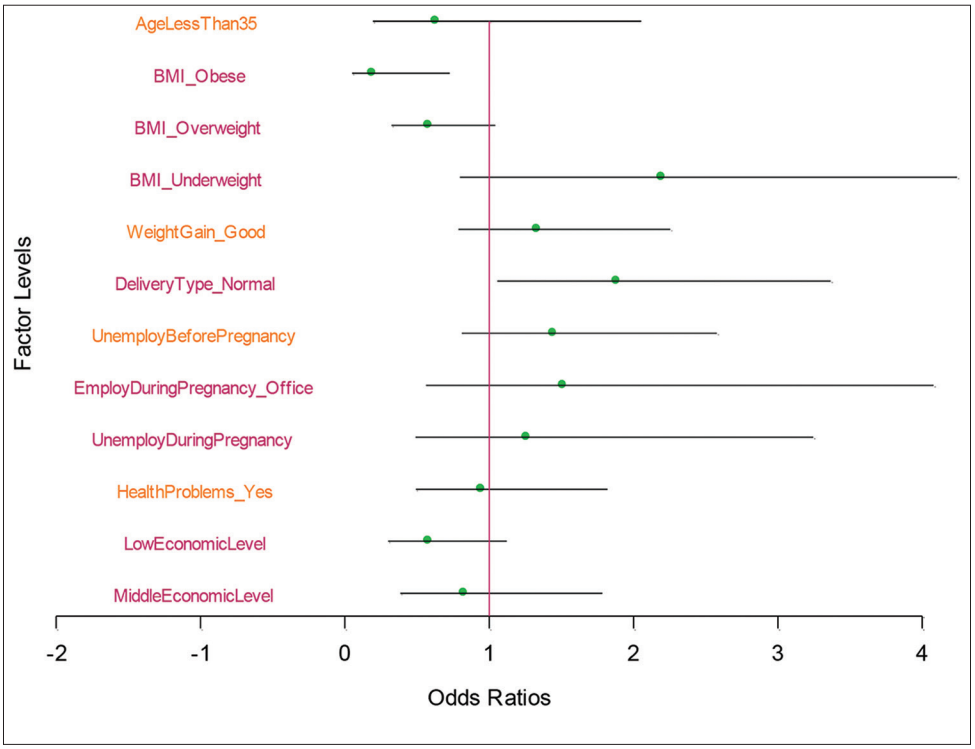

Figure 10: Caterpillar plot depicting estimated odds ratio normal weight babies versus overweight babies

give birth to underweight babies. In discriminating between babies of normal weight with overweight babies, both BMI obese and BMI overweight significantly predicted overweight babies (odds ratios of 0.19 and 0.58). Obese and overweight mothers are more likely to give birth to overweight babies, while mothers experiencing normal delivery are less likely (OR = 1.88) to deliver overweight babies. Unemployed mothers were more likely (OR = 4.1) to deliver underweight babies while employed mothers were more likely (OR = 1/0.21) to deliver overweight babies [Figures 8-10].

Underweight Babies versus Normal Weight Babies

Underweight Babies versus Overweight Babies

Normal Weight Babies versus Overweight Babies

CONCLUSION

Based on the results, inactive mothers were more likely to give birth to unhealthy babies and active mothers gave birth to healthier babies. Recommendations should be made to women in general that physical activity is vital to a healthy lifestyle. We need to promote new guidelines for stressing the importance of preconception counseling to ensure women of child-bearing age to be at a healthy weight before they become pregnant. Healthy active women give birth to healthier babies who grow to be healthier children and adults, hence, a better and healthier society.

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Typesetting by

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No: 9, Sabapathy Avenue,
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ISSN 2231-3265

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