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## Research Article

# Youth empowerment project and service delivery in the case of the University of Gondar youths' development center

**Abiot Kassaw**

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### ABSTRACT

This study described youth empowerment project and services delivery of University of Gondar youths' development center in Gondar city administration at Arada sub-city. A qualitative single instrumental case study approach was used. A purposive sampling technique was utilized. The researcher has included ten in-depth interviewee participants, eight key informants, and two focus group discussions in the study. Data were analyzed using cross case analysis. During analysis, the researcher ensured that the data were transparent, understandable to the reader, and trustworthy using multiple data collection methods and data triangulation. The findings indicated that youth empowerment projects and its services delivery influenced by the unfulfilled services and management system of the youth center and exaggerated and false reports. Youth center provided entertainment, empowerment, career progression, information, and participatory activities. Due to these activities, youth have brought behavioral changes, developed different skills, and most importantly taken training to develop their talents, to get peer education and to establish a good friendship. The study found that there is no participation of youth with disability and less participation of female youth in the center. In addition, lack of good management, lack of family involvement in youth participation, negative perception toward the services, lack of clinical, and non-clinical materials and wastage of resources are among the major challenges that hindered youth center to give full package services to youth. Inability to go in line with the planned procedures, failure to have a detailed plan, inability to have regular review meeting with the concerned stakeholders, and failure to consult the major beneficiaries (youths) regularly, location, and size of the center are among the major challenges of the project. The study findings have implication to youth empowerment practice improvement, research, and advocacy.

**Keywords:** Empowerment, Management system, Service delivery, Youth center, Youth

### INTRODUCTION

As one of the vital issues, empowerment of youths is a very crucial for the progression and improvement of countries all over the world in general and specifically for youth's self-development, participation in productive activities, control over their own lives, and people surrounding them and their family. In line with this, Ethiopia has formulated youth-focused policy as "The Ethiopian National Youth Policy in 2004 with the vision to create an empowered young generation with democratic skills, and ideas, who is equipped with knowledge and professional skills, and gets organized and built on ethical integrity." To achieve these goals institutions like higher education institutions take community services as one of their missions. Similarly,

University of Gondar plays a key role in community lives and the youth center at Gondar city administration is an exemplary. Structure of organization, skilled and committed personal and service delivery systems are the major factors which hinder the effectiveness of youth's empowerment centers to give its service to the fullest capacity. Service delivery is the provision of comprehensive and coordinated services to people in need. Human service delivery is complex in contemporary world, with high community expectations, competing demands and often delivered under fiscal constraints. United Nations (1996) identified fields of action that is needed internationally as education, employment, health, environment, leisure-time activities, girls, and young women, and effective participation of youth in the life of society and in decision-making, in which most of them are youth services. The youth services is part of group services that make up well-being, play key role in life's of young people and provides opportunities to participate in ranges of activities that are beneficial to personal, social, and educational well-being (Bond, 2010). Youth services are

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also part of youth development that is about enabling young people to receive education, be healthy, have access to decent employment, and gain civic and political empowerment. A high youth development environment should guarantee young people access to these needs and enable young people to develop their capabilities and full potential (Common Wealth, 2013). In line with this, University of Gondar youth center is established to empower youth's of the Gondar city and surrounds as one project of reaching the community. However, the intended goals to contribute to the target groups' need improvement in both qualities of service delivery and range of inclusions of the beneficiaries. As a member of the organization and project implementer, the researcher did this assessment for the betterment of the center to address its goal to the fullest capacity. Therefore, the researcher was try to assess the relevance of the current organizational structure, system of service deliveries and controlling mechanisms, inclusion of services, and suitability of the place for variety of range of services.

### General Objective of the Study

The general objective of this study is to assess the appearance of the youth empowerment project and its service delivery status of the University of Gondar youth's center at Gondar city administration.

### Specific Objectives of the Study

The objectives of the study are as follows:

- To assess the wide-range performance of youth empowerment projects in the youth center of the University of Gondar
- To describe the services being provided by the University of Gondar youth's center
- To identify activities that youth might suggest for improvement of services delivery
- To identify youths benefits from the services being provided by the center.

## MATERIALS AND METHODOLOGY

The study was conducted at University of Gondar youth's center in Gondar city administration. A qualitative single instrumental case study approach was used. A purposive sampling technique was utilized. The researcher has included ten in-depth interviewee participants, eight key informants, and two focus group discussions in the study. Data were analyzed thematically using cross case analysis qualitatively. During analysis, the researcher ensured that the data were transparent, understandable to the reader, and trustworthy using multiple data collection methods and data triangulation.

## RESULTS AND DISCUSSION

The current study found out that when youth spend their time at the youth center by engaging in recreational and sports

activities, they may have less probability to be engaged in addiction and deviant behavior. This is strongly fitted with the evidence in the literature of the study by Omboto *et al.* (2013) found that recreational activities will reduce crimes committed out of excitement games because engaging in sports and other activities will leave them with no time for destructive activities. This implies that the more youth are engaged in recreational activities, the less probability youth have to be involved in crime or misbehaviors. At youth centers, young people value the non-health benefits, including the availability of recreational facilities, prevention of idleness, building of confidence, improving interpersonal communication skills, vocational training, and facilitation of career progression. This strongly fitted with the study by Godia *et al.* (2014). At youth centers, young people value, the non-health benefits, includes availability of recreational facilities, prevention of idleness, building of confidence, improving interpersonal communication skills, vocational training, and facilitation of career progression. The current study found out that youth have been presenting their complaints because they were unhappy with service provision in the youth center due to wrong organizational structure and less skilled and less committed personal in the center. As a result, they have a rough relationship with some staff members of the center. In line with this, research conducted by Jili (2012) on the perception of youth on services delivery indicates that poor services delivery and unhappy job opportunities were the main reasons for protest. From this discussion, it is noted that when youth are unsatisfied with service provision, it may lead them to conflict. Even though there are clinical services in the youth center, most of them are not work effectively in the youth center. In line with this, research conducted by Selamawit (2015), on sexual reproductive health indicates that sexual reproductive health in youth center is not effective as a result of poor communication. From this discussion, it is noted that reproductive sexual reproductive health in the youth center is not effective. The current study found that empowerment activities include trainings, academic practices, information, free condom distribution, free hall services to youth to do on their talents, constructing youth center intended for youth behavioral change, and existence of some recreational materials and places in the center for youth refreshment. The training include life skill trainings which focused on gender, how to create job, computer skill development, how to handle maths, saving, knowing personal skills, and promoting active participation, training on HIV/AIDS transmission and ways of protection, leadership, volunteerism, peer education, and awareness how to use condom effectively. According to the participants of the study, youth have been benefited from the training in different ways; become interactive, develop self-confidence, and communication skill and entered into career progression as a result of participation are given in youth center. This in line with research conducted by Tedla (2014) reveals that youth development program has contributed to improve

the level of program participants in all elements of life skill and also program participants in community services come first followed by youth at education program and entertainment program. The research pointed out that the youth association is the second most important influencing body on the life skill development of the youths.

The study also found that youths want place to discuss their own issue and to train themselves in that place that is the reason youth go to the youth center. This persists to the study conducted by check way and Gutierrez (2006) as cited in Assefa (2011), youth participation is the active and meaningful involvement of young people in all stages of program decision-making, including planning, implementation, monitoring, and evaluation. Give youth space to discuss their own issues and participation. They often still need time to define their own role as a youth, youth group in the partnership. The whole organization needs to understand and commit to youth-adult partnerships.

## CONCLUSION

The study was conducted with the objective of assessing empowerment project; its implementation and implication for youth well-being: The case of the University of Gondar youths' center. The youth empowerments' implication for their social welfare, economic benefit, and health were assessed. The qualitative research design was used. The study participants were selected using non-probability method; purposive sampling was employed to select study participants, youth interviewees, and key informants. Youths were selected by dividing activities in the center into four main categories. Interview guideline was used to generate data from youth interviewees and key informants, and observation was also conducted by the use of the observation checklist to substantiate data from interviews. The data obtained were analyzed thematically based on the study objectives and were discussed in line with literature related to youth empowerment, the fundamental assumptions of the Positive Youth Development Model and Project Management Landscapes.

The findings indicated that the youth center has something to do with youth empowerment. The first contribution is in terms of social capital. It contributes more in terms of building good social relationships both among them and with the wider society. Through participation, the youth respondents felt that they learned new social skills and developed interpersonal relationship skills. Other implication is in terms of economic and health dimensions. Though minimal, health and economic implications of the empowerment process, is also considered. The study found negligible repercussions of the empowerment processes on the economic livelihood. Empowerment on their health dimension is somehow good in a relative way. Major challenges of the center were also identified as the inability

to go in line with the planned procedures, failure to have a detailed plan, inadequacy of regular budget for the activities to be executed in the center, inability to have regular review meeting with the concerned stakeholders, and failure to consult the major beneficiaries (youths) regularly, among others. The problems related to underemployment, i.e., people in the center like the manager and program and training officer are not the right people to run the activities of their respective positions can also be taken as other challenges of the center. This study generally found that youth empowerment in the youth center creates opportunities for empowerment, though it did not meet up the criterion required by Contemporary Project Management.

## Recommendations

- According to the findings of the study, the youth center has been providing inadequate services for youth. These services are insufficient when compared with the services of listed in the manual of the youth center. Thus, the youth center should provide services based on the services mentioned in the manual of the youth center.
- According to the finding, the center is not accessible and convenient for youth with disabilities and female youth. Social workers should advocate for these segments of population to address their needs.
- The findings of the study showed that though there is a counseling service in the youth center, it is not providing services for youth. Since counseling is important for youth because they face many challenges at this age. Thus, social workers should be employed for providing this kind of services in its holistic manner.
- The study found out that ICT and library services are available in the center as one of the services given to youth, but these services are not given as expected currently. Thus, the researcher urges the youth center to provide the services adequately for the youth.
- Facilitating recreational places and materials to meet youth need is must because it is important to prevent youth from practicing unwanted behavior. The study indicated that when they are busy on recreation places, they have no time to experience destructive things. Thus, this kind of service should be arranged and facilitated youth by the youth center.
- The findings of the study stressed that there is a lack of awareness about the youth center because the community has negative views towards the youth center. Thus, to overcome this problem, concerned bodies should provide awareness creation about the benefits of the youth center.
- Further research is needed on this segment of population. In the way of doing this study, the researcher face problem related to literature as a result of no enough research on youth in general and youth center service delivery in particular.
- The researcher found that youth services are unfulfilled and youth fired of the unfulfilled services and report cases

repeatedly, but the issue still not solved, youth still not attention, and convenient place from the top management system. Young people who live with disability are not benefited. Because of the youth center is not convenient for them in terms of materials and place of training.

- Consulting with the city administration, the university should have another site for the center to give a wide range of services for all youths as the researcher feels the current arena is not comfortable as it is surrounded by churches and drug consumption houses.
- The area is not green and it is very narrow to attract youths.

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## Research Article

# A survey study on the role of psychological variables on the performance of football players: In case of selected Ethiopian premier league football clubs

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### ABSTRACT

The purpose of this study was to investigate the role of psychological variables on the performance of male football players in case of selected Ethiopian premier league clubs. A descriptive survey research method was employed to investigate the problem. The target population in the study was selected male players who were participating in 2018/2019 tournament of the Ethiopian premier league such as St. Georges M.F.C, Ethiopian Coffee M.F.C, Defense M.F.C, Adama M.F.C, and Hawassa M.F.C. From the total 128 players and 15 coaches, a comprehensive sample of 75 players and ten coaches were taken in the study. The data collection instruments designed for the studies were questionnaires, interviews, observation, and document analysis. The questionnaires were prepared for the male players and the coaches. A structured interview was conducted for the coaches. Using a checklist observation was carried on 3 times during training sessions at the training centers. Some documents were examined, which describe the annual plan and training session. The data collected from 75 male and ten coaches through the questionnaires and observation checklist were organized and analyzed using descriptive statistics such as tables, frequencies, percentages, and graphs. The data obtained from the interview and document analysis were qualitatively analyzed in words and were triangulated with the responses of the questionnaires. The findings of the study displayed that half of the coaches plan psychological training in the annual training plan. However, the coaches do not implement effectively in the training session, as well as the coaches do not follow the scientific method in their implementation of psychological variables. At last psychological variable (motivation, self-confidence, and team cohesion) results indicate that the variables are the challenge of players in the training and competition. These findings will be useful to coaches and players of the premier league clubs and enable to implement psychological training effectively in line with fitness training to improve the quality performance of players.

**Keywords:** Football, Motivation, Performance, Self-confidence and team cohesion

## BACKGROUND

In the past 15 years, Applied Sport Psychology has shown great and significant development at all levels of sport discipline. In those years, numerous athletes and coaches at all levels of competition utilized results of scientific studies which reported the importance of mental preparation and positive effects of mental preparation on personal and performance characteristics of elite athletes (Gould *et al.*, 1999). Practicing psychological variables along with physical practices play an important role in enhancing the player's preparedness such that psychological

variables help the athlete to not only enjoy more from sport experience but also to perform the sport activity in a more desirable way and achieve sport successes.

Sport has become a popular past time among the people. Above all, interest in football has been growing in the country over the years. The rapidly increasing popularity of football has also need a demand of excellent performance. In any sports competition, an individual athlete or a team would participate targeting better performance for achieving successfully in the team. The likely success of an athlete or a team is the result of better preparation and hard efforts (Tenenbaum and Eklund, 2007).

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Today, sport psychologists are very frequently employed in professional sport to meet the needs arising in this area. They help athletes to learn psychological variables. According to

Vealey (2011) stated that mental preparation is the learning and implementation of traditional cognitive-behavioral techniques “with the objective of assisting sports participants in the development of mental skills to achieve performance success and personal well-being.” The importance of mental preparation within football settings tried to be approved by studies related with profile of elite athletes identified numerous psychological variables and characteristics related to success.

The role of psychological training on athletic performance has long been of interest to athletes, coaches, sport psychologists, and sports scientists. Successful coaches emphasize the psychological preparedness of athletes (Orlick and Partington, 1988; Bacon, 1989). In general, it is recognized that psychological training plays a crucial importance in the performance enhancement of football players. Thus, with this substantial information that the researcher was initiated to carry out research undertaken, which focuses on the role of psychological variables on the performance of Ethiopian male football premier league players. To investigate this issue, a number of premier league male players and coaches were taken from clubs.

### Statement of the Problem

Psychological training should be an integral part of an athlete’s holistic training process, carried out in conjunction with other training elements (Adling and Bangar, 2017). It is quite evident that drawing up and implementing of the training plan is an essential tool to optimally improve football performance. This is best accomplished by a collaborative effort among the coach, the sport psychologist and the players; however, a knowledgeable and interested coach can learn basic psychological variables and impart them to the players, especially during actual practice. The influence of the mental state on performance is as important as technical and tactical training. This is why it should benefit from the same importance in training programs (Taylor and Wilson, 2005).

To enhance the performance of football player’s the role of psychological training, it is essential to optimally develop the potential capacities of the players. Reid *et al.* (2004) studies show that sport psychology consultants should be ready for everything and by successful results prove how beneficial sport psychology can be McCann (2008). In the football setting, the empathic and compassionate way of working seems to be highly appreciated (Gilbourne and Richardson, 2006).

Many previous studies have focused on the physical training requirements of different game positions. However, physical preparations are not sufficient to allow high performances and players require specific mental attributes. In today’s high-level football performance, being physically gifted is not enough to succeed at the highest level. Achieving excellence in soccer is a complex inquiry that requires an accurate combination of

motor and mental skills. High levels of stress or low coping skills, whether on or off the field, can cause alterations in cognitive appraisal and focus that can interfere with physical performance through alterations in muscular tension and physical coordination. As a result, it is important that all football team coaches are expected to prepare and implement psychological training plans to attain their desired goals.

Based on the current poor performance of Ethiopian male football premier league, the researcher was try to assess and answer the question on the role of psychological variables on the performance of football players such as motivation, self-confidence, and team cohesion.

### Objectives of the Study

#### General objective

The general objective of the study was to investigate the role of psychological variables on the performance of Ethiopian premier league male football players.

#### Specific objectives

The specific objectives of the study were as follows:

1. To assess the knowledge of players and coaches on the use of psychological skills training.
2. To examine the annual training plan of Ethiopian premier league football clubs.
3. To assess the role of psychological variables in enhancing players performance.
4. To investigate the role of football coaches in using psychological variables for the enhancement of players performance.

### Significance of the Research

This study may have the following significance:

- Provide reliable information for the premier league coaches on the use of psychological variables that enhance the performance football players.
- It may create awareness and common understanding about the role of psychological variables enhancing football performance.
- Provides guidance to coaches, players, football managers, and practitioners on creation of appropriate quality training for the improvement of player’s performance.
- Serve as a springboard for other researchers who have interest to conduct researches on similar area.

## METHODS

### Research Design

The design employed in this research is descriptive method. Under descriptive research, survey method is also utilized to assess the role of psychological variables on the performance of football players. More importantly, the study applies both quantitative and qualitative methods (mixed approach) to

describe and analyze the information that has been obtained using different data collection instruments. The researcher used both primary and secondary sources of data. The researcher obtains primary sources from coaches and players. Secondary sources of data were gathered from documents, books, journals, web, and other research papers that are related to the study. To gather data, the researcher employed four types of data collecting tools. These are questionnaires, interviews, document analysis, and observation checklist. These instruments were helpful in triangulating the responses obtained from the respondents. To insure the appropriateness of the items, a pilot study was carried out in one selected Ethiopian premier league male football club for 15 players and two coaches who were selected for the pilot study. Based on the response obtained from the pilot study, correction and revision made to avoid ambiguity of questionnaire items and to maintain the validity and reliability of questions and language coherence. After that, the questionnaire was distributed for selected football clubs.

### Pilot Study

To insure the appropriateness of the items, a pilot study was carried out in one selected Ethiopian premier league male football club for 15 players and two coaches who were selected for the pilot study. Based on the response obtained from the pilot study, correction and revision made to avoid ambiguity of questionnaire items and to maintain the validity and reliability of questions and language coherence. After that, the questionnaire was distributed for selected football clubs.

### Population of the Study

According to the data obtained from Ethiopian Football Federation, there are 16 male football premier league club participants in 2011 E.C. From those, this study was focused on five selected Ethiopian male premier league football clubs. Those clubs are Ethiopian coffee M.F.C, three coaches and 26 players; St. Gorge M.F.C has three coaches and 27 players; Ethiopian defense M.F.C has three coaches and 24 players; Adama M.F.C has three coaches and 25 players; and Hawassa M.F.C has three coaches and 25 players. Totally from five clubs, 15 coaches and 128 players were found.

### Sample and Sampling Techniques

Samples from the total population of five clubs for this research, the researcher was selected by using random sampling techniques for players, using a simplified formula provided by Yamane (1967) provided below for each club of total population and coaches were selected by purposive sampling method. According to this from Ethiopian coffee F.C, two coaches and 15 players were selected. Second, from St. George F.C, two coaches and 15 players were selected. Third, from Ethiopian defense F.C, two coaches and 15 players were selected. Fourth, from Adama F.C, two coaches and 15 players were selected for the study and from Hawassa F.C, two

coaches and 15 players. Totally ten coaches and 75 players were selected for the study.

$$n=N/1+N(e)^2$$

Where,  $n$  = sample size,  $N$  = population size,  $e$  = level of precision.

The level of precision is the range in which the true value of the population is estimated to be; it is expressed in percentage points  $(\pm 0.05)^2$ .

### Procedures of Data Collection

Before developing the instruments, related literature was thoroughly examined and items were prepared in the English language. Second, the leaders of each club, those the researcher randomly selected for the study was approached and asked to assist in the investigation by allowing some of their players and coaches to participate in the study. All clubs indicated a willingness to participate. Then, all of the participants were informed the purpose of the study. Following this, the question items were tested their reliability and conductivity to address the purpose of the study needs to collect data from the participants by making sample groups of the participants. According to the test, players' English language skill were been limited. So that the questionnaires addressed to the players were translating into their national language (Amharic). Then, it was distributed for the sample selected population. At last, after the items collected from the players and coaches, the analyses were continued.

### Method of Data Analysis

Data analysis is the process systematically searching, arranging, and organizing the questionnaire, interview, observation, and other documents that collected for the intended study. The data collected. The organized data were presented and analyzed quantitatively by the methods of descriptive statistics such as tables, frequency, percentage, and graphs. The analyzed data were then discussed and interpreted. Interview and document analysis were analyzed qualitatively. Finally, summary, conclusion, and recommendations were drawn from interpreted data.

## RESULTS AND DISCUSSION

This study was aimed to investigate the role of psychological variables on the performance of Ethiopian premier league male football players in five selected clubs with other different specific objectives to be addressed. Thus, the researcher drafted problems of the basic research questions and identified the research gap that was not well addressed with other previous studies. Considering the significance of the research and the wide application of the findings obtained from the study, the investigators planned to conduct this research study.

The results obtained from the analysis and discussions done in described the findings and results of the study possibly answered based on the basic research questions as follows:

1. Do coaches and players have the knowledge on the use of psychological skill training in enhancing their performance?

The result of the analysis which was obtained from interview, field observation, and document analysis shows that coaches and players do not have enough knowledge on;

- The use of mental skills techniques in training and competitions
  - Preparation of psychological training program in preparatory, competition, and transition period
  - Planning mental training based on the interest of players and
  - Integrating psychological training in the training session.
1. Do coaches incorporate psychological skill training in their annual training program?
    - Psychological training is scheduled in the annual plan in the previous 2 years in few clubs
    - Psychological training is not scheduled such as fitness, technical, and tactical training
    - There is no clear report based on the implementation of scheduled psychological training.
  2. Does psychological training is implemented effectively in Ethiopian premier league football clubs?

The result of the analysis, which was obtained from the observation checklist and questionnaires of both coaches and players, shows that all clubs rarely implement psychological training. In spite of having a key role, the coaches were not early implement psychological skills foundation that will facilitate future athletic success.

3. To what extent the players use psychological variables (motivation, self-confidence, and team cohesion) in their training and competition to enhance their performance?

To explore the role of internal and external specification revealed in the questionnaires of coaches and players, motivation has a great contribution to determine to what extent the players were ready to perform better for their team. The implication of motivation on the clubs indicates that the majority of the football players responded that “they do not agree on motivational role” since it is not implemented effectively in Ethiopian premier league male football clubs.

The other psychological variable was the other that has been given for the player respondents and the same as to coaches respondents is self-confidence. Most of the respondents disagreed that “as they have self-confidence and they are not

sure that self-confidence is vital for withstanding and recovering from setbacks such as a defeat or a poor performance.”

On the other hand, the variables related to the performance of the trainee also indicated that they clearly showed how those variables determine the performance of the players as well as the team in general. The factors determined the social cohesion and task cohesion indicated that “the Ethiopian premier league male football performance was significantly affected with those determinants.”

Niiewenhuis *et al.* (2002) reported that psychological variables (factors) play an increasing role in the contemporary game of soccer by influencing the level of performance and further stated that coaches through the knowledge of the contribution of psychological constructs in the game of soccer can identify the weakness in the psychological build-up of a player which can help him provide the basic counseling necessary for the player to achieve his maximum performance. The aim of this study was to investigate the role of psychological variables on the performance of Ethiopian premier league male football players. Thus, with the separate different specific objectives, the researcher has been intended to answer the basic research questions. Hence, to answer the basic research questions and addresses, the objectives, questionnaires, interview, observation, and document analysis were selected for the purpose of the study.

The variables which selected to measure the internal motivation of the players indicated that “players in the premier league clubs are not intrinsically motivated.” Thus, the factors listed under internal motivation affects the player’s performance improvement. According to Ryan and Deci (2012) intrinsically motivated players will keep on practicing despite setbacks and are motivated to make decisions that support developing athletic performances.

The other categories of the variables selected as the measure of players’ performance are those measured as the external motivations. The summary results seen from players and coaches respondent indicates external motivation is one challenge on the performance of the premier league players. These results show that players are not extrinsically motivated by the clubs. Parker (2004) cited external motivation takes into account the different behaviors that occur for instrumental value of completing task and will not only improve physical performance, it will also assist in the learning of physical skills, which in turn will affect the quality performance of players.

The last psychological variable that has been given for the player’s respondents as well as the coaches’ respondents was team cohesion. Based on the questions distributed for them, most of the respondents disagreed on that football players in premier league clubs are socially cohesive. Bray and Whaley



(2001) study revealed that high levels of cohesion increased performance by producing higher levels of effort. In some extent, task cohesion is a challenge on player's performance in the premier league clubs, it indicates that "the players in the premier league clubs are not cohesive in task." Task cohesion also includes a practical assessment of the level of athlete and team coordinated efforts that show to what extent each team and its members achieve its goals (Carron *et al.*, 1985).

This result can be considered an encouraging finding because PST literature has shown a positive influence of these techniques on football players' performance (e.g., Johnson *et al.*, 2004; Munroe *et al.*, 2012; Thelwell *et al.*, 2006; 2010). By contrast, participants highlighted a lack of use of psychological variables and this can be considered a cause of concern. However, in spite of the significant role of psychological variables on the successful performance of the football game, psychological variables do not implement effectively in the Ethiopian premier league male football clubs.

## CONCLUSIONS AND FUTURE PERSPECTIVES

### Conclusion

The objective of this study was to find out the implementation of psychological variables on the performance of Ethiopian men's premier league players in selected clubs. To this end, data were collected from 85 participants (players and coaches) of five premier league clubs through questionnaires, interview, and document analysis and observation checklist. Data gathered through the questionnaire might have a limitation of English language skill, but the researcher tried to solve the limitation by translation on the national language. In spite of this limitation, the study came up with the following major points:

According to the data gathered through document analysis and interview, half of those selected club coaches draw up (prepare) psychological training in the annual training plan and the rest were not. In this connection, the major reasons for not including the psychological training in annual training are:

- Not having enough knowledge about psychological training
- Due to the contractual stability of coaches in the clubs (joining the club late)
- Miss understanding about the importance of psychological training
- Lack of time.

According to the findings of this study, the premier league player's self-confidence is below average. Robert and Gould (2001) high levels of self-confidence can enhance emotional state, concentration, goal setting, effort expended, and

development of effective competitive strategies. The factors such as feeling confident before an important competition, recovering from loss of confidence, trust themselves in the hardest moments of competition, and losing confidence when important competition draws nearer are the major problems of premier league players.

The coaches' result also shows that the player's self-confidence is low. Team cohesion also another variable analyzed in this study. The results indicated as it leads the players not to have social interaction as well. Team task cohesion also another factor affects the performance of the player's premier league clubs.

In general, based on the data that have been collected from the respondents, saying that almost all of the variables mentioned in this study are the psychological challenge of players' in the premier league and are not implemented as expected as it can be so that the football coaches in the club have been in one way or other using psychological strategies to enhance the performance of their player both during competition and training.

### Recommendation

Based on the findings of the study, the following suggestion is forwarded as a means to alleviate the problems encountered in the process of preparing and implementing psychological variables to tackle psychological problems of premier league players to improve their performance.

- As a result of this study shows that the reason why coaches did not include psychological training plan in annual training is not having enough knowledge and misunderstanding about psychological intervention. Therefore, coaches should update themselves through training, prepare psychological skill training in their training program.
- The coaches and clubs should follow the scientific method of implementing psychological variables to improve the performance of Ethiopian premier league male football players.
- It is the coach's responsibility to provide reward and assist the players to set a goal for themselves.
- The coaches should plan and implement mental skills techniques to boost the self-confidence of players.
- A coach should also promote both type of cohesion (social and task) among the team members by means of assessing at the end of half session.
- A coach should give psychological skill training test every month.
- A coach must be committed to set specific times during or after practice to devote psychological training.
- Sport psychology consultants and other concerned bodies should make sufficient research paper.

- The players should attend each training session with full concentration and try to apply it.
- Players need to develop a positive way of looking at the game during moments of difficulty.
- The federation must pay attention and work on the male premier league clubs coaching staff in line to have a professional sport psychologist.

## AUTHORS' CONTRIBUTIONS

This study was designed and compiled by Abreham Goshu (M.Sc. in Football coaching) as the principal investigator. The development of the basic research questions, identifying the problems, and selecting appropriate statistical models have been done by him. Edition of the overall progress of the work and compiling the research was supported by Dessalegn Wase Mola (M.Sc. in Athletics Coaching) and Habtamu Feyisa (Msc. in Athletics Coaching). Finally, all parts of the research have been read by the researcher and approved for the publication.

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## Research Article

# Effect of yogasanas, pranayama, and meditation on breath-holding time of high schoolgirls

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### ABSTRACT

The present study aims to determine the effect of yogasanas, pranayama, and meditation on the breath-holding time of high schoolgirls. The sample for the study comprises 80 girls between the ages of 14 and 16 years. The sample was further divided into two groups: (I) Experimental group (40) and (II) control group (40). The subjects of the experimental group went through a yogasanas, pranayama, and meditation training for 12-week under the direct supervision of researchers. The control group was engaged in daily routine work. The subjects of both the groups were tested before and after the experimental period of 12-weeks. The data analyzed statistically by applying ANCOVA. The results show that there is a significant change in the breath-holding time as a result of the experimental training. Since the result has revealed that there is a significant difference, the hypothesis is accepted.

**Keywords:** Breath-holding time, Pranayama, Pranayama, Yogasanas

## INTRODUCTION

Yoga is a physical, mental, and spiritual practice aimed at attaining permanent peace within. This practice for permanent inner peace originated in ancient India, and it also belongs to the six schools of Hindu philosophy or six "astika." Yoga is also considered as a form of exercise due to its physical forms and postures that have physical benefits to the body, and it is also considered as meditation due to the mental and emotional benefits. It gives as well as it is also considered spiritual because it involves getting in touch with your spirit or beyond physical nature. This is why yoga is known as a combination of physical, mental, and spiritual exercise and development or creating a union with your inner self which can benefit life.

The word yoga means "unity" or "oneness" and is derived from the Sanskrit word yuj, which means "to join." This unity or joining is described in spiritual terms as the union of the 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, mudra, bandha, shatkarma, and meditation and must be achieved before a union can take place with the higher reality.

## METHODOLOGY

The present study aims to determine the effect of yogasanas, pranayama, and meditation on the breath-holding time of high schoolgirls. The sample for the study comprises 80 girls between the ages of 14–16 years. The sample was further divided into two groups: (I) Experimental group (40) and (II) control group (40). The subjects of the experimental group went through a yogasanas, pranayama, and meditation training for 12 weeks under the direct supervision of researchers. The control group was engaged in daily routine work. The subjects of both the groups were tested before and after the experimental period of 12 weeks. The data analyzed statistically by applying ANCOVA. The results show that there is a significant change in the breath-holding time as a result of the experimental training. Since the result has revealed that there is a significant difference, the hypothesis is accepted.

### Training Program

The subjects are classified into two groups that one is a control group which is not exposed to any treatment and another one is an experimental group which is exposed to yogasanas,

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pranayama, and meditation training treatment. Weekly 6 days, i.e., Monday to Saturday, from 7.00 am to 8.00 am for a period of 12 weeks. All the subjects involved in this study were carefully monitored throughout the training program to be away from injuries. They were questioned about their health status throughout the training program. None of them reported any injuries or discomfort. However, muscle soreness appeared in the earlier period of the training program and was reduced in due course.

Table 1 shows that the pre-test means scores of the breath-holding time of the control and experimental groups of high schoolgirls students. It is observed that mean scores of pre-test of the control and experimental groups of high schoolgirls students are 13.5763 and 13.8320, and their standard deviation is 1.39,373 and 1.43,633, respectively. The obtained “F” ratio value is ( $F = 0.421$  1, 78,  $\alpha = 0.05$ ) 0.421 at 5% level of significance, which is less than the table value ( $F = 4.0$ ); hence, the null hypothesis is accepted, it can be concluded that the breath-holding time level between the experimental group and control group found almost similar among the high schoolgirls students.

Further, it is observed that mean scores of post-test of the control and experimental groups of girls high school students are 13.1840 and 14.7353; their standard deviation is 1.17,446 and 1.30,682, respectively. The obtained “F” ratio value is ( $F = 31.179$  1, 78,  $\alpha = 0.05$ ) at 31.179 5% level of significance, which is much more than the table value ( $F = 4.0$ ); hence, the null hypothesis is rejected and the alternative hypothesis is accepted. It can be concluded that there is a significant difference found between the experimental group and control group with respect to the breath-holding time level of girls high school students. This indicates that the breath-holding time level is more among the control group when compared to the experimental group. Finally, it can be concluded that yogasanas, pranayama, and meditation training has made a significant impact on the control of the breath-holding time level of the high schoolgirls students.

The adjusted post-test means scores on the breath-holding time of the control and the experimental groups are 13.241 and 14.685, respectively. The obtained “F” ratio value is ( $F = 33.821$  1, 76,  $\alpha = 0.05$ ) 33.821 at 5% level of significance,

**Table 1: The analysis of covariance for pre-test and post-test on the breath-holding time of the control group and experimental group of high schoolgirls**

Type of test	Control group	Experimental group	Source of variance	Sum of the squares	df	Mean square	F ratio
Pre-test mean	13.5763	13.8320	Between	1.308	1	1.308	0.421
SD	1.39373	1.43633	Within	156.215	78	2.003	
Post-test mean	13.1840	14.7353	Between	48.128	1	48.128	31.179
SD	1.17446	1.30682	Within	120.398	78	1.544	
Adjusted post-test mean	13.241	14.685	Between	41.356	1	41.356	33.821
			Within	92.932	76	1.223	

\*Significance  $\alpha = 0.05$ , table value = 4.0



**Figure 1:** The analysis of covariance for pre-test and post-test on the breath-holding time of the control group and experimental group of high schoolgirls



which is much higher than the table value ( $F = 4.0$ ); hence, the null hypothesis is rejected and the alternative hypothesis is accepted. It can be concluded that there is a significant difference that is found between the experimental group and control group with respect to breath-holding time level of high schoolgirls students.

Figure 1 gives a clear picture of the adjusted means of two training groups. Thus, it is inferred that yogasanas, pranayama, and meditation training is more effective in increasing the breath-holding time among the subjects experimental group in comparison to control groups.

## DISCUSSION ON FINDINGS

### Breath-holding Time

In this study, it is found that there is a significant difference between pre-test control and experimental group in breath-holding time, but there is a significant difference in the post-test of the control and experimental groups due to 12 weeks of the yogasanas, pranayama, and meditation training program.

The results, by and large, were in conformity with the findings of Singh *et al.*, (2009) Madanmohan *et al.*, (1992), Telles *et al.*, (1991), Rajakumar (2010), Kumar (2015), and Vaibhav Rai (2014).

## CONCLUSIONS

Result of this study, it was concluded that through the 12 weeks of yogasanas, pranayama, and meditation training of high schoolgirls were significantly improved breath-holding time compared to control group.

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## Research Article

# A study of achievement motivation among male kho-kho players

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### ABSTRACT

The aim of this study was to achieve the purpose of achieving the achievement motivation levels of male kho-kho players and the objectives of male kho-kho players and the objectives of comparing the achievement motivation levels of kho-kho players categorized and grouped on the basis of achievement, participation experience and levels, and training age; 94 kho-kho players in the age group of 18–26 years drawn from different registered clubs of Karnataka state during the state kho-kho championship were measured for their achievement motivation levels through achievement motivation scale developed and standardized by Dr. Kamalesh. The subjects were then grouped under different categories, such as high achievement group ( $n = 48$ ) and low achievement group ( $n = 46$ ) and low participation group ( $n = 46$ ) and high participation group ( $n = 48$ ) and below 5 years of training age ( $n = 29$ ), between 6 and 10 years of training age ( $n = 59$ ), and above 10 years of training age ( $n = 6$ ). Achievement motivation scores that were derived from the subject's responses to 20 items of the scale represented the data for the present study statistical analysis involved computation of mean and application of  $t$ -test and  $f$ -test (completely randomized design) to find out if any significant differences existed in the mean achievement motivation scores of kho-kho players categorized and prepared.

**Keywords:** Achievement, Kho-kho, Motivation scale performance, Motivation, Training age

## INTRODUCTION

Kho-kho is one such indigenous game which requires certain levels of psychomotor factors on the part of those who play at a competitive level. Players are required to possess a high level of fitness and proficiency in fundamental skills. The game of kho-kho is as fast as any of the international games or sports. Motivation can affect the selection, intensity, and persistence of an individual's behavior, which in sport obviously has a strong impact on the quality of an athlete's performance. An athlete's motivational level is determined by the interaction of personal factors such as personality, needs, interest, or ability and specific situational factors such as the practice, facilities, type of coach, or the terms win/loss record.<sup>[1]</sup> Motivation is a process by which an individual is inspired, guided, or coaxed to do something. It is one of the important conditions rather than the central core of life.<sup>[2]</sup> It is believed that superior athletic performance has benefited from the knowledge of the physiology and

biomechanics of human motor activity. However, many coaches and psychologists throughout the world believe that future records will be broken primarily due to increased attention to the psychological parameters of human personality.<sup>[3]</sup> Sinha tried to analyze some of the factors associated with success and failure in university education. On the basis of examination marks, 185 high achievers and 190 low achievers were tested on Sinha's anxiety scale, Bihar test of general intelligence, and Saksena's personality inventory. High achievers were found to be superior in intelligence, better in adjustment, and moderate in level of anxiety.<sup>[4]</sup> Muthayaa studied motivation with the help of McClelland's need achievement test under neutral conditions on a group of 60 adolescent schoolboys. He observed that the mean score on need achievement of the high achievers was greater than that of low achievers, the mean difference being significant beyond 0.01 level.<sup>[5]</sup>

### Hypothesis

- The subjects as a group may have moderate levels of achievement motivation.
- There may not be any significant difference in the achievement motivation levels of high and low achievers.

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- There may not be any significant difference in the achievement motivation levels and kho-kho players in respect to their levels of participation.
- There may not be any significant difference in the achievement motivation levels of kho-kho players in respect to their training age.

### Delimitation

- The study was delimited to 94 male kho-kho players from three different categories.
- The study was delimited to male kho-kho players of Karnataka state only.
- The study was basically delimited to male kho-kho players of the age groups and who had participated in various tournaments, local, university, state, and national.
- The study was further delimited to assessment of achievement-motivation in relation to, levels of achievement of subjects (high and low achievement groups), levels of participation (high level and low level), and training age (three categories).

### Significance of the Study

- The results of the study may help sports persons (kho-kho players) in evaluating their achievement motivation levels their abilities and success.
- Knowledge of the results of the study can be useful for players, coaches, and trainers.
- The knowledge of results can be used as motivation techniques by themselves. Because the players know where they stand along the given dimension of achievement motivation.
- The results can be useful for feedback purposes so that the players can themselves evaluate their level of achievement motivation as well as the coaches can make attempts to strengthen and augment motivation levels through psychological training.

## METHODOLOGY

The subjects for the present study were drawn from various kho-kho clubs of Karnataka state who participated in the state kho-kho championships. The subject drawn for the present study was regular participants in various kho-kho tournaments from local to national level. The subjects were male kho-kho players in the age group 18–26 years.

### Description of the Test

The sports achievement motivation test developed and standardized by Dr. Kamelesh consists of a series of question numbering 20. Each question or item in the questionnaire has two alternative answers. The subject will have to tick the one that he or she feels is most suited to him or her. This would reveal a response to each item of the questionnaire or scale. All instructions in the questionnaire are very clearly stated, and

depending on the response of the subject, the subject would get either zero mark or two marks for an answer to each question. The scoring key has also been given in the manual. A subject answering the questionnaire may get a maximum of 40 marks, as described in the manual. The subject would be graded on the basis of the total number of marks that he would get after answering all the 20 questions. The final score that the subject would get would be considered as the achievement motivation score of each subject. The subjects could also be graded or characterized as high in achievement motivation (31–40 marks), average or moderate in achievement motivation (24–30 marks), and low in achievement motivation (0–23 marks).

## RESULTS AND DISCUSSION

The data collected were statistically analyzed computing the mean achievement motivation scores and the significance of differences in the mean achievement scores of different categories of subjects was analyzed by applying, *t*-test and *f*-test. The statistical analysis of data has revealed the following results that are presented in Tables 1–4.

Table 1 indicates that the mean value of achievement motivation scores of the subjects selected was found to be 27.30. As per the mean scores, the kho-kho players were found to have average achievement motivation scores and hence average or moderate in achievement motivation level. Hence, the hypothesis formulated in the present study won accepted.

Table 2 indicates that the difference in the mean achievement motivation scores of high and low achievement groups was 4.3514. The “*t*” value obtained was 0.606 with 92° of freedom which was found to be non-significant ( $P < 0.546$ ). This has revealed that high and low achievers did not differ significantly in their mean achievement scores. Hence, the hypothesis number 2 formulated in the present study was accepted.

Table 3 reveals that high and low participation groups had the mean achievement motivation scores of 26.0417 and 28.5652, respectively. The difference in the mean scores was –2.5236. The “*t*” value obtained was –2.422 with 92° of freedom which was found to be statistically significant ( $P < 0.017$ ). The low participation group had significantly higher mean scores (mean 28.57) compared to the high participation group (mean, 26.04). The hypothesis number 3 formulated in the present study was rejected.

Table 4 indicates the results of one-way ANOVA. The figures reveal a non-significant difference in the achievement

**Table 1: Mean achievement motivation scores**

<i>n</i>	Mean value	Standard deviation
94	27.30	5.20

**Table 2: The achievement motivation scores, mean difference, and “t” value for high and low achievements groups**

ACH score	n	Mean	SD	SEM	t-test for equality of means			
					t	df	Sig. (two-tailed)	Mean difference
High	48	32.9167	48.5394	7.0061	Score	0.606	92	0.546
Low	46	28.5652	4.3546	0.6420				

**Table 3: The achievement motivation scores, mean difference, and “t” value for high and low participation groups**

ACH score	n	Mean	SD	SEM	t-test for equality of means			
					t	df	Sig. (two-tailed)	Mean difference
High	48	26.0417	5.6341	0.8132	Scores	-2.422	92	0.017
Low	46	28.5652	4.3546	0.6420				

**Table 4: One-way of ANOVA for groups of different training age**

Points – Descriptives					
	<i>n</i>	Mean	SD	SE	
Below 5 years	29	27.1724	4.6450	0.8626	
6–10 years	59	27.0508	5.4248	0.7062	
Above 10 year	6	29.3333	6.0222	2.4585	
Total	94	27.2340	5.2063	0.5370	
Points – ANOVA					
	Sum of squares	Df	Mean squares	F	Significance
Between groups	28.532	2	14.266	0.521	0.596
Within groups	2492.319	91	27.388	-	-
Total	2520.851	93	-	-	-

motivation scores between the three groups of subjects categorized on the basis of training age. The “F” value of 0.521 with 2 and 91° of freedom is found to be non-significant ( $P < 0.596$ ). The three groups of subjects do not differ significantly in their achievement motivation scores. Therefore, hypothesis number 4 formulated in the present study was accepted.

#### The Results Obtained in the Present Study may be Attributed to the following Factors

The group of subjects selected for the present study was heterogeneous in terms of achievement participation experience and exposure and training age. Heterogeneity in respect of these factors might have contributed to average motivation levels. Because motivation appears to be stronger when goal-seeking is nearer low achievement groups, low participation groups, and low training age groups that might be thinking of higher achievements whereas their counterparts

in high achievement groups, high participation groups, and higher training age groups might have achieved all that they wanted and hence might have reached a level of saturation point in respect of motivation.

#### This Factor Might Have Influenced Average or Moderate Motivation Levels

The same factors of heterogeneity and motivation levels of subjects belonging to different groups might have influenced the result of insignificant differences among them. The groups low in achievement and participation and training age will be seeking higher achievement and will be moving up on the motivation scale, and those who have already made achievements may be moving down the motivation scale due to saturation and lack of further motivation. This might have caused similarly in motivation levels among different groups of subjects. A significant difference between participation and high participation groups in mean achievement scores, in favor of low participation groups, may be again due to the fact that low participation groups will be aspiring for participation in higher levels and many competitions (goal-seeking). They will be seeking higher achievements, whereas the high participation group will have already reached such participation exposure, successes, and achievements. Goal seeking will be lesser and hence low motivation levels.

## CONCLUSIONS

1. The mean achievement motivation scores of the male kho-kho players were found to be 27.30, and therefore, the male kho-kho players were found to have moderate levels of achievement motivation. The hypothesis number 1 formulated in the present study was accepted.
2. There were no significant differences in the mean achievement motivation score of high and low achievers, the hypothesis number 2 formulated in the present study was accepted.
3. There were significant differences in the mean achievement motivation scores of low participation and high participation groups. The low participation group had significantly higher mean scores; hypothesis number 3 formulated in the present study was rejected.



4. There were no significant difference in the mean achievement motivation scores of kho-kho players grouped under three categories on the basis of training age, the hypothesis number 4 formulated in the present study was accepted.

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## Research Article

# Anthropometric profile of volleyball players at different level of contests: In reference to South Gondar woredas team and project players

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### ABSTRACT

The purpose of this study was to compare the anthropometric profiles of volleyball players at different level of matches (i.e., inter-projects level and inter-clubs level). A sample of 52 subjects, which includes 26 each, inter-project level ( $n = 26$ , mean  $\pm$  SD: Age  $16.42 \pm 0.47$  years, height  $162.04 \pm 6.14$  cm, weight  $58.44 \pm 4.42$  kg, and body mass index [BMI]  $18.34 \pm 1.86$ ) and inter-club level ( $n = 26$ , mean  $\pm$  SD: Age  $21.42 \pm 0.46$  years, height  $171.08 \pm 4.14$  cm, weight  $64.22 \pm 4.36$  kg, and BMI  $21.42 \pm 2.18$ ) male volleyball players, was selected for the present study. The purposive sampling technique was used to select the subjects. All the subjects were assessed for height, weight, lengths, circumferences, diameters, and skin-fold thicknesses. An independent samples *t*-test revealed that inter-club volleyball players had significantly higher height ( $P < 0.05$ ), arm length ( $P < 0.05$ ), upper leg length ( $P < 0.05$ ), and lower leg length ( $P < 0.05$ ) as compared to inter-project level volleyball players. The inter-club level volleyball players were also found to have significantly greater elbow diameter ( $P < 0.05$ ), shoulder diameter ( $P < 0.05$ ), hip diameter ( $P < 0.05$ ), knee diameter ( $P < 0.05$ ), calf circumference ( $P < 0.05$ ), chest circumference ( $P < 0.05$ ), upper arm circumference ( $P < 0.05$ ), and fore arm circumference ( $P < 0.05$ ). Inter-club volleyball players had significantly greater biceps ( $P < 0.05$ ), triceps ( $P < 0.05$ ), subscapular ( $P < 0.05$ ), and suprailiac skin-fold ( $P < 0.05$ ) as compared to basketball players.

**Keywords:** Anthropometric, Club, Contest, Project, Volleyball

## INTRODUCTION

Anthropometric characteristics are related to a player's profile and might be used to predict a player's success. Anthropometric characteristics of players have been an interest of sports trainers, exercise scientists, physical education, and sport medicine professionals for years and many of them assumed the practicing players might be expected to exhibited structural and functional characteristics that are specifically favorable for the sport (Milicerowa, 1973). In addition, anthropometric measurements and morphological characteristics play an important role in determining the success of a sportsperson (Wilmore and Costill, 1999 and Keogh, 1999). Volleyball belongs to sport activities, in which anthropometric characteristics of its participants influence the level of sport performance. It was established that volleyball players compared to most other athletes have

distinctive anthrop-morphological characteristics (Ercollesi, 1999; Jankovic *et al.*, 1995; and Ugarkovic, 2004). An athlete's anthropometric characteristics represent important prerequisites for successful participation in any given sport (Gualdi-Russo and Zaccagni, 2001). Body height, being the most characteristic trait of volleyball players, is significantly conditioned genetically (Milicerowa, 1973). Many previous studies have evaluated anthropometric profile of volleyball player (Bandyopadhy, 2007; Gabbett and Georgieff, 2007; Bayios *et al.*, 2006; Duncan *et al.*, 2006; Gaurav *et al.*, 2010; Hadzic *et al.*, 2012; Petroski *et al.*, 2013; and Gaurav and Singh, 2014). Therefore, the purpose of this study was to compare the anthropometric characteristics of volleyball players at different match level (i.e., between clubs and at club level).

## MATERIALS AND METHODS

### Subjects

A sample of 52 subjects, which includes 26 each, at club level ( $n = 26$ , mean  $\pm$  SD: age  $16.42 \pm 0.47$  years, height  $162.04 \pm$

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6.14 cm, weight  $58.44 \pm 4.42$  kg, and body mass index [BMI]  $18.34 \pm 1.86$ ) and inter-project level ( $n = 26$ , mean  $\pm$  SD: age  $21.42 \pm 0.46$  years, height  $171.08 \pm 4.14$  cm, weight  $64.22 \pm 4.36$  kg, and BMI  $21.42 \pm 2.1$ ) male volleyball players, was selected for the present study. The purposive sampling technique was used to select the subjects. The club level subjects were selected from different volleyball clubs of North Gondar and Gondar city administration of Ethiopia, and inter-project level subjects were selected from different projects found in Gondar town.

### Methodology

The subjects were assessed for circumferences, height, weight, lengths, diameters and skin-fold thickness. Stature was measured using a standardized wall mounting stadiometer (measuring range 200 cm, least count 0.5 cm, MIndiart, New Delhi, India). The body mass was measured to the nearest 0.1 kg using calibrated digital scale in kilogram (Adam equipment Co, Ltd, Milton Keynes, UK) and it's capacity was 150 kg. The scale was checked using standardized weights in regular intervals and checked, whether it was reading zero or not before measured.

BMI was calculated by the following formulae:  $BMI(kg/m^2) = (Body\ weight\ in\ kg) / (height\ in\ meters)^2$ . Girths and lengths were taken with the steel tape to the nearest 0.5 cm, while widths and diameters of body parts were measured using sliding caliper. Skin-folds thicknesses were assessed using skin-fold caliper.

### Statistical Analyses

Values are presented as mean values and SD. Independent samples *t*-test was used to test if population means estimated

by two independent samples differed significantly. The level of significance was set at 0.05. Data were analyzed using SPSS Version 20.0.

## RESULTS

Table 1 depicts the demographic characteristics of inter-club and inter-project level volleyball players. The mean age of inter-club players was 21.42 years and inter-project were 16.42 years. The mean height of inter-club was 171.08 cm and inter-project was 162.04 cm. The mean weight of inter-club was 64.22 kg and inter-project was 58.44 kg. The mean BMI values of inter-club were 21.42 and inter-project was 18.34. Results indicated that inter-club players had more height and weight than inter-club volleyball players.

Table 2 shows the comparison of length measurements of inter-club and inter-project level volleyball players. It is evident from the results that significant differences were found between inter-club and inter-project level volleyball players with regard to arm length ( $P < 0.05$ ), upper leg length ( $P < 0.05$ ), and lower leg length ( $P < 0.05$ ). The inter-club players had better lengths measurements than inter-project volleyball players.

Table 3 shows the comparison of diameter measurements of inter-club and inter-project level volleyball players. Results indicated that inter-club players had significantly greater elbow diameter ( $P < 0.05$ ), shoulder diameter ( $P < 0.05$ ), hip

**Table 1: Demographic characteristics of inter-club and inter-project level volleyball players**

Variables	Inter-project volleyball		Inter-club volleyball		t-value	Sig.
	Players (n=26)		Players (n=26)			
	Mean	SD	Mean	SD		
Age (years)	16.42	0.47	21.42	0.46	34.204	0.000*
Height (cm)	162.04	6.14	171.08	4.14	167.591	0.000*
Body weight (kg)	58.44	4.42	64.22	4.36	45.147	0.000*
BMI (kg/m²)	18.34	1.86	21.42	2.18	0.048	0.878

\*Significant at 0.05 level

**Table 2: Comparison of length measurements of inter-club and inter-project level volleyball players**

Variables	Inter-club volleyball		Inter-project volleyball		t-value	Sig.
	Players (n=26)		Players (n=26)			
	Mean	SD	Mean	SD		
Arm length (cm)	80.06	3.7	76.06	3.7	4.583	0.000*
Leg length (cm)	94.36	15.98	90.36	15.98	1.062	0.292
Upper leg length (cm)	51.75	6.54	47.75	6.54	2.597	0.011*
Lower leg length (cm)	41.83	3.53	37.83	3.53	4.803	0.000*

\*Significant at 0.05 level

diameter ( $P < 0.05$ ), and knee diameter ( $P < 0.05$ ) as compare to inter-project volleyball players.

Table 4 shows the comparison of circumference measurements of inter-club and inter-project level volleyball players. Results indicated that inter-club players had significantly greater calf circumference ( $P < 0.05$ ), chest circumference ( $P < 0.05$ ), upper arm circumference ( $P < 0.05$ ), and fore arm circumference ( $P < 0.05$ ) as compare to inter-project volleyball players.

Table 5 shows the comparison of skin-folds measurements of inter-club and inter-project level volleyball players. Results indicated that significant differences were found between inter-club and inter-project level volleyball players with regard to biceps ( $P < 0.05$ ), triceps ( $P < 0.05$ ), subscapular ( $P < 0.05$ ), and suprailliac skin-fold ( $P < 0.05$ ), respectively. The inter-club had significantly greater skin-folds thickness as compare to inter-club volleyball players.

## DISCUSSION

In the present study, the anthropometric measurements of the volleyball players have been evaluated in relation to their competition level (i.e., inter-club and inter-project). This study indicates the existence of differences between inter-club and inter-project players. The overall results show that inter-club volleyball players were taller and heavier as compared to the inter-project volleyball players. Body height, being the most characteristic trait of volleyball players, is significantly conditioned genetically (Milicerowa, 1973). The mean height of the inter-club volleyball players ( $178.06 \pm 6.14$  cm) and inter-project volleyball players ( $174.06 \pm 6.14$  cm) in the present study is greater than the volleyball players of West Bengal, India ( $173.10 \pm 4.19$  cm) reported by Bandyopadhyaya (2007).

In volleyball, teams compete by manipulating skills of spiking and blocking high above the head. Therefore, the presence of

**Table 3: Comparison of diameter measurements of inter-club and inter-project level volleyball players**

Variables	Inter-club volleyball		Inter-project volleyball		t-value	Sig.
	Mean	SD	Mean	SD		
Elbow diameter (cm)	7.33	0.57	6.33	0.57	7.389	0.000*
Shoulder diameter (cm)	43.31	2.09	38.31	2.09	10.158	0.000*
Hip diameter (cm)	29.83	1.93	28.83	1.93	2.194	0.032*
Knee diameter(cm)	9.98	0.87	8.98	0.87	4.861	0.000*

\*Significant at 0.05 level

**Table 4: Comparison of circumference measurements of inter-club and inter-project level volleyball players**

Variables	Inter-club volleyball		Inter-project volleyball		t-value	Sig.
	Players (n=26)		Players (n=26)			
	Mean	SD	Mean	SD		
Calf circumference (cm)	33.25	3.02	30.25	3.02	4.218	0.000*
Thigh circumference (cm)	48.92	8.46	45.92	8.46	1.505	0.137
Chest circumference (cm)	86.61	10.27	80.61	10.27	2.478	0.016*
Upper arm circumference (cm)	26.33	2.35	23.33	2.35	5.406	0.000*
Fore arm circumference (cm)	25.08	3.7	22.08	3.7	3.441	0.001*

\*Significant at 0.05 level

**Table 5: Comparison of skin-folds measurements of inter-club and inter-project level volleyball players**

Variables	Inter-club volleyball		Inter-project volleyball		t-value	Sig.
	Players (n=26)		Players (n=26)			
	Mean	SD	Mean	SD		
Biceps (mm)	4.53	1.13	6.53	1.13	7.486	0.000*
Triceps (mm)	6.97	2.4	10.97	2.4	7.082	0.000*
Subscapular (mm)	9.11	2.21	12.11	2.21	5.749	0.000*
Suprailliac (mm)	9.08	3.59	14.08	3.59	5.911	0.000*
Calf (mm)	7.92	2.23	8.92	2.23	1.899	0.062

\*Significant at 0.05 level



tall players is an indispensable factor in the success of a team (Gaurav *et al.*, 2010). In this study, the inter-club volleyball players had significantly greater arm length, upper leg length, and lower leg length than inter-project volleyball players because anthropometric characteristics are almost exclusively genetically determined; therefore, length and breadth measurements cannot be changed with training (Norton and Olds, 2001). On the other hand, inter-club volleyball players had significantly greater all the diameters.

Results indicated that the inter-club volleyball players had significantly greater calf circumference, chest circumference, upper arm, and forearm circumference than the inter-project volleyball players. The findings of the present study are in line with the study of Gaurav and Singh (2014), evaluated the differences in anthropometric characteristics of volleyball players in relation to their performance level (i.e., inter-university and inter-college). They observed that inter-university players had better anthropometric measurements as compared to inter-club volleyball player. In case of skin-fold measurements, the inter-project volleyball players had significantly greater skin-folds thickness as compare to inter-club volleyball players. The skin-fold thickness of four sites, biceps, triceps, subscapular, and suprailiac of volleyball players in the present study was more than those of reported by Bandyopadhyay (2007). The skin-fold thickness is significantly higher in the inter-club volleyball players group, indicating that the inter-project volleyball players had a greater quantity of subcutaneous fat deposition.

## CONCLUSION

It is concluded that various anthropometric measurements have clear impact on the competition level of volleyball Players.

The skin-fold thickness is significantly higher in the project volleyball players group, indicating that the project volleyball players had a greater quantity of subcutaneous fat deposition.

In this regard, woreda volleyball players had significantly greater chest circumference, upper arm, and forearm circumference than the project volleyball players. In addition, the woreda volleyball players had significantly greater arm length, upper leg length, and lower leg length than project volleyball players. Moreover, woreda volleyball team players were taller and heavier as compared to the project volleyball players.

## Recommendations

In selecting the physical exercises while designing the training program, it is recommended that the form of exercise should have on the anthropometric variables.

Significant differences existed among U-17 volleyball project players of different playing positions. Coaches should use this information to determine the type of anthropometric measurements that are needed.

The selection and training process should emphasis on their anthropometric measurements for the betterment of the result.

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## Research Article

# Evaluating the effectiveness of sports sponsorship among football fans in Ethiopia

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### ABSTRACT

In Ethiopia, more potential commercial companies are there but, few are participating on sport sponsorship due to feeling fear to achieve their commercial objectives. Purpose of this research was to survey effectiveness of commercial companies by sponsoring sport organization in Ethiopia. Researcher was going to evaluate commercial objectives (brand awareness, company image, and purchase intention) among football fans in specific club. Research was delimited to Ethiopia buna football club and Habesha Beer Company in Ethiopia because currently they are in sponsorship agreement. The cross-sectional survey research design was adopted in the study. Three-hundred and eighty six fans were randomly sampled from fans of Ethiopia buna football club. Mean and standard deviation were adopted for data analyses. Quantitative data were analyzed using descriptive statistic with the help of Statistical Package for the Social Sciences. Finding of the study shows that commercial objectives (brand awareness, company image, and purchase intention) of Habesha Beer company were created and increased by fans of Ethiopia Buna FC. Researcher proposes that other potential companies may achieve their commercial objectives if they participate on sport sponsorship. However, more detailed research and interpretation of results suggest that potential commercial companies could become beneficial if they are sponsor sport event/sport club in Ethiopia. **Contribution/Originality:** This study contributes to the existing literature to encourage different potential commercial companies to sponsor sport events in Ethiopia. The study used to fill the gap between negative attitudes of potential commercial company's managers toward effectiveness of sport sponsorship and to introduce the effectiveness of sport sponsorship to potential commercial company's in Ethiopia.

### INTRODUCTION

Sports are the area, in which sponsorship has developed furthest. According to Czinkonta and Ronkainen (2004), sponsorship is a promotional tool that marketers are using to affect customer behavior. The purposes of sponsorship include increasing sales, generating and raising awareness, reaching new target markets, and enhancing corporate image (Shank, 1999). A firm uses sponsorship to support an event to reach a specific or a wider target group and achieve corporate and commercial objectives (Javalgi *et al.*, 1994). Sponsorship is one of the fastest growing components of the marketing communication mix, according to the 2014 spending report by the professional authority in sponsorship consulting and research IEG, the worldwide sponsorship spending increased 3.9% in 2013, and forecasts 4.1% sponsorship spending growth over 2013, to \$55.3 billion.

Depending on the year being studied and the country and definitions, the share of sports sponsorship within sponsorship as a whole lies approximately between 50% and 70% of the total (Lagae, 2005). There are various types of sponsorship, including television and radio program sponsorship, sport, art, music, entertainment events, and educational sponsorship. Sport, art, and music events were received the highest volume of sponsorship funds, because they are events that have global acceptance. Many companies have increasingly implemented sponsorship in their marketing strategy as a key success for their businesses. Given that sports sponsorship is the most beneficial and the less damaged kind of sponsorship compared to other marketing tools. It becomes a main attraction for companies to invest in (Slack, 2004). As the practice of sponsorship marketing becomes an increasingly more important element of the marketing mix, this research pursues to contribute to the emergent body of theoretical research that supports sponsorship as a way to increase awareness, company image, and purchase intension.

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Therefore, the results of this study were important to increase sponsorship, sport industry development, and understand

benefits of sport sponsorship in the context of developing countries specifically in Ethiopia.

### Objectives of the Study

The objectives of this study were to investigate effect of sport sponsorships on fans perception toward company's image, brand awareness, and purchase intention: in case of Habesha Beer Company in Addis Ababa, Ethiopia.

## MATERIALS AND METHODS

The present study is a descriptive study in terms of the nature and the method it employs. The research was conducted on Ethiopia buna football club only because it was potentially sponsored by Habesha Beer Company. In Ethiopia, more potential commercial companies are there but, few are participating on sport sponsorship. Three-hundred and eighty six fans were randomly sampled from fans of Ethiopia buna football club). The total of 386 questionnaires was distributed to fans of Ethiopia Buna FC and among these ten papers are missed and five responses were excluded due to partially completed. Besides, all returned questionnaire's responses from selected subjects were analyzed and discussed. After the data were collected, the raw data were entered into the computer and were analyzed by the Statistical Package for the Social Sciences Software (Version 20). Descriptive statistics were used to analyze the data. Mean and standard deviation were used for data analysis were employed in the study to explore the effect

of sport sponsorship on variables selected. To conduct this research, as well as to collect data and information about the variables researcher used standard existing questionnaires with slight modification of scholars. The researcher used Likert scaling to measure customer's company image, brand awareness, and purchase intention with a series of short statements on a given in the surveys in from of the five-point range of responses from 1 (strongly disagree) up to 5 (strongly agree). The level of significance is set at 0.05 level. The reliability of the questionnaire in the present investigation: Cronbach's alpha for the questionnaire was a (0.781) for brand awareness, (0.814) for company image, and purchase intention (0.886), respectively.

## RESULTS

The study sought to determine the extent to which respondents agreed with the above statements relating to the effect of sports sponsorship on fans perception toward brand awareness. From the research findings, the study established that majority of the respondents agreed that I can easily remember the sponsored brand name as shown by mean of ( $M = 4.49$ ), I have sufficient information about the sponsored brand and its offers as shown by mean of ( $M = 4.24$ ), I got the brand for the 1<sup>st</sup> time through sponsored event as shown by a mean of ( $M = 3.59$ ), I can recognize the sponsored brand logo as shown by mean of ( $M = 4.52$ ), and I differentiated the brand characteristics through sponsored event as shown by mean of ( $M = 4.54$ ). The above findings concurs that

**Table 1: Summary of descriptive statistics for means and standard deviations: Effect of sports sponsorship on fans perception toward brand awareness**

Descriptive statistics					
	<i>n</i>	Minimum	Maximum	Mean	SD
I can easily remember the sponsored brand name	371	1.00	5.00	4.49	1.16
I have sufficient information about the sponsored brand and its offers	371	1.00	5.00	4.24	1.09
I got the brand for the 1 <sup>st</sup> time through sponsored event	371	1.00	5.00	3.59	1.49
I can recognize the sponsored brand logo	371	1.00	5.00	4.52	1.03
I differentiated the brand characteristics through sponsored event	371	1.00	5.00	4.54	0.89
Valid N (listwise)	371				

**Table 2: Summary of descriptive statistics for means and standard deviations: Effect of sports sponsorship on fans perception toward company image**

Descriptive statistics					
	<i>n</i>	Minimum	Maximum	Mean	SD
Habesha Beer has good product and services	371	1.00	5.00	4.47	0.97
Habesha Beer target to support the football activity	371	1.00	5.00	4.14	1.08
Habesha Beer responds to consumer needs	371	1.00	5.00	4.23	0.92
Sponsors of my favorite team have a good credibility	371	1.00	5.00	4.58	0.87
Valid N (listwise)	371				

**Table 3: Summary of descriptive statistics for means and standard deviations: Effect of sports sponsorship on fans perception toward purchase intention**

	Descriptive statistics				
	<i>n</i>	Minimum	Maximum	Mean	SD
I am willing to try the products/services of club's sponsors	371	1.00	5.00	4.38	1.08
I always enjoy Habesha Beer with my friends	371	1.00	5.00	4.47	0.98
I am willing to take away Habesha Beer to celebrate the holiday in the home	371	1.00	5.00	4.12	1.13
I am willing to buy the products/services of the sponsors	371	1.00	5.00	4.38	0.97
If the company presents new product/service, I will buy it	371	1.00	5.00	4.39	1.06
Valid N (listwise)	371				

brand awareness is achieved by exposing the brand to as many potential consumers as possible (Aaker, 1991; cited in Gwinner, 1997, p. 1).

The study sought to determine the extent to which respondents agreed with the above statements relating to the effect of sports sponsorship on fans perception toward company image. From the research findings, the study established that majority of the respondents agreed that Habesha Beer has good product and services as shown by mean of ( $M = 4.47$ ), Habesha Beer target to support the football activity as shown by mean of ( $M = 4.14$ ), Habesha Beer responds to consumer needs as shown by a mean of ( $M = 4.23$ ), and sponsors of my favorite team have a good credibility as shown by mean of ( $M = 4.58$ ). The finding supported by an empirical study (Tsiotsou and Konstantions, 2009) found that highly attached fans are more likely to develop positive image about their team's sponsor and consequently express positive intention to say good things and buy the sponsor's products.

The study sought to determine the extent to which respondents agreed with the above statements relating to the effect of sports sponsorship on fans perception toward purchase intention. From the research findings, the study established that majority of the respondents agreed that I am willing to try the products/services of club's sponsors as shown by mean of ( $M = 4.38$ ), I always enjoy Habesha Beer with my friends as shown by mean of ( $M = 4.47$ ), I am willing to take away Habesha Beer to celebrate holiday in home as shown by a mean of ( $M = 4.12$ ), I am willing to buy the products/services of the sponsors as shown by mean of ( $M = 4.38$ ), and if the company presents new product/service, I will buy it as shown by mean of ( $M = 4.39$ ). The finding supported Whitlark *et al.* (1993) discovered that "75% of the respondents who indicated that they would be likely to buy a sponsor's products actually did purchase the products within 3–6 months."

## DISCUSSION

The purpose of this research was to survey the effectiveness of sport sponsorship and Ethiopia potential commercial

companies and to aware that benefits of sport sponsorship to the other potential companies support sport events and achieve their commercial objectives. Moreover, the researcher attempted to fill the gap between negative attitudes of potential commercial company's managers toward the effectiveness of sport sponsorship and to introduce the effectiveness of sport sponsorship to potential commercial company's managers in Ethiopia. The finding of the descriptive analysis showed that majority of the respondents strongly agreed and Habesha Beer brand awareness was created and increased by fans of Ethiopia Buna FC. The finding supported Kosher and Merz (1995) argue that sponsorship is poor at building awareness and is rather used to push existing brand awareness, and also majority of the respondents strongly agreed and Habesha Beer company positive image was created and increased by fans of Ethiopia Buna FC. A lot of companies utilize sponsorship as a vehicle for brand exposure, many firms view sponsorship as an opportunity to foster a favorable image of their brand or firm (Milne and McDonald, 1999). In other words, create a positive corporate image. Firstly, the majority of the respondents strongly agreed and they were highly motivated to purchase and use Habesha Beer company product. Pitts (2004) showed that "a staggering 92% of respondents at Gay Games IV who said that they were more likely to purchase the sponsors' products due to the companies' support for the event." If companies participated on sport sponsorship were achieve their commercial objectives, why not other potential companies are participate and use this modern and effective tool of promotion. Therefore, researcher recommends that potential commercial companies to participate in sport sponsorship and to become beneficial from sport sponsorship.

## CONCLUSION

The purpose of this research was to survey effectiveness of sport sponsorship and Ethiopia potential commercial companies and to aware that benefits of sport sponsorship to the other potential companies support sport events and achieve their commercial objectives. To this end, the data collected from 386 fans from Ethiopia buna football club who

is registered up to 09/08/2017. The study employed descriptive statistics. Through sport sponsorship Habesha beer company image, brand awareness, and purchase intention was increased.

### **Implications**

The purpose of this research was to survey effectiveness of sport sponsorship and Ethiopia potential commercial companies and to aware that benefits of sport sponsorship to the other potential companies support sport events and achieve their commercial objectives. In the light of the findings of the study, the following recommendations were forwarded: Potential commercial companies could become beneficial if they sponsor sport event/sport club, Habesha Beer Company to make further sponsorship agreement with Ethiopia buna football club.

### **FUNDING**

This study received no specific financial support.

### **COMPETING INTERESTS**

The authors declare that they have no competing interests.

### **CONTRIBUTORS/ACKNOWLEDGMENT**

Both authors contributed equally to the conception and design of the study.

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## Research Article

# Players physiological qualities for the selection process of the 1<sup>st</sup> and 2<sup>nd</sup> division football clubs in Ethiopia

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### ABSTRACT

The study assessed the physiological performances of football players in the 1<sup>st</sup> and 2<sup>nd</sup> division football clubs, Ethiopia. The aim of this study was mainly to understand and to develop basic standards to select players based on their physical quality to formulate and implement effective strategies for the coaching program. The study employed a cross-sectional study design. The samples of 240 players from eight different teams were selected. Speed, power, agility, endurance, and flexibility tests were conducted. The data were analyzed using descriptive and inferential analysis techniques. Significantly weight (0.014) and height (0.036) differences were found between the 1<sup>st</sup> and 2<sup>nd</sup> division, but not in body mass index. Mean value per setting from 1<sup>st</sup> to 2<sup>nd</sup> division, respectively: 10 m speed 2.08 s and 2.14 s ( $P < 0.0001$ ); 20 m speed 3.4 s and 3.49 s ( $P < 0.0001$ ); and 40 m speed 5.87 s and 6.07 s ( $P < 0.0001$ ). Flexibility was 11.96 cm and 14.96 cm ( $P < 0.05$ ). First division club's players were taller, heavier, faster, and flexible than the second division club's players.

**Keywords:** Ethiopia, Football, Physiological performance, Talent selection program

## INTRODUCTION

Ethiopia has 1,220,900 sq.km and more than 85,000,000 people, and football is the number one sport in the country (Andualem *et al.*, 2016). The Ethiopian national football team rank has been declined gradually as compared to other Africa countries football level. Today's, football players must have basic physiological performances that are suitable for their positions, such as goalkeeper, defender, midfielder, and striker (Mohr *et al.*, 2003). The literature has emphasized the importance of the physiological characteristics of players. Gil *et al.* (2010) and Perroni *et al.* (2014) suggest that increased body fat is negatively related to the selection of players and the performance of football players. Players for higher performance in football are selected not only based on body size and physical structure. Consequently, identification policies based solely on physical attributes may serve only to select current performance levels and may prematurely exclude those who have the potential to excel in the future (O'Connor *et al.*, 2016). Such an approach would lead to late maturing players, who are not

necessarily shorter and weaker as adults, could be missing out on specialized training (Reilly *et al.*, 2000).

Cooper and Storer (2001) suggest that field tests are appropriate when testing groups of people, providing quantitative and objective measures of exercise performance in a variety of settings. Many studies (Vaeyens *et al.*, 2006 and Hemati *et al.*, 2013) also highlighted the importance of physiological tests such as 10, 20, and 40 m speed. Technical analysis of field sports shows that most young players execute straight-line speeds for an average of 3 s (up to a maximum of 5 s) before encountering an obstacle or altering direction to gain a tactical advantage. For this reason, the 10, 20, and 40 m speeds are more accurate tests for the selection program. Surveys such as that conducted by Baechle and Earle (2008) have shown that vertical jumping ability has a direct correlation with the ability to accelerate and changing direction, in practice, and at game time. Cooper introduced 12 min run test for the estimation of aerobic fitness. Cooper and Storer (2001) demonstrated that the replacement of 12 min run test with 20 m shuttle running test.

Therefore, the objective of this research was to study the physical qualities of football players so that coaches and managers understand, formulate, and implement effective strategies for their coaching program. The study will also help

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to develop basic standards for clubs to select better players based on their physical qualities. There is abundant research on the physical qualities of players in the selection process: Very limited published research exists, however on the Ethiopian football and the relationship between players settings.

## METHODOLOGY

Two-hundred and twenty football players participated in the study. One-hundred and twenty were represented from 1<sup>st</sup> division to the rest 120 players that were selected from 2<sup>nd</sup> division clubs. A total of eight teams were randomly selected. Once the clubs were identified, all members of the club included in the study. All players who were included in the study were active players at the time of the study. The players used to train at least 5–6 training sessions per week and involved in one game on a weekly basis. To be eligible for the study, all players were required to be free from injury, not taking medication, and restricted from any act or behavior that may affect the test performance either positively or negatively.

### Ethics/Informed Consent

All participants involved in this study were provided with verbal and written communications of the study's requirements.

### Research Design

This study employed a cross-sectional study design. The study was designed to examine football-specific physical fitness differences among the two-division football players at the clubs.

### Data Collection Procedures

Along with the basic, a total of five physical fitness tests were used a data collection instrument. These five tests were conducted into consecutive days. Speed, standing vertical jump (power), and Illinois agility was assessed on the 1<sup>st</sup> day of the test. On the 2<sup>nd</sup> day: Yo-Yo intermittent endurance and sit and reach (flexibility) tests were conducted. One time measurement was taken for all physical fitness qualities.

Bodyweight measurement was taken using a digital scale according to the standards for bodyweight measurement. Height measurement was taken using a stadiometer. Speed and agility tests were conducted using a digital stopwatch. A wall-assisted vertical jump test was conducted to measure the lower leg explosive power, and the modified yo-yo intermittent recovery test on a 20 m specified distance was conducted for aerobic endurance performance. To measure the flexibility of the lower back and hamstring muscles, the sit-and-reach test was used. In this study, all the physical fitness tests were conducted based on the recommendation of Ransone, 1996.

### Statistical Analysis

All the descriptive statistics for football-specific fitness measurements are presented using mean and standard

deviation. To see the physical fitness differences among the two groups (1<sup>st</sup> and 2<sup>nd</sup> division), one-way analysis of variance was employed independently. Statistical Package for the Social Sciences version 24 used to analyze the data. All Statistical significance was accepted at  $P < 0.05$  with 95% confidence level.

## RESULTS

From 240 respondents, 100 (42%) came from EFF teams, 80 (33%) from clubs and 60 (25%) were from academy. From the whole respondents, 50 (21%) were secondary level, 56 (23%) were grade 10 completed, 101 (42%) were metric qualified, and 33 (13%) were diploma certificate and above. From the total number, 108 (45%) were played football at 1<sup>st</sup> time at home, 70 (29%) were youth teams, and 62 (26%) were played at school. Most of players 191 (80%) attend selection process, and the rest 49 (20%) did not attend [Table 1].

### The Physical Performances of Players

The mean and the standard deviation of results across the physical performance tests ( $n = 240$ ) are shown in Table 2. The mean time of the total players for 10 m, 20 m, and 40 m speed were 2.15 s, 3.51 s, and 5.96 s, respectively, the mean value of the sit and reach test and the vertical jump was 12.94 cm and 42.93 cm. Using the Yo-Yo intermittent endurance, test the mean predicted value for  $\text{VO}_2$  max was 49.73 ml/kg/min.

**Table 1: Biographical data of players**

	Frequency	Percent
Setting		
First division	120	50
Second division	120	50
Total	240	100.0
Level of education		
Secondary	50	21
Grade 10	56	23
Grade 12	101	42
Certificate	33	13
Total	240	100.0
They played football at 1 <sup>st</sup> time		
At home	108	45.0
At school	62	25.8
Youth team	70	29.2
Total	240	100.0
Attend the selection process		
Yes	191	79.6
No	49	20.4
Total	240	100.0

The physical performances of the participants were presented in the following Tables 2 and 3.

The mean value of the group of players per setting from 1<sup>st</sup> division and 2<sup>nd</sup> division, respectively, was as follows: 10 m speed time was 2.08 s and 2.26 s ( $P < 0.0001$ ); 20 m speed time was 3.4 s and 3.7 s ( $P < 0.0001$ ); and 40 m speed time was 5.87 s and 5.9 s ( $P < 0.0001$ ). Sit and reach flexibility were 11.96 cm and 11.31 cm ( $P < 0.05$ ). Vertical jump scores were 43.40 cm and 42.25 cm. The Illinois agility scores were 17.42 m and 17.5 m. The  $VO_2$  max value was 50.1 and 50.22 ml/kg/min from the 1<sup>st</sup> division to 2<sup>nd</sup> division clubs setting, respectively. The 1<sup>st</sup> division football players were significantly faster than the 2<sup>nd</sup> division players. The 1<sup>st</sup> division players have significantly better flexibility than the 2<sup>nd</sup> division players. No significant difference observed between settings per power, agility, and  $VO_2$  max.

## DISCUSSION

This study aimed to describe the present physical performances of Ethiopian football players and compare the results of within players with various settings for the selection process. The main findings of this study showed the following results. The

**Table 2: Physical performance of players (n=240)**

Parameters	Minimum	Maximum	Mean	SD
Speed 10 m(s)	1.71	2.82	2.15	0.19
Speed 20 m(s)	3.05	5.19	3.51	0.29
Speed 40 m(s)	5.23	7.46	5.96	0.31
Sit and reach flexibility (cm)	1.00	49.50	12.94	7.86
Vertical jump power (cm)	25.0	64.00	42.93	6.58
Illinois agility test(s)	15.41	20.40	17.45	0.83
Yo-Yo intermittent endurance (cm)	216.00	2840.00	1587.90	644.70
$VO_2$ Max (Yo-Yo test) (ml/kg/min)	38.21	60.26	49.74	5.42

1<sup>st</sup> division football players were significantly taller and heavier compared to the 2<sup>nd</sup> division football players. No significant difference between settings for per body mass index (BMI). The 1<sup>st</sup> division football players were significantly faster compared to the 2<sup>nd</sup> division football players. There was no significant difference between settings per power, agility, and  $VO_2$  max.

Regarding physiological correlates of success: Abbott and Collins (2010) described: As early as the 1920s, researchers were examining the potential of physiological an example of height and strength accordingly measures as discriminating factors between players involved in different sporting events.

There was a significant difference between the 1<sup>st</sup> division football teams and 2<sup>nd</sup> division football teams. The study result indicates that the 1<sup>st</sup> division football players were significantly taller, heavier, faster, and more flexible compared to the 2<sup>nd</sup> division football players. According to Veale (2011), evidence demonstrates a large difference in access to club facilities (including training hours) between part-time (8 h/week) and full-time trainee (roughly 40 h/week). Better clubs have better facilities and equipment in addition to a skilled workforce in the selection and their training program.

In summary players at 10, 20, and 40 m, the 1<sup>st</sup> division football players attained significantly better results. For the sit and reach flexibility tests, 2<sup>nd</sup> division football players attained significantly better results. According to Vaeyens *et al.* (2006), top clubs are used the current dynamic talent selection program to maintain their sporting and financial status and different chances for players who differ in progress and maturity must be canceled out. The selection, development, and professional guidance of football players were a priority for success.

Regarding to the correlation matrix comparing the relationship of variables performance described in Table 3. BMI and height were negatively related to speed and agility. This implies that the player had larger BMI that was slower and less agile, the taller players were slower and less agile.

As a result indicated, the different values were observed and it helps to consider when the player's selection process implemented. Regarding to the result and the literatures, we

**Table 3: Physical performance of players by the 1<sup>st</sup> division and 2<sup>nd</sup> division clubs setting**

Setting	n	10 m		20 m		40 m		Flexibility		Power		Agility		$VO_2$ max	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
1 <sup>st</sup> division	120	2.08*	0.13	3.40*	0.15	5.87	0.25	11.96	5.37	43.40	5.81	17.42	0.76	50.10	5.22
2 <sup>nd</sup> division	120	2.26	0.25	3.70	0.38	5.90	0.30	11.31	5.31	42.25	6.45	17.50	0.60	50.22	5.84
Total	240	2.15	0.19	3.51	0.29	5.96	0.31	12.94	7.86	42.93	6.58	17.45	0.83	49.74	5.42
Sig. difference		0.000		0.000		0.000		0.023		0.556		0.825		0.376	

Sig. ( $P < 0.05$ )\* 1<sup>st</sup> division versus 2<sup>nd</sup> division

better consider the biological age rather than chronological age may provide a more accurate index of performance potential.

Limitations of the study were recognized. The limited number of teams and fields for the study, although football fields were not available sufficiently or were not appropriate for the selection process.

## CONCLUSION

The present study analyzed the results of player's physical performances. The result showed that in Ethiopian, 1<sup>st</sup> division football clubs players were significantly taller, heavier, faster, and flexible than the 2<sup>nd</sup> division football players. Considering all the results, the findings suggest that physical tests can have the power to select the talented players.

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## Research Article

# A study on influence of yoga on student's life

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### ABSTRACT

Yoga is widely practiced as a way to plug physical, psychological, and spiritual well-being, while kind of studies has documented the efficacy of yoga for functioning in healthy individuals and people experiencing illness or pain. We propose an analog between the physical, psychological, and spiritual effects of the practice of yoga in students behavior. Physical systems activated through yoga practice include musculoskeletal, cardiopulmonary, autonomic system nervosum, and endocrine functioning. Psychological benefits include enhanced coping, self-efficacy, and positive mood. Spiritual mechanisms which may be understood within a Western medical model include acceptance and mindful awareness. We present empirical evidence that supports the involvement of those domains. However, additional well-conducted research is required to further establish the efficacy of yoga for health states and to know how posture, breath, and meditative activity affect the body, mind, and spirit. In this study, we are mainly concerned with secondary data for the evaluation of yoga's influence on students.

**Keywords:** Cardiopulmonary, Musculoskeletal, Nervosum, Psychological, Spiritual

## INTRODUCTION

Teenage is that the period of time of scholars once they are stucked between sort of workload and pressures. They need to perfectly accomplish their school or college task, steel oneself against sort of examinations or test, got to score excellent marks, work better in their workplace and improve their performance, and many other tension.

In several schools, colleges, and universities round, the world several programs and courses are made compulsory for the scholars to hitch. Yoga is one of the among them. Students from all round the world have gained benefits by doing yoga. It helps your body to relax and soothes your mind. Furthermore, it helps to form your body flexible and improves your concentration power. Furthermore, students can gain various other benefits from yoga which will help them in completing their work perfectly and make them high scorer within the class.

### Objective

The main objective of this paper is to find the impact of yoga in school going students.

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## METHODOLOGY

For this study, we mostly went for secondary data from a review of the literature from various articles and research papers published.

## REVIEW OF LITERATURE

Joshi *et al.* (1992) reported that pranayama leads to an increase in breath-holding time and decrease respiration rate. It is also believed that practice of kumbhaka (breath retention) in the most of pranayama enhances concentration and reduces anxiety.

Khumar *et al.* (1993) examined the effectiveness of Shavasana (a type of yoga exercise) as a therapeutic technique to alleviate depression. Fifty female university students were diagnosed with severe depression; 25 were subjected to 30 sessions of Shavasana, and 25 served as controls. Results revealed that (1) Shavasana was an effective technique for alleviating depression and (2) continuation of the treatment for a longer period resulted in a significantly increases positive change in the Ss.

## DISCUSSION

There is a broad variety of yoga schools, practices, and goals in Hinduism, Buddhism, and Jainism. The term "Yoga" in the



Western world often denotes a modern form of hatha yoga and yoga as exercise, consisting largely of the postures called asanas.

The origins of yoga have been speculated to date back to pre-Vedic Indian traditions, possibly in the Indus valley civilization around 3000 BCE. It is mentioned in the Rig-Veda, but yoga most likely developed as a systematic study around the 5<sup>th</sup> and 6<sup>th</sup> centuries BCE, in ancient India ascetic and śramaṇa movements. The chronology of earliest texts describing yoga-practices is unclear, varyingly credited to Upanishads. The Yoga Sutras of Patanjali go back to the 2<sup>nd</sup> century BCE and gained prominence within the west within the 20<sup>th</sup> century after being first introduced by Swami Vivekananda. Hatha yoga texts emerged sometimes between the 9<sup>th</sup> and 11<sup>th</sup> centuries with origins in tantra.

Yoga gurus from India later introduced yoga to the West, following the success of Swami Vivekananda within the late 19<sup>th</sup> and early 20<sup>th</sup> century together with his adaptation of yoga tradition, excluding asanas. Outside India, it is developed into a posture-based fitness, stress-relief, and relaxation technique. Yoga in Indian traditions, however, is a quite physical exercise; it is a meditative and spiritual core. One of the six major orthodox schools of Hinduism is additionally called yoga, which has its own epistemology, ontology, and metaphysics and is closely associated with Hindu Samkhya philosophy.

### **Impact of Yoga in the Life of Students**

Meditation and yoga bring positive vibes among the students and if they are doing it regularly, it will help in bringing positive outcomes which are advantageous for the scholars. There are a sort of positive outcomes of yoga for learners and various other peoples. Some of the advantages of yoga to students.

#### ***Destress students***

Students face tons of depression and stress thanks to a spread of reasons such as family pressure, financial pressure, or the other depression. Yoga is one among the simplest thanks to eliminate all of your pressure. Yoga keeps all of your depression away and keeps your mind fresh.

#### ***Concentration and sharpness***

Yoga helps in increasing the sharpness of your brain and your concentration power. It helps you in relaxing your mind and supply you more peace of mind.

#### ***Strength***

Strength is required by your body to satisfy all day activities appropriately. Especially, young students need tons of strength as they are overloaded with many tasks. Therefore, yoga helps in building your strength and provides you power.

#### ***Health benefits***

Medically proved yoga has various medical benefits. A lot of diseases are often improved by doing yoga daily. It helps to scale back excellent hypertension among students.

#### ***Weight management and flexibility***

Flexibility of the body is another advantage of doing yoga daily. Practicing yoga asana, your muscles also are stretched, thereby increasing the pliability of your body. Uneasiness in breathing and obesity is a number of the issues associated with weight which is extremely common among the scholars. Due to high calories drinks and food intake, students need to face such sorts of problems. With practicing yoga regularly, they will help their weight management.

#### ***Advancement of educational brain***

Doing yoga regularly helps you in advancing your brain muscles and helps students to attain the very best grades. Hence, yoga helps learners to remain relaxed and stress-free from all the depress and academic tensions which are useful in your academic advancement.

#### ***Enhances your power and memory***

Yoga is that the power for all the scholars that help in enhancing their memory and provides them more energy and power.

#### ***Increases focus***

Students can enhance their focus and concentration with the assistance of yoga. A student can receive multiples benefits with the assistance of yoga.

## **CONCLUSION**

There are multiple benefits of yoga for the students. Whether its kids, school going children or college students anyone can avail benefits from yoga. Yoga has proved to be of great benefit in reducing mental health disorders among students. Students can leave these stress management-based activities with the help of online assignments service provider helper. It is the important time for the development of the mental health of the students. With studentsassignmenthelp.com leave, all the difficult work for your assignment help experts to do and improve your strength, stamina, concentration power, and relaxation of mind by practicing yoga regularly.

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## Research Article

# Performance and achievement of Mr. Zameer Ahmed Khan in the field of Volleyball

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### ABSTRACT

Physical education aims at all-round development of the personality of an individual and includes physical, mental, social, emotional, and moral aspects to make an individual a good citizen. Volleyball in India is a popular sport that is played in various regions of India and several reputed Volleyball tournaments are also organized as well. The investigator has conducted a study on the renowned personality Mr. Zameer Ahmed Khan and the contribution he made to the field of Volleyball. The objective of the present study was to investigate the factors responsible for the successful sporting career of Mr. Zameer Ahmed Khan and his contribution toward his performance and achievement in Volleyball. The author found that consistent performance and success in various competitions have not only made Mr. Zameer Ahmed Khan capable for hard training and perseverance in sports but also made him realize his own potentials of becoming a Volleyball player of international repute.

**Keywords:** Health, Perseverance, Physical education, Volleyball

## INTRODUCTION

The purpose of physical education and sport from ancient to modern times is to assist students in developing and understanding of the historical foundations of physical education and sport so that they will be equipped to undertake further work in the sociocultural study of human movement. Students will be encouraged to seek out the meanings of sport and physical education held for people during different historical periods, and to identify the linkages between modern sports and physical education and their earlier counterparts.

Volleyball is a team sport played by two teams on a playing court divided by a net. The sport originated in the United States and is now just achieving the type of popularity in the U.S. that it has received on a global basis, where it ranks only behind soccer among participation sports. William G. Morgan has gone down in history as the inventor of the game of Volleyball in 1895, to which he originally gave the name "Mintonette."

The objective of the game for each team is to send the ball regularly over the net, to ground it on the opponent's court, and to prevent the ball from being grounded on their own court. The ball is put into play by the right back-row player, who serves the team is allowed to hit the ball 3 times (in addition to the block contact) to return it to the opponent's court. A player is not allowed to hit the ball twice consecutively, except when he is attempting a block. The rally continues until the ball touches the ground/floor, goes "out" or a team fails to return it to the opponent's court or commits a fault. The perfect play in Volleyball is Pass, Set, and Spike! Today, there are more than 46 million Americans who play Volleyball. There are 800 million players worldwide who play Volleyball at least once a week.

Mr. Zameer Ahmed Khan (Plate 1) was born on November 1, 1950 in Dharwad District of Karnataka State. Right from his childhood, he loved sports, and his ambition was to become an International Player. There was strong support from his family when he wanted to enter in the field of sports. During his school days, he was active in many sports such as Athlete, Tripple Jump, and Discuss throw. Mr. Zameer Ahmed Khan started playing Volleyball in the year 1967–1968 and was inspired by his coach Mr. B.G. Khan. He entered in the field of Volleyball by choice of his coach and not by chance.

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At the tender age of 17 years, he was selected for National Team and represented Mysore State during the year 1967–1968 and played at Trivandrum (Kerala). His favorite position in Volleyball is blocker though he is an all-rounder. He started his career by playing Inter District match held at Mudduhal and Shimoga and selected for Nationals 1<sup>st</sup> time and was winner too. He says that the main reason for choosing Volleyball as his profession is it is economic and more disciplined. He had preferred Volleyball as his game during the school and college days than any other game. Hence, the present study was designed to study the performance and achievement of Mr. Zameer Ahmed Khan in the field of Volleyball.

## METHODOLOGY

The study has been designed to investigate the factors responsible for the successful sporting career of Mr. Zameer Ahmed Khan and his contribution toward his performance and achievement in Volleyball. The study was purely descriptive cum analytical in nature which was based on the survey method. The house held schedule methods along with interview techniques were adapted to employ the questionnaires, and thus the investigator gathered the necessary information.

## Rating Scale

Opinion rating scale on Mr. Zameer Ahmed Khan was constructed with the help of experts for the following four dimensions viz.,

- Mr. Zameer Ahmed Khan as a player
- Mr. Zameer Ahmed Khan as a coach and mentor
- Mr. Zameer Ahmed Khan as a personality
- Mr. Zameer Ahmed Khan as a manager and administrator.

Likert scale having four options such as agree, strongly agree, disagree, and strongly disagree was used for the study. Finally, the total number of responses was received and the interpretation was done accordingly. The respondents chosen for the study were the family members and relatives of Mr. Zameer Ahmed Khan.

## Analysis of Data

Analysis of the data was done after administering the questionnaire to ten respondents after ascertaining their willingness to participate in the study. Finally, the total number of responses received was converted in terms of percentage and the statistical and graphical representation was done accordingly. The graph was further interpreted to give a clear understanding of the data.

**Table 1: Opinion rating survey of relatives on Mr. Zameer Ahmed Khan as a player**

S. No.	Statements	Relatives			
		Agree	Strongly agree	Disagree	Strongly disagree
1.	Mentally strong at competition time	11	89	0	0
2.	Believes in faith in teachers	11	89	0	0
3.	Always respects referees decision	11	89	0	0
4.	Always likes to help others	0	100	0	0
5.	Always keeps himself physically fit for competition	0	100	0	0
6.	Very conscious about his diet	56	44	0	0
7.	Purely a professional athlete	0	100	0	0
8.	Always has a family support	11	89	0	0
9.	Very hard working athlete	0	100	0	0
10.	Discuss his personal matters with friends	89	0	11	0
11.	He follows the rules and regulations of the game strictly	11	89	0	0
12.	He tried his best to bring progress among Volleyball players	0	100	0	0
13.	He enjoys his victory	11	89	0	0
14.	He works hard on his minus point	44	56	0	0
15.	Has a pleasant manner	0	100	0	0
16.	Has a vast knowledge about sports	33	67	0	0
17.	His approach to sports is more scientific	44	56	0	0
18.	Very friendly and cooperative	11	89	0	0
19.	Always motivated teammates	0	100	0	0
20.	His presence is inspiring	0	100	0	0

## RESULTS AND DISCUSSION

### Opinion Rating Survey of Mr. Zameer Ahmed Khan as a Player

The opinions of respondents for 20 different questions on Mr. Zameer Ahmed Khan as a player are shown in Table 1. The table depicts that cent percent of the relatives strongly agreed that Mr. Zameer Ahmed Khan was mentally strong at competition time, always liked to help others, was a very hardworking and professional athlete, and always kept himself physically fit for competition. The tabular data depict that among the relatives, 11% agreed and 89% strongly agreed that Mr. Zameer Ahmed Khan had belief in his teachers, always respected his referee's decision, always had family support, and used to follow the rules and regulations of the game strictly.

Meanwhile, the table also depicts that 56% of the respondents agreed and 44% of them strongly agreed that Mr. Zameer Ahmed Khan used to be very conscious about his diet. Consequently, 89% of the relatives agreed, while 11% of them disagreed for the statement that Mr. Zameer Ahmed Khan used to discuss his personal matters with friends.

Further, it is observed that cent percent of the respondents strongly agreed that Mr. Zameer Ahmed Khan tried his best

to bring progress among Volleyball players. The table shows that 11% agreed and 89% respondents strongly agreed that Mr. Zameer Ahmed Khan enjoyed his victory, had a very friendly and cooperative nature. The tabular data depict that among the relatives, 44% agreed and 56% strongly agreed that Mr. Zameer Ahmed Khan used to work hard on his minus point and had a scientific approach toward sports.

Moreover, the data depict that cent percent relatives strongly agreed that Mr. Zameer Ahmed Khan has pleasant manners, has vast knowledge about sports, always motivated his teammates, and his presence is inspiring.

### Opinion Rating Survey of Mr. Zameer Ahmed Khan as a Coach

The opinion of relatives about Mr. Zameer Ahmed Khan as a coach is shown in Table 2. It is evident from the table that cent percent of the relatives strongly agreed that Mr. Zameer Ahmed Khan was a committed professional. The tabular data depict that among the relatives, 22% agreed, whereas 78% strongly agreed that Mr. Zameer Ahmed Khan has a natural ability of spotting talent and often cited examples of world performance.

The table shows that 33% of the relatives agreed and 67% strongly agreed that Mr. Zameer Ahmed Khan was a very hard

**Table 2: Opinion rating survey of relatives on Mr. Zameer Ahmed Khan as a coach**

S. No.	Statements	Relatives			
		Agree	Strongly agree	Disagree	Strongly disagree
1.	Committed professional	0	100	0	0
2.	Natural ability of spotting talent	22	78	0	0
3.	Very hard working and industrious	33	67	0	0
4.	Always receptive to new ideas	0	100	0	0
5.	Very good in providing motivation to his players	11	89	0	0
6.	Knows how to influence human performance	33	67	0	0
7.	Always maintains diary	33	67	0	0
8.	Daily schedule for his students always on scientific lines	11	89	0	0
9.	Often cited examples of world performance	22	78	0	0
10.	A good conversationalist	11	78	11	0
11.	Keeps complete records of performance	56	33	11	0
12.	Punctual for his classes	0	100	0	0
13.	Does not show inclination or favor	11	89	0	0
14.	Employed variations in his coaching style	11	89	0	0
15.	His classes were interesting and inspiring	22	78	0	0
16.	Employed audio-video aids	22	78	0	0
17.	A good example to others	0	100	0	0
18.	Motivated students to take part in competitions	11	89	0	0
19.	Corrected mistakes	56	33	11	0
20.	Very popular among students	22	78	0	0



working, industrious coach, knew how to influence human performance, and always maintains diary. The tabular data further depict that cent percent of the respondents strongly agreed that Mr. Zameer Ahmed Khan was always receptive to new ideas during his coaching. It was observed that 11% of the relatives agreed, while 89% strongly agreed that Mr. Zameer Ahmed Khan was a very good in providing motivation to his players, always planned his daily schedule for his students on scientific lines, and did not show inclination or favor toward any player.

Moreover, 11% of the respondents agreed and 78% strongly agreed, while 11% disagreed that Mr. Zameer Ahmed Khan was a good conversationalist. The tabular data depict that the majority of the relatives (56.00%) agreed, whereas 33% strongly agreed and 11% disagreed that Mr. Zameer Ahmed Khan kept complete records of his performances. Cent percent of the relatives strongly agreed that Mr. Zameer Ahmed Khan was always punctual for his classes. The table depict that the majority of the relatives (100.00%) strongly agreed Mr. Zameer Ahmed Khan employed variations in his coaching style, always used to set a good example to others, and motivated students to take part in competitions.

The tabular data depict that among the relatives, 22% agreed, and 78% strongly agreed that Mr. Zameer Ahmed Khan's

classes were interesting, inspiring, and employed audio-video aids during his coaching. The table further shows that 56% of the relatives agreed, while 44% strongly agreed that Mr. Zameer Ahmed Khan always believed in correcting mistakes and was very popular among students.

### Opinion Rating Survey of Mr. Zameer Ahmed Khan as a Personality

The opinion of relatives about Mr. Zameer Ahmed Khan as a personality is shown in Table 3. Here, the tabular data depict that cent percent of the relatives strongly agreed that Mr. Zameer Ahmed Khan always used to behave in sober manner, respects established traditions and possesses a very pleasant personality. Further, 11% of them agreed and 89% strongly agreed that Mr. Zameer Ahmed Khan follows the rules strictly, acts in a self-reliant manner, is a warm-hearted person, and acts in a controlled manner. The table shows that 78% of the respondents agreed, while 22% strongly agreed that Mr. Zameer Ahmed Khan behaves boldly in decision-making.

Meanwhile, 22% of them agreed, whereas 78% strongly agreed that Mr. Zameer Ahmed Khan is a practical man and behaves in a relaxed manner. Meanwhile, 56% of the relatives agreed, while 44% strongly agreed that Mr. Zameer Ahmed Khan acts in a dominant manner. Cent percent of the respondents strongly

**Table 3: Opinion rating survey of relatives on Mr. Zameer Ahmed Khan as a personality**

S. No.	Statements	Relatives			
		Agree	Strongly agree	Disagree	Strongly disagree
1.	Behaves in sober manner	0	100	0	0
2.	Follows the rules	11	89	0	0
3.	Behaves boldly in decision making	78	22	0	0
4.	Acts in self-reliant manner	11	89	0	0
5.	Is a practical man	22	78	0	0
6.	Respects established traditions	56	44	0	0
7.	Behaves in relaxed manner	22	78	0	0
8.	Is a warm-hearted person	11	89	0	0
9.	Acts in a controlled manner	11	89	0	0
10.	Acts in a dominant manner	56	44	0	0
11.	Takes his own decision	0	100	0	0
12.	Possesses a very pleasant personality	0	100	0	0
13.	Very friendly and cooperative	11	89	0	0
14.	Health conscious	67	33	0	0
15.	Has a good physique	11	89	0	0
16.	Not stubborn	0	100	0	0
17.	Never loses his cool	11	89	0	0
18.	Has lot of patience and perseverance	67	22	11	0
19.	Believes much in social service	78	22	0	0
20.	His attitude toward others is always human	22	78	0	0

agreed that Mr. Zameer Ahmed Khan takes his own decision. The data further depict that 11% of the relatives agreed and 89% strongly agreed that Mr. Zameer Ahmed Khan is a very friendly and cooperative man, has a good physique and never loses his cool. Meanwhile, 67% of them agreed, while 33% strongly agreed that Mr. Zameer Ahmed Khan is a health-conscious person.

However, cent percent of them strongly agreed that Mr. Zameer Ahmed Khan is not a stubborn man. Meanwhile, 67% of the respondents agreed and 22% strongly agreed, while 11% disagreed that Mr. Zameer Ahmed Khan has a lot of patience and perseverance. Moreover, the table shows that 78% agreed and 22% disagreed that Mr. Zameer Ahmed Khan believes much in social service. On the other hand, 22% of the relatives agreed, whereas 78% strongly agreed that Mr. Zameer Ahmed Khan's attitude toward others is always human.

### Opinion Rating Survey of Mr. Zameer Ahmed Khan as a Manager and Administrator

The opinion of relatives about Mr. Zameer Ahmed Khan as a manager and administrator is shown in Table 4. The tabular data depict that cent percent of the relatives strongly agreed that Mr. Zameer Ahmed Khan is a very knowledgeable man. Among the relatives, 11% of them agreed, while 89% strongly agreed that Mr. Zameer Ahmed Khan is very honest, sincere to

his assignments and believes in learning by doing. The table shows that 78% and 22% of the relatives agreed and strongly agreed that Mr. Zameer Ahmed Khan is a pragmatic person.

Moreover, the data depict that 22% of the respondents agreed and 78% strongly agreed that Mr. Zameer Ahmed Khan always helps others and create open and trusting climate. However, 56% of them agreed, while 44% strongly agreed that Mr. Zameer Ahmed Khan respected his teachers. Further, it was noticed that 11% of the relatives agreed, while 89% strongly agreed that Mr. Zameer Ahmed Khan has pleasing manners, his approach to sports is most scientific and followed the rules and regulations of the game strictly.

It was observed that cent percent of the relatives either agreed or strongly agreed that Mr. Zameer Ahmed Khan respects other games and other players and is a hardworking player. However, 67% of them agreed, while 33% strongly agreed that Mr. Zameer Ahmed Khan never used shortcuts. Meanwhile, cent percent of the relatives either agreed or strongly agreed that Mr. Zameer Ahmed Khan is a very friendly and cooperative person.

It is further noticed from the table that cent percent of the respondents strongly agreed that Mr. Zameer Ahmed Khan is a very punctual man. Meanwhile, 11% of the relatives agreed,

**Table 4: Opinion rating survey of relatives on Mr. Zameer Ahmed Khan as a manager and administrator**

S. No.	Statements	Relatives			
		Agree	Strongly agree	Disagree	Strongly disagree
1.	Very knowledgeable man	0	100	0	0
2.	Very honest and sincere to his assignments	11	89	0	0
3.	Pragmatist	78	22	0	0
4.	Believes in learning by doing	11	89	0	0
5.	Always help others	22	78	0	0
6.	Respects teachers	56	44	0	0
7.	Always create open and trusting climate	22	78	0	0
8.	Has pleasing manners	11	89	0	0
9.	His approach to sports is most scientific	11	89	0	0
10.	Respects other games	56	44	0	0
11.	Respects other players	0	100	0	0
12.	Is a hardworking player	0	100	0	0
13.	He follows the rules and regulations of the game strictly	11	89	0	0
14.	Never uses shortcuts	67	33	0	0
15.	Very friendly and cooperative	11	89	0	0
16.	He is very punctual	0	100	0	0
17.	He enjoys game	11	89	0	0
18.	He is always satisfied on his own performance	67	22	11	0
19.	Has faith in teacher	78	22	0	0
20.	Is a professional athlete	22	78	0	0

whereas 89% strongly agreed that Mr. Zameer Ahmed Khan enjoys his game. The tabular data depict that 67% and 22% of the respondents agreed and strongly agreed, while 11% disagreed that Mr. Zameer Ahmed Khan, most of the time, used to be satisfied with his own performance. The tabular data depict that 78% of the relatives agreed, while 22% strongly agreed that Mr. Zameer Ahmed Khan had faith in his teachers. On the other hand, 22% agreed and 78% strongly agreed that Mr. Zameer Ahmed Khan is a professional athlete.

## CONCLUSION

The following conclusions may be drawn from the analysis of the data gathered from the subject and other associates in responses to the questionnaires served to them and interviews conducted. The subject possesses very sound habits, discipline, sincerity, humbleness, regularity, punctuality, calmness,

relaxed approach, optimistic attitude, die-hard attitude, aggressive attitude, and a very positive and favorable approach toward sports and people and has shown total dedication, will power, determination, and involvement as a Volleyball player and coach at various levels.

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## Research Article

# Physical fitness traits of junior Volleyball players in West Gojjam, Ethiopia

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### ABSTRACT

The purpose of this study was to compare the physical fitness traits of junior Volleyball players in the West Gojjam district of Ethiopia with that of their international norms. The cross-sectional study involves 54 ( $n = 54$ ) junior Volleyball players from West Gojjam and secondary data from official websites, journals, and books. Six fitness traits were tested and the result examines that junior Volleyball players in the West Gojjam district of Ethiopian were significantly lower than international norms ( $P < 0.01$ ). Officials, experts, Volleyball coach, and people should consider the physical fitness traits of players during the talented identification of players.

**Keywords:** Junior, Physical fitness traits, Volleyball players

## INTRODUCTION

Volleyball game is mostly characterized by jumping serve, attack from the back row, aggressive blocking, suddenly move in the forward direction, sideways, and downward directions. All this requires optimum traits of fitness (Dale, 2017). In Volleyball game, players require performing vigorous activities, including starting, stopping, changing direction, and diving movements, players also perform jump serve, dig, and spike, demonstrate aggressive blocking and spiking actions in an effective manner. Hence, it is essential for the players to possess a high level of physical fitness traits that allow them to play their roles more effectively in each position. Hence, Volleyball sport considered as the game of flexibility, strength, speed, agility, and power (Zhang, 2010; Tian, 2006). Attacking and blocking performance represent 45% of the total actions in a game and 80% of the scores obtained in international matches (Voigt and Vetter, 2003; Zhang, 2010). Therefore, so we can conclude that Volleyball requires a better level of Physical fitness traits.

### Statement of the Problem

In Ethiopia, Volleyball is considered as a cultural activity in West Gojjam district of the country. Most of the youths

practiced it during their free time. People, officials, coaches, and experts of the region considered the district as talent area in Volleyball sport. According to scholars of the field, talent of Volleyball players greatly depends on the physical fitness traits of the players, next to anthropometric characteristics (Milić *et al.*, 2016; Yadav, 2015; Fattahi *et al.*, 2012; Pridal and Hancák, 2012). To the researchers' knowledge, there was no study conducted on the physical fitness traits of Volleyball players in the given district. Hence, the purpose of this study was to compare the physical fitness traits of junior Volleyball players in the West Gojjam district of Ethiopia with that of their international norms.

### Objectives of the Study

To compare whether there exists a statistically significant mean difference between junior Volleyball players in the West Gojjam district of Ethiopia and international norms respect to selected physical fitness traits.

## METHODS

The study used a cross-sectional research design and it is descriptive in nature. Three junior Volleyball teams from the West Gojjam zone of Ethiopia were involved and all players ( $n = 54$ ) who are regularly trained and free from injuries were included in the study. All fitness tests were taken by the researchers with the assistance. Before the actual

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test, the researcher conducted a pilot study and applied the test-retest method to prove his ability. The average results demonstrated a high level of reliability coefficient for each physical fitness test ( $r = 0.954$ ,  $P < 0.05$ ). Secondary data also assessed from official websites, journals, and books of international society.

## RESULTS AND DISCUSSION

Descriptive physical fitness traits of junior Volleyball players in the West Gojjam zone of Ethiopia are shown in Table 1.

It is clear that the mean physical fitness traits of junior Volleyball players in the West Gojjam district of Ethiopia on sit and reach, push up, sit up, 10 m sprint run, T-shuttle run, and vertical jump performance were  $20.87 \pm 7.28$  cm  $30.05 \pm 11.27$  reps,  $22.96 \pm 11.05$  rep,  $2.17 \pm 0.29$  s,  $10.84 \pm 0.62$  s, and  $38.90 \pm 10.03$  cm, respectively. Push up, sit up, and vertical jump performance traits were relative with larger variability. These reflect the presence of big differences among the players in the strength of the upper and middle body as well as the power of lower extremities.

As Table 2 shows that the mean flexibility of the lower back and hamstring muscles of junior Volleyball players in

the West Gojjam zone of Ethiopia was  $20.87$  cm and that of the international normative mean score was  $25.00$  cm. The difference between these was found to be statistically significant ( $P < 0.01$ ). A similar finding was reported by Sameer *et al.* (2015)  $19.07 \pm 3.77$  cm, and Govind *et al.* (2013)  $20.38 \pm 2.83$  cm. While, higher flexibility score of junior Volleyball players reported in England by Duncan *et al.* (2006), which is  $29.22 \pm 8.8$  cm. This difference in flexibility in the lower back and hamstring muscles related to the nature of their joints, the types of muscle fiber, the characteristic of tendons, and ligaments of the players together with the nature of training given to the players (Horst, 2017). Poor flexibility will boost the risk of injury, decrease the range of movement, damage skilled movement, and extend recovery time and decrease the speed and agility of the players (Hamilton, 2018). Therefore, these lower back and hamstring flexibility of junior Volleyball players found in West Gojjam, Ethiopia still needed to be improved.

As Table 2 indicates the upper body strength mean score of junior Volleyball players in the West Gojjam district of Ethiopia, and the international normative mean score was  $30.05$  and  $32.5$  repetitions, respectively. The difference between these was found to be statistically non-significant ( $P < 0.05$ ). Fitness of junior players found in the West Gojjam was a little bit better than the performance of Indian junior Volleyball players,  $28.90 \pm 4.174$ , reported by Govind *et al.* (2013). In Volleyball, there is aggressive blocking, spiking, and repetitive jump serves. All these actions need optimum strength of muscle groups found in the shoulder and around the chests (LA84 Foundation, 2012; Singh *et al.*, 2011). Offensive and defensive actions also nothing without having strong muscle groups on shoulders, around the chest, and arms (Zhang, 2010). All these indicate that the strength of the upper body is vital for successful Volleyball participation. It is one of the vital fitness components for Volleyball players and it contributes a lot for better spike, block, and dig action during the game (Athletic, 2017, Keshav and Harmandee, 2014).

**Table 1: Descriptive statistics on physical fitness traits of junior Volleyball players in West Gojjam zone of Ethiopian (n=54)**

PFV	Mean	SE	SD
Flexibility (cm)	20.8704	0.99124	7.28412
Upper body strength (rep.)	30.0556	1.53469	11.27766
Abdominal strength (rep.)	22.9630	1.50493	11.05896
Speed (s)	2.1787	0.04041	0.29692
Agility (s)	10.8469	0.08484	0.62347
Explosive power (cm)	38.9074	1.36525	10.03253

PFV: Physical fitness variables

**Table 2: Comparison of fitness traits of junior Volleyball players in West Gojjam with international mean value**

Fitness test	n	Df	Mean (SD)	Tested value	Mean difference	t	P-value
Flexibility (cm)	54	53	$20.87 \pm 7.28$	25	-4.12	-4.166	0.001
Upper body strength (rep.)	54		$30.05 \pm 11.27$	32.5	-2.44	-1.593	0.117
Abdominal strength (rep.)	54	53	$22.96 \pm 11.05$	36.5	-13.53	-8.99	0.001
Speed (s)	54	53	$2.18 \pm 0.29$	1.86	0.318	7.888	0.001
Agility (s)	54	53	$10.84 \pm 0.62$	10.49	0.35	4.206	0.001
Power (cm)	54	53	$38.90 \pm 10.03$	48.74	-9.83	-7.202	0.001

Source: Elizabeth Quinn, 2018; international normative mean was calculated from the findings of Simonek *et al.*, 2017; international normative mean was calculated from the findings of Aouadi *et al.*, 2015; Kumar and Yadav, 2015; international normative mean adapted from Australian College of Sport and Fitness 2013; Nebojs *et al.*, 2012; Nikbakht, 2011; Gabbett *et al.*, 2007; Duncan *et al.*, 2006; international normative mean score was adapted from copper institute, 2006; international normative mean score was adapted from Canadian society for exercise physiology, 1998)



The study also confirms that junior Volleyball players in the West Gojjam zone of Ethiopia were significantly less than international norms with respect to sit up performances ( $P < 0.05$ ). In this study, the sit-ups mean score of our junior Volleyball players was 22.92 repetitions. It was inconsistent with the sit-up performance of junior Volleyball players in India; their sit-up test score was 41 repetitions as reported by Keshav and Harmandee (2014). In the other study, Bag *et al.* (2015) reported 38.73 repetitions for the mean sit-up performance of junior Volleyball players. This difference in sit-ups performance is related to the difference in the strength of waist and abdominal muscles, including rectus abdominals, external Oblique's, internal Oblique's, transverse abdominals, and hip flexor muscles, including psoas major, iliacus, rectus femoris, pectineus, and sartorius (Quinn, 2018). The strength of the abdominal and hip muscles is the key to successful Volleyball performance (Singh *et al.*, 2011). It also contributes a lot for the proper successful execution of dig actions, explosive jumping, and powerful spiking actions (LA84 Foundation, 2012).

In this study, the mean score of Ethiopian junior Volleyball players and international norms in 10 m sprint run test was 2.17 s and 1.86 s, respectively. The difference between these was found to be statistically highly significant ( $P < 0.01$ ). This means our junior Volleyball players were not as fast as their international counterparts. Speed is a complex mixture of perception, expectation, decision making, reactions, moving at maximum speed, and reading the game. All of these components are interrelated and have a significant influence on the speed of Volleyball players (Kessel, 2019).

As Table 2 shows that the mean score of Ethiopia junior Volleyball players in relation to the shuttle run agility test score was 10.84 s, while the normative mean of international counterparts was 10.49 s. The difference between these was found to be statistically highly significant ( $P < 0.05$ ). This means that our players were less agile than the international normative mean. The agility, performance traits of our junior Volleyball were lesser than Australian junior Volleyball players,  $10.49 \pm 0.96$  s (Tim *et al.*, 2007) and better than Indian counterpart, 11.55 s, as reported by Jatinder *et al.* (2017). This difference in their agility test performance may be related to the difference in cognitive or decision-making ability (knowledge of the situation, pattern recognition, anticipation, and visual scanning) of the players. Physical capability, particularly, strength, and power of the leg muscles and technical abilities difference, such as foot placement, adjustment of step to accelerate, and body position also affect their performance (Young *et al.*, 2015; Gabbett *et al.*, 2008; Sheppard *et al.*, 2006; Sheppard and Young, 2005). It is much more complex, involving speed, balance, coordination, fluidity of movement, and the ability to react to a change of the environment (BBC Sports, 2018; Plisk, 2008). In Volleyball, agility does not only

include changing in direction but also involves the ability to predict the movement of the ball, players and react to the game-specific situations (Gamble, 2013). That means that the ability to start, stop, and change directions rapidly and efficiently is essential for Volleyball players (Lloyd *et al.*, 2015; Scanlan *et al.*, 2014; Young *et al.*, 2011; Lockie *et al.*, 2013; Kutlu *et al.*, 2012; Serpell *et al.*, 2011; Sporis *et al.*, 2010; Little and Williams, 2005).

In this study, the mean vertical jump score of junior Volleyball players in the West Gojjam zone of Ethiopia was 38.90 cm and that of the international normative mean was 48.74 cm. The difference between these was found to be statistically highly significant ( $P < 0.001$ ). This means that the explosive power of our junior Volleyball players was less than the international counterparts. The mean vertical jump score of junior Volleyball players in the West Gojjam zone of Ethiopia was 38.90 cm. It was not alien with the finding,  $33.47 \pm 6.11$  cm, reported by Aouadi *et al.* (2015). The greater explosive power was reported by Indian and Iranian junior Volleyball players. Their vertical jump test score was  $69 \text{ cm} \pm 7.44 \text{ cm}$  and  $50.0 \text{ cm} \pm 8.4 \text{ cm}$ , respectively, as reported by Sameer *et al.* (2015) and Masoud and Nikbakht (2011). This much amount of difference in the vertical jump is associated with different factors. Such factors include the technical ability of players, their muscular strength and power difference, and their anthropometric characteristics (Al-Fadhli *et al.*, 2015; Aouadi *et al.*, 2012). The vertical jump is common, very vital, and essential fitness quality for Volleyball players and it is the key capabilities for both attacking and blocking actions (Singh and Behera, 2013).

## CONCLUSION AND RECOMMENDATIONS

Physical fitness is the key predictor for identifying talent in junior Volleyball players. Based on the results of this study, junior Volleyball players in the West Gojjam district of Ethiopian were significantly lower than international players with respect to physical fitness traits. It is vital to study the physical fitness traits of players while searching talented Volleyball players. Officials, experts, Volleyball coaches, and people should consider the physical fitness traits of players during the talented identification of players.

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## Research Article

# Configuration of mind frame through motivational techniques in sports: A review

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### ABSTRACT

Motivation is the process of initiating a conscious and purposeful action. The goal-directed, need-satisfying behavior is called motivation. The behavioral regulations can be arranged on a scale from the least to the most self-determined, i.e. a motivation, external regulation, introjected regulation, identified regulation, integrated regulation, intrinsic motivation, and flow. Motivation techniques, such as goal setting, reward, music, and self-talk play an important role in configuration of mind frame for sports performance.

**Keywords:** Mind frame, Motivation techniques, Motivation

## INTRODUCTION

Motivation is the process of initiating a conscious and purposeful action. The goal-directed, need-satisfying behavior is called motivation. It is an internal energy that determines all facets of our behavior including the way we think, feel, and interact with others. It is essentially about the direction of effort over a long period of time. It is a dynamic and multifaceted phenomenon that can be exploited, to some degree at least, in the pursuit of superior sporting performance.

One of the most accepted and widely tested approaches to motivation in sports is the self-determination theory proposed by American Edward Deci and Richard Riyan. This theory is based on the degree to which your behaviors are chosen and self-initiated.

### Types of Motivations

The behavioral regulations can be arranged on a scale from the least to the most self-determined, i.e., amotivation, external regulation, introjected regulation, identified regulation, integrated regulation, intrinsic motivation, and flow.

Amotivation implies a lack of intention to engage in an activity. It is associated with feelings of incompetence and a lack of connection between one's behavior and the expected result. For example, an amotivated athlete expresses a sense of helplessness, namely, "I can't see the point in training any more it just tires me out" and frequently require counseling, as they are highly vulnerable to dropping out.

External and introjected regulations represent non-self-determined types of extrinsic motivation because athletes do not detect that their behavior is choice full, and as a result, they feel the psychological pressure. Participating in sport to receive prize money, win a trophy, or a gold medal or to avoid punishment or negative evaluation are the characteristic features of external regulation. On the other hand, the introjection is an internal pressure under which athletes might participate out of feelings of guilt or to gain recognition.

Identified and integrated regulations denote self-determined types of extrinsic motivation because activity is initiated out of choice, although it is not necessarily enjoyable. These types of regulation justify why some athletes spend hundreds of hours to repeat the drills; they realize that such activity will finally help them to improve. Identified regulation stands for engagement in behavior because it is highly valued, whereas when behavior becomes integrated that it is in harmony with one's sense of self and almost entirely self-determined.

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Intrinsic motivation generates from within, is absolutely self-determined and characterized by interest in, and enjoyment derived from, sports participation. It is categorized into three types, namely, intrinsic motivation to know, intrinsic motivation to accomplish, and intrinsic motivation to experience stimulation. Intrinsic motivation is regarded as the healthiest type of motivation and reflects an athlete's motivation to perform an activity simply for the sake of participation.

According to Hungarian psychologist, Mihalyi Csikszentmihalyi, the highest level of intrinsic motivation is flow state. Flow is characterized by complete immersion in an activity, to the degree that nothing else matters. In other words, there is a perfect match between the demands of an activity and an athlete's perceived ability or skills. During flow, self-consciousness is lost and athletes become one with the activity.

## MOTIVATIONAL TECHNIQUES FOR COACHES AND ATHLETES

### Goal Setting

Athletes should be encouraged to set a few ambitious but achievable long-term goals. Through empowering athletes to set their own goals, they are more likely to accept the challenges and pursue the goals with enthusiasm. To align athletes on track with their long-term goals, they should also set suitable medium-term goals. To achieve superior performance, short-term goals are the most important in practical terms as these keep athletes focused on the checkmarks. Goals need to be monitored and revised on a regular basis.

### Using Extrinsic Rewards

According to self-determination theory, the extrinsic reward reinforces an athlete's sense of competence and self-worth. A reward should be informational in nature but not controlling because it can destabilize intrinsic motivation.

### Motivational Music

Research from Brunel University indicates that the use of music during training sessions and recovery times enhances

work output, reduces exertion, and improves the pleasure experience during the activity.

### Positive Self-task

This technique can be used to increase motivation across a wide range of achievement domains. It makes use of an athlete's powerful inner voice to reinforce their self-esteem. With appropriate reiterations, self-talk can positively alter an athlete's belief system. The legendary boxer, Mohammed Ali, repeated the claim, "I am the greatest" so many times that even his opponents believed it.

## CONCLUSIONS

1. An overbearing or unrealistic challenge can cause excess anxiety; therefore, the coaches should ensure that athletes set realistic goals.
2. One of the biggest mistakes that coaches make in setting goals is that they are often too rigid in their approach. The goal setting process works best when there are some flexibility and the individual athlete or team takes ownership of each goal.
3. Simultaneous presence of high extrinsic and high intrinsic motivation is likely to yield the most positive benefits for adult athletes. The extrinsic motives are supported on a firm foundation of high intrinsic motivation.

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## Research Article

# Psychological preparation for enhancing the performance in sports and games

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### ABSTRACT

Athletes and coaches often neglect the psychological preparation which is very important for sports performance. Various studies have observed that mental readiness was felt to be the most significant statistical link with elite athletes. Athletes have frequently been quoted to state how the mental aspect is the supreme important measure of one's performance. Arnold Palmer, a professional golfer, advocated that the game is 90% psychological. The entire time consumed by the golfer actually swinging and striking the ball throughout those 72 holes is roughly 7 min and 30 s, leaving 15 h, 52 min, and 30 s of "thinking time." Within the parameters of psychological aspects of athletic performance, it is thought-provoking to note that more than 70% questions raised, debated, and pondered at the international conferences and seminars on sport psychology concerns to anxiety and aggression as performance to the genre of emotions. They ascend under varying sets of situations and form a sort of range but always moving upward. Their far-reaching consequences for the physical and mental health of the people in general and performing athletes, in particular, are an open secret. Stress is upshot from non-fulfillment of necessities; continued stress generates anxiety and anxiety results in tension. The lingering effect of tension is sensed, monitored, and assessed both physiologically and psychologically and is ultimately linked with psychosomatic disorders. Here, stress and anxiety are discussed.

**Keywords:** Aggression, Psychological factors, Sports performance, Stress, Tension

## INTRODUCTION

### Stress

It is a physical, mental, or emotional demand which inclines to disrupt the homeostasis of the body. It is an everyday part of life if there is no stress, we would, in all probability, suffer "appalling boredom." Stress is unavoidable in life and sport, and all performing actors, artists, and athletes achieve their tasks with varying stress levels. It may also relate to any kind of pressure, be it due to one's job, school work, marriage, illness, or death of a loved one.

The common outcome in all of these is change.

## STRESS AND SPORTS PERFORMANCE

Sports performance is not simply a result of physiology (for example, stress and fitness) and biomechanical (for example,

technique factors), but psychological factors have a crucial part in determining performance. Every athlete has a certain stress level that is obligatory to elevate his or her game. That is governed by factors, such as past experiences, coping responses, and genetics.

Stress during sports, as in anything else in life, maybe acute episodic or chronic. For the most part of sports, it is episodic, whether during a competitive match between friends, or a championship game. While acute stress may essentially act as a challenge, if not harnessed, it can change to not only an episodic stressor that can affect one in the long term but can also obstruct one's play (Kamlesh, 2011).

### How Does Stress Affect Performance?

The relationship between stress and performance has been portrayed by the stress response curve (Nixon, 1979). In addition, pressure, an important stressor, also has a crucial influence on an individual's response to stress. One of the most obvious effects of stress in one's life is the vagaries in his performance. While we can certainly identify the magnitudes of normal or excessive amounts of stress

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through mere surveillance, it is best to study the scientific relationship between stress and performance (Kamlesh, 1972 and 2011).

### The Stress Response Curve

To better know the effects of stress on performance, the following graph of the stress performance curve explaining how stress affects performance in theoretical terms.

The curve shows that as the level of stress rises, the performance level also increases, to the point of healthy tension. Near the point of fatigue, a known area called the comfort zone designates the kind of stress levels that we can totally accomplish and assist good performance levels. As stress begins to be professed as overwhelming or excessive, the person touches a fatigue point, wherein the performance levels start to drop. The ultimate end of overwhelming stress, called burnout, can be fatigue, ill-health or breakdown.

### Positive Effects

As shown by the graph, performance levels rise when stress supervision is effective. Stressors such as pressure and demands can enable better stress response and, consequently, higher levels of performance. For instance, a basketball player attempts to run faster, shoot a three-point shot, and succeeds in it since the pressure, he has obtained from the spectators, the close scores, and the strong opponents.

### Negative Effects

When stress is observed as intense or unmanageable, the person starts to experience a slow to extreme reduction in performance levels, producing a drop in efficiency, and enthusiasm to respond to the stress. For instance, a very tight target is given to an office employee who has to take care of her four children at home and a sick mother at the hospital. This irresistible mix of circumstances, if not coped cautiously and totally, will end to a low performance at work, bad relationships with other members of the family, ill health, and burnout.



Figure 1: The stress response curve

### Pressure and Performance

Pressure, one of the noteworthy life stressors, affects performance, as shown by the “Inverted-U” graph (Robert and Dodson, 1908).

Looking at the left side of the graph, you will notice that low pressure or low levels of stress result in a person’s stress response as “boredom” or unchallenging. Even if the task is of great importance, the absence of an appropriate level of pressure, attention, and concentration to perform the task is significantly low.

On the other hand, extreme levels of pressure do not mean high-performance levels; rather, it is identified as the outcome from low pressure – low-performance levels due to “unhappiness” or negative feelings due to vast stress. However, there is a region called the “area of best performance.” In this region, reasonable pressure ensuing to optimum stress or stress that is entirely adaptable leads to the highest level of performance (Daily Mail, 2001).

### Approaches for Tackling of Stress

- When stress originates simply as a stimulus triggering distraction, adaptation of the stimulus itself may be sufficient to reduce stress.
- Stress as a perception of threat would require the athlete to learn to feel that demands of the situation are not difficult for him/her to meet.
- In situation, where stress becomes an illogical perception of a threat, the coach must make efforts to change the athlete’s rational and ward of illogical uncertainties.
- In case of stress as an anticipated negative result, the performer needs to overly review the behavior (routine) to the point at the success, which is more likely to happen and expectancy of failure corresponding to decrease.
- Where stress arises as a tension response, deep muscle relaxation technique, or biofeedback acts as the best approach.
- If stress comes as an important negative consequence, the athlete must be made to understand the importance of

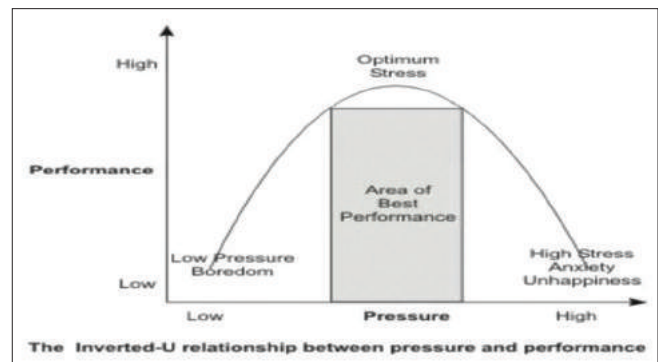


Figure 2: The inverted-U model or the Yerkes-Dodson law

and increase (chances of) success and reduce failure by rationalizing his thinking about the level and importance of competition (Barrow and McGee, 1979; Kamlesh, 2011). In nutshell, in dealing with stress as a process objective, external circumstances are perceived and interpreted by the athlete, thus leading to responses, the consequence of which may lead to changing the external situation and/or modifying the athlete's perception of these external circumstances.

### **Anxiety**

It is a distressed state of mind; emotional reactivity; arousal; nervousness; unrealistic; and unpleasant state of mind. Anxiety is an indispensable feature of any competitive situation and without a certain level of anxiety, there cannot be competitive performance. Neither too high nor too low level of anxiety is conducive to sports performance. Ample level of anxiety yields the best results. Unless sports persons learn to handle the stressful competitive situations by managing anxiety, they would fail to realize their aim.

Anxiety has both psychological and physiological effects on sports performance. Once aroused, it raises the general arousal level of a player to the degree that he finds it tough to focus on his game due to continuous assault on his nervous system and failure to diffuse tension initiated by rising anxiety levels. The ability of the player to observe and evaluate situations correctly is reduced.

His information-processing mechanism gets overstressed, resulting in either in the wrong or slow response, even to emergent situations. Under such conditions, a player is not focused that he wishes to do one thing but does something else. He loses control over his body and mind.

The association between anxiety and athletic performance has been a subject of numerous theories launched up from time, for example, drive theory in 1943 and inverted U-hypothesis or optimal arousal level in 1962. The former was formed on the idea that there is an ideal amount of arousal that an athlete will perform at. However, if that level of arousal is passed, then the level of performance will reduce. The same thing occurs when the level of arousal is lesser than the optimal level. Although this hypothesis has much support for many years, it too has fallen out of favor due to its generalization on a subject as complex as brain and behavior (Daily Mial, 2001; Kansal, 2008; and Kamlesh, 2011).

## **HOW TO PREVENT ANXIETY IN SPORTS PERFORMANCE**

### **Diaphragmatic Breathing**

The diaphragm is a muscle between the chest and the stomach cavity. The breathing done by contracting this muscle is known

as diaphragmatic breathing. It requires simple practice to learn, and then it should be repeated several times daily.

### **Relaxation Technique**

When the athlete feels the symptoms of anxiety, such as increased heart rate, increased blood pressure, or difficult breathing, a relaxation technique can help in controlling the anxiety. In one relaxation technique, the athlete is asked to lie down in a darkened room and think about relaxing his body from the outside inward. As a result, blood pressure, breathing, and heart rate normalize. If the anxiety attack is more severe, then massaging the body can relax the individual to a great extent.

### **Visualization**

Visualization is a technique, used by the athletes to control their anxiety. In this technique, one visualizes himself in a situation similar to the actual event. The athlete visualizes himself winning in front of the entire crowd, where the event is to take place. Below are more ways, you can use visualization to combat performance anxiety.

#### ***Visualizing yourself***

This is one of the exercises of visualization in which athlete visualizes themselves. The athlete is asked to visualize every physical aspect of their body with their eyes closed. While visualizing the body, the athlete tells himself that each of these body parts is fine and in good working condition.

#### ***Visualizing your game***

Another exercise requires the athlete to visualize the actual sport that they are to play. The athlete visualizes the events starting from the preparations before going onto the field and the first move, and finally the victory.

#### ***Visualizing your opponents***

So far, you have visualized yourself and your game. In this exercise, the athlete is now required to imagine how he sees his opponent playing. While visualizing his opponent's moves, he is supposed to tell himself that his moves are better than his opponent and visualize how he should combat his opponents' moves.

### **Muscle Relaxation**

Anxiety results in stiffness of the muscles. Muscle relaxing practices are done to avoid this happening during the actual game. In this technique, the athlete tenses a particular muscle of the leg, abdomen, hands, or face for 10 s with the eyes closed. After 10 s of tension, 20 s of relaxation should be practiced before moving to the next muscle.

### **Focusing on What Can Be Controlled**

Athletes should remind themselves that they are better trained; they have developed better techniques, but should not try to

control things that are not in their control such as the audience or the opponent. An overview of the results of research on anxiety with elite athletes as subjects of study makes an interesting reading, even though the conclusions are at great variance across sports: (a) Athletes (especially, gymnasts, track and field athletes, basketball, and tennis players) who interpreted their anxiety as harmful had higher intensity of anxiety than those who reported it as being an aid. (b) The more experienced athletes were found to have lower level of cognitive anxiety. This makes some sense because as an athlete gains experience (especially while playing competitive fixtures), he or she learns tricks of the game and knows how to manage stress. (c) The level of confidence and that of anxiety is said to be closely related. The higher an athlete's confidence, the less he or she will feel anxious about the competition (and its outcomes) because they know they are ready to take the bull by the horn. Likewise, an over-anxious athlete exhibits sign of self-doubt. Athletes who are made to practice, as also compete, under high anxiety conditions, are better able to manage their anxiety and keep its level optimal, which is conducive to top performance.

## CONCLUSION

It is pertinent to see that the athlete is prepared well taking care of his psychological training apart from his technical and tactical training.

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## Research Article

# Importance of sports psychology in sports and games

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### ABSTRACT

Psychology is the science of the human mind and behavior. The sports community now recognizes that mental factors such as confidence, composure, focus, and motivation are highly significant to athletic performance. As a result, over the year's performance enhancement has become an emerging career track within the field of sport psychology. Psychology principles such as positive thinking, imagery, and goal setting can be applied in sports to help athletes perform and prepare for competition. Sport psychology professionals aim to increase athletic performance by instilling mental toughness and minimizing the psychological effects of poor performance.

**Keywords:** Behavior, Human mind, Positive thinking, Sports psychology

## INTRODUCTION

Psychology is the science of the human mind and behavior. Where there is behavior, there is psychology. Physical education makes an art-science combine dealing with movement, motion, activity, play recreation, and the like. In essence, they are activity-based endeavors; in function, they are enhancers of health and fitness; in an objective, they are developmental to the core; and in nature, they are joyful, recreating, and relaxing. The branch of psychology which is intimately connected with human behavior on the playfield – both under practice and competitive situations – with a view to bring about qualitative improvement in performance, is usually called exercise and sports psychology. It is basically of applied nature. Physical education, an educational endeavor, is much wider in range and focus than an elite competitive sport.

Singer enumerated the focus of modern sports psychology on the following themes:

- Exercise and health psychology for personal well-being.
- Counseling and clinical approaches to help individuals to overcome personal problems and maladaptive behavior.
- Identifying processing mechanisms and conditions leading to the acquisition and maintenance of skill.

- Performance enhancement techniques to contribute to performance potential.
- Group situations are leading to productivity.
- Psychometrics to develop and administer tests for specific purposes.
- Youth sport programs and the enrichment of experiences.

The sports community now recognizes that mental factors such as confidence, composure, focus, and motivation are highly significant to athletic performance. As a result, over the year's performance enhancement has become an emerging career track within the field of sport psychology.

Psychology principles such as positive thinking, imagery, and goal setting can be applied in sports to help athletes perform and prepare for competition. At the elite levels, all athletes have the talent and the physical tools to compete. In an interview hall of quarterback and sports analysis, Troy Aikman stated, "When you get to the elite level in sports, athletically, what separates the really great performers are the ones who are mentally tough and see things a little bit quicker than their competitors." These athletes have the ability to move on after mistakes, maintain confidence and composure in the face of adversity, and focus on what is need to execute each task successfully.

Mental training is about improving one's attitude and mental skills to help them perform their best by identifying limiting beliefs and embracing a healthier philosophy about their sport.

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Many athletes and coaches resist mental training because they do not understand how it can help them. For athletes to get the most out of their sport, it is critical for them to understand the value of improving their mental game. Athletes are more likely to embrace mental training when they understand it and its benefits. Our mental training programs aim to help players and coaches discover the benefits of mental training by highlighting the mental skills need to achieve peak performance and underlining the mental barriers that limit success.

### **Our Mental Training Programs Are Designed To**

1. Identify the mental barriers that limit performance.
2. Educate athletes on the mental skills needed to achieve peak performance.
3. Apply mental training strategies to enhance focus, confidence, composure, and mental preparation.

### **The Purpose of Our Mental Training Programs Are To Instill**

- An awareness of the zone and the feelings associated with playing in the zone.
- High self-confidence or a strong belief in their skills or ability to play well.
- The ability to fully immersed in the task or totally concentrate on the present.

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- High self-confidence or a strong belief in their skills or ability to play well.
- The ability to fully immersed in the task or totally concentrate on the present.
- A narrow focus of attention or the ability to focus on one specific thought without distraction.
- The ability to swing effortlessly or let it happen when it counts.
- Emotional control or the ability to remain calm under pressure.
- Clear and decisive mind or not overthinking and doubting their decisions.

- The ability to refocus or collect themselves after mistakes or errors.

### **Performance Accomplishments – Getting Athletes to Feel They Have Mastered a Skill to Influence Their Perception of their Abilities**

For wide receivers on a football team, start each practice with them catching the football over and over. This repetition builds a sense of mastery and muscle memory and enhances self-efficacy in their position.

Baseball players who field numerous ground balls develop a sense of mastery in one aspect of the game of baseball to gain self-efficacy in that area.

Hitting a ball off of the tee numerous times to practice mechanics leads to a sense of mastery.

## **CONCLUSIONS**

Sports psychologists often work as part of a collaborative team.

There are diverse career paths and specialization opportunities (i.e., teaching, youth sports, and professional athletics training).

It can be a fun, challenging, and exciting job.

Sport psychology professionals aim to increase athletic performance by instilling mental toughness and minimizing the psychological effects of poor performance.

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## Research Article

# A study of the hurdles affecting sports in secondary schools of Punjab, Pakistan

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### ABSTRACT

This research study is an effort in line with the researches of the world to explore the magnitude and influence of different hurdles on the prevalence of sports at the school level. The research hypotheses that there is no significant effect of different hurdles on sports in secondary schools of Punjab were tested. The hypothesis regarding gender difference was also tested. The population of this particular study was comprised all the teachers, head of the institutions, and the parents in the province of Punjab, Pakistan. A sample of 36 selected from each district and the total sample from the whole province (11 districts) was 484. The questionnaire was used as a data collection tool. The result shows that there was a significant effect of hurdles on sports activities and also gender difference which were observed.

### INTRODUCTION

According to Chu (1982), sports activities play a key role in an individual's life particularly in school-going children. The children who take part in interscholastic sports not only develop their physique but also enhance their academics performance. Khan (2004) states that "*Being sportsmen most of the students have shown good academic results on their credits particularly at secondary schools level*" (P-158). It is also agreed on that participation in school sports not only develops the student's physically but also mentally (Van, 1971). No doubt, a sound mind rests in a sound body. This mind-body relationship is shown in the research by Kalakian and Goldman (1976), who stated that proper movement of the body in infancy developed the cognitive or intelligence of the children (cited in Jay, 1978). Khan (2004) states that the "*declining position of education can be improved through sports and games*" (P-158). Therefore, it can be claimed that the academic achievements of the children can not be enhanced properly without engagement in sporting activities. In most parts of the world, sports activities are given due importance at school level and students can be facilitated to participate in various sports activities.

In Pakistan, the extent of facilities and the level of participation in sports among school-age children are considerably low. There might be several reasons behind this. However, one may be the numerous barriers that restrict sports activities at school level and ultimately deprive school student to reap the benefits of sports participation. We can classify these barriers into five categories, including governmental, institutional, financial, cultural and religious, and parents student's hurdles.

In light of the above discussion, various researchers are conducting the researches to break the barriers and improve the sports activities. This research study is an effort in line with the researches of the world to explore the magnitude and influence of these barriers on the prevalence of sports at the school level. This study was conducted in Punjab a province of Islamic Republic of Pakistan situated in the North West of the country.

### STATEMENT OF THE PROBLEM

The students in the present era are not taking part in the educational activities, and therefore, the achievement of the students is low. There may be many reasons, but the expert suggests that sports create the sound mind in the sound body and thus facilitate educational development. In our country unluckily, there are many hurdles in the way of sports. The

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researcher intends to launch a study for hurdles affecting sports and for the suggestion of workable measures to overcome these barriers.

### Objectives of the Study

The objectives of this study were as follows:

1. To investigate the effects of barriers on sports activities in secondary schools of Punjab.
2. To investigate the gender differences in hurdle affecting sports in secondary schools of Punjab.

## SIGNIFICANCE OF THE STUDY

This study may provide information to the stakeholders regarding various hurdle affecting sports and possible measures to remove those hurdles at secondary schools so that they could be able to overcome these hurdles and to promote sports. Through this particular study, the authorities may be able to know the hurdles that affect sports at the secondary school level of Punjab and take effective measures to remove them. This study will also be helpful in promoting sports activities at the secondary school level, and thus, the students may be able to enhance their academics by participating in various sports activities.

### Research Hypothesis

- $H_1$ : There is no significant effect of governmental hurdles on sports in secondary schools of Punjab.
- $H_2$ : There is no significant effect of institutional hurdles on sports in secondary schools of Punjab.
- $H_3$ : There is no significant effect of religious and cultural hurdles on sports in secondary schools of Punjab.
- $H_4$ : There is no significant effect of financial resources as hurdles on sports in secondary schools of Punjab.
- $H_5$ : There is no significant effect of parent and student hurdles on sports in secondary schools of Punjab.
- $H_6$ : There is no overall significant effect of different barriers on sports in secondary schools of Punjab.
- $H_7$ : There is no significant difference between the views of male and female respondents in different hurdles.

## RESEARCH METHODOLOGY

### Population

Fraenklel and Wallen (2006) define that “*population is the group of interest to the researcher, the group to whom the researcher would like to generalize the result of the study.*” The population of this particular study was comprised all the teachers, head of the institutions (HOI), and the parents in the province of Punjab, Pakistan.

### Sample

Fraenklel and Wallen (2006) define that “*A sample in a research study is the group, on which information is*

*obtained.*” In this study, there are 25 districts and 1379 higher secondary schools (male – 1069 and female – 310) situated in Punjab, Pakistan. It was quite difficult for the researcher to contact each and every school in the province. To overcome this difficulty, the researcher selected only 11 districts from the whole population using a cluster sample random technique. The researcher selected four schools from each district (two male and two female) by applying convenient or available sampling techniques. The researcher selected five teachers, one HOI from each school, and 20 parents from each district through available sampling technique. Hence, the total number of the sample from one district was 44, and the total sample from the whole province (11 districts) was 484.

### Instrumentation

The researcher developed a draft questionnaire consisting of 50 questions. This questionnaire was put to 40 experts from Gomal University for the purpose of reliability. Some of the items were deleted by the experts view. The final version of the questionnaire consists of 36 questions. The reliability of this questionnaire was found to be 0.82. This questionnaire was a Likert type consisting of five options (Strongly agree, agree undecided, disagree, and strongly disagree). Instructions for filling up the questionnaire were made clear for the participants.

### Procedure

The 484 copies of the final version of the questionnaire were distributed among the sample. They were given 1 day time to fill up the questionnaire. They were told that this information will only be used for the research purpose. After 1 day, the filled questionnaires were recollected, and the data were arranged in the form of data matrix on SPSS (version 12).

### Data Analysis

For data analysis, the research statistic mean, standard deviation, t-statistic, and regression analysis were used. The t-statistic is used to check the difference between two means as in the case of male and female. The regression was used to check the cause and effect relationship.

## PRESENTATION AND ANALYSIS OF DATA

### Test of Hypothesis 1

There is no significant effect of governmental hurdles on sports in secondary schools of Punjab barriers on sports. The R square is 0.539, which means that 54% effect on sports is due to governmental barriers. The B is 0.583 ( $P = 0.000$ ), which means that a total 1 unit increase in governmental barriers will cause 0.583 unit overall increase [Table 1].

### Test of Hypothesis 2

There is no significant effect of institutional hurdles on sports in secondary schools of Punjab.

Table 2 shows the effect of institutional hurdles on sports. The R square is 0.699, which means that 70% effect on sports is due to institutional hurdles. The B is 0.682 ( $P = 0.000$ ), which means that a total 1 unit increase in governmental hurdles will cause 0.682 unit overall increase.

### Test of Hypothesis 3

There is no significant effect of religious and cultural hurdles on sports in secondary schools of Punjab.

Table 3 shows the effect of religious and cultural hurdles on sports. The R square is 0.571, which means that 58% effect on sports is due to religious and cultural hurdles. The B is 0.295 ( $P = 0.000$ ), which means that a total 1 unit increase in governmental hurdles will cause 0.295 unit overall increase.

### Test of Hypothesis 4

There is no significant effect of financial hurdles on sports in secondary schools of Punjab.

Table 4 shows the effect of financial hurdles on sports. The R square is 0.215, which means that 22% effect on sports is due to financial hurdles. The B is 0.273 ( $P = 0.000$ ), which means

**Table 1: Effect of governmental hurdles on sports**

Model summary					
Model	R	R square	F	-	Sig.
1	0.734 <sup>a</sup>	0.539	562.673	-	0.000
Coefficients (A)					
Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
(Constant) GB	B	SE	Beta		
	1.595	0.092		17.333	0.000
	0.583	0.025	0.734	23.721	0.000

**Table 2: Effect of institutional hurdles**

Model summary					
Model	R	R square	F	-	Sig.
1	0.836 <sup>a</sup>	0.699	1119.421	-	0.000 <sup>a</sup>
<sup>a</sup> Predictors: (Constant), IB					
Coefficients (A)					
Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
Constant) IB	B	SE	Beta		
	1.229	0.076		16.121	0.000
	0.682	0.020	0.836	33.458	0.000

<sup>a</sup>Dependent variable: Collective

**Table 3: Effect of religious and cultural hurdles**

Model summary					
Model	R	R square	F	-	Sig.
1	0.571 <sup>a</sup>	0.326	233.399	-	0.000 <sup>a</sup>
<sup>a</sup> Predictors: (Constant), RCB					
Coefficients (A)					
Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
(Constant) RCB	B	SE			
	2.658	0.074		36.102	0.000
	0.295	0.019	0.571	15.277	0.000

<sup>a</sup>Dependent variable: Collective

that a total 1 unit increase in financial hurdles will cause 0.273 unit overall increase.

### Test of Hypothesis 5

There is no significant effect of parent and student hurdles on sports in secondary schools of Punjab.

Table 5 shows the effect of parent and student hurdles on sports. The R square is 0.534, which means that 54% effect on sports is due to parent and student hurdles. The B is 0.508 ( $P = 0.000$ ), which means that a total 1 unit increase in parent and student hurdles will cause 0.508 unit overall increase.

### Test of Hypothesis 6

There is no overall significant effect of different hurdles on sports in secondary schools of Punjab.

Table 6 shows the step-wise effect of different barriers on sports. The four different models have been shown. In the first model, the R square is 0.696, that is, the effect of institutional role is 70%. In the second model, when parent and student hurdles added with the first model the R square value is 0.888, that is, overall effect is 89%. In the third model, when governmental role is added that the R square is 0.946, that is, the overall effect is 95%. In the last model, when the religious and cultural hurdles are added that the R square value is 0.982, which means that there is 99% effect.

### Test of Hypothesis 7

There is no significant difference between the views of male and female respondents in different hurdles.

Table 7 shows  $t(482) = 0.64$ ,  $P > 0.05$ , which means that there is a significant difference between male and female on governmental hurdles.

## FINDINGS

Following findings float up as the result of data analysis:

1. To test the first hypothesis  $H_1$ , the R square is 0.539, which means that 54% effect on sports is due to governmental hurdles. The B is 0.583 ( $P = 0.000$ ), which means that a total 1 unit increase in governmental hurdles will cause 0.583 unit overall increase; therefore,  $H_1$  is rejected [Table 1].
2. To test the second hypothesis  $H_2$ , the R square is 0.699, which means that 70% effect on sports is due to institutional hurdles. The B is 0.682 ( $P = 0.000$ ), which means that a total 1 unit increase in governmental hurdles will cause 0.682 unit overall increase; therefore,  $H_2$  is rejected [Table 2].
3. To test the third hypothesis  $H_3$ , the R square is 0.571, which means that 58% effect on sports is due to religious and cultural hurdles. The B is 0.295 ( $P = 0.000$ ), which means that a total 1 unit increase in governmental hurdles will

**Table 4: Effect of financial hurdles on sports**

Model summary					
Model	R	R square	F	-	Sig.
1	463 <sup>a</sup>	0.215	131.724	-	0.000 <sup>a</sup>
<sup>a</sup> Predictors: (Constant), FB					
Coefficients (A)					
Model	Unstandardized coefficients		Standardized coefficients		Sig.
(Constant) FB	B	SE			
	2.648	0.098		27.016	0.000
	0.273	0.024	0.463	11.477	0.000

<sup>a</sup>Dependent variable: Collective

**Table 5: Effect of parent and students hurdles on sports**

Model summary					
Model	R	R square	F	-	Sig.
1	0.731 <sup>a</sup>	0.534	553.283	-	0.000 <sup>a</sup>
Coefficients (A)					
Model	Unstandardized coefficients		Standardized coefficients		Sig.
(Constant) PSB	B	SE			
	1.822	0.083		21.874	0.000
	0.508	0.022	0.731	23.522	0.000

<sup>a</sup>Dependent variable: Collective

**Table 6: Overall significant effects of different hurdles on sports**

Model summary				
Model	R	R square	F	Sig.
1	0.836 <sup>a</sup>	0.699	1119.421	0.000 <sup>a</sup>
2	0.942 <sup>b</sup>	0.888	1905.168	0.000 <sup>b</sup>
3	0.973 <sup>c</sup>	0.946	2791.814	0.000 <sup>c</sup>
4	0.991 <sup>d</sup>	0.982	6669.468	0.000 <sup>d</sup>

<sup>a</sup>Predictors: (Constant), IB, <sup>b</sup>Predictors: (Constant), IB, PSB, <sup>c</sup>Predictors: (Constant), IB, PSB, GB, <sup>d</sup>Predictors: (Constant), IB, PSB, GB, RCB

Coefficients (A)					
Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
1. (Constant) IB	B	SE	Beta		
	1.229	0.076		16.121	0.000
	0.682	0.020	0.836	33.458	0.000
2. (Constant) IB PSB	0.5746	0.052		10.429	0.000
	0.529	0.014	0.648	38.948	0.000
	0.329	0.012	0.474	28.471	0.000
3. (Constant) IB PSB GB	0.252	0.039		6.516	0.000
	0.421	0.011	0.516	39.805	0.000
	0.284	0.008	0.409	34.265	0.000
4. (Constant) IB PSB GB RCB	0.233	0.010	0.294	22.640	0.000
	0.164	0.022		7.363	0.000
	0.420	0.006	0.514	69.454	0.000
	0.233	0.005	0.335	46.425	0.000
	0.200	0.006	0.252	33.432	0.000
	0.111	0.004	0.216	31.512	0.000

**Table 7: Gender difference in governmental hurdles**

Gender	n	Mean	SD	t-value	P-value
Male	322	3.71	0.56	0.64	0.522
Female	162	3.67	0.58		

cause 0.295 unit overall increase; therefore,  $H_3$  is rejected [Table 3].

4. To test the fourth hypothesis  $H_4$ , the R square is 0.215, which means that 22% effect on sports is due to financial hurdles. The B is 0.273 ( $P = 0.000$ ), which means that a total 1 unit increase in financial hurdles will cause 0.273 unit overall increase; therefore,  $H_4$  is rejected [Table 4].
5. To test the fifth hypothesis  $H_5$ , the R square is 0.534, which means that 54% effect on sports is due to parent and student hurdles. The B is 0.508 ( $P = 0.000$ ), which means that a total 1 unit increase in parent and student hurdles will cause 0.508 unit overall increase; therefore,  $H_5$  is rejected [Table 5].
6. To test the sixth hypothesis  $H_6$ , four different models have been shown. In the first model, the R square is 0.696 that is the effect of institutional role is 70%. In the second model,

when parent and student hurdles are added with the first model, the R square value is 0.888, that is, overall effect is 89%. In the third model, when the governmental role is added that the R square is 0.946, that is, the overall effect is 95%. In the last model, when the religious and cultural hurdles are added, the R square value is 0.982, which means that there is 99% effect; therefore,  $H_6$  is rejected [Table 6].

7. To test the seventh hypothesis  $H_7$ ,  $t(482) = -1.326$ ,  $P > 0.05$ , which means that there is a significant difference between male and female on overall sample; therefore,  $H_7$  is rejected [Table 7].

## DISCUSSION

This study was initiated for the purpose to know about the barriers of sports participation and their effect on sports at the secondary schools level of Punjab, Pakistan. After the analysis, it was concluded that there is a significant effect of the entire barriers (governmental hurdles, institutional hurdles, cultural/religious hurdles, and financial hurdles and parents/students hurdles) on sports activities in the secondary school of Punjab. These results are



supported by ChFazal Ahmad and Dr. Maryam. It was concluded by these researchers that lack of funds, space, and facilities coupled with no interest in physical education teachers were the main hurdles in the development of physical education and sports. This present study is in line with Jenkinson, Kate and Amanada (2010) who described hurdles such as lack of qualified staff, lack of equipment's, unavailability of facilities, and improper curriculum in the way of sports. They further described the institutional hurdles such as access of facilities, access to suitable teaching space, timetabling, support from other staff, and proper subject funding. The results of this present study are also supported by Dorovolomo and Hammond (2005), Landis (2005), and Chavltan *et al.* (2010). They concluded that improper time allocation for the implementation of sports and physical activities is one of the hurdles in the way of sports promotion at the school level, cultural influences, issue of accessibility to facilities, and costs for the smooth conduction of sports activities which are included in the hurdles of sports promotion. They also said that two main hurdles are practical hurdles such as cost, time, lack of facilities, and awareness among the peoples about sports and personal hurdles such as poor health status, lack of motivation, and commitment.

Daskapan *et al.* (2006) conducted a research at the university level, and classified the hurdles of sports participation into two main types, i.e. internal hurdles such as lack of time, lack of motivation, and lack of self-efficacy and the external hurdles such as lack of resources, lack of social support, and lack of time. They concluded that the external barriers have a significant impact on the sports as compared to external hurdles.

## CONCLUSIONS

In the light of the data analysis, the following conclusions are, hereby, made by the researcher.

As far as, the hurdles of sports are concerned, there were total of five main hurdles that affect sports at secondary school level which are governmental hurdles, institutional barriers, financial hurdles, religious and cultural hurdles, and parent/students hurdles. In the study, the effect of these hurdles on sports was analyzed and the result shows that there is a significant effect of all these hurdles on sports. The result also shows that there was a significant gender difference in different hurdles of sports.

## Recommendations

The following is the recommendations of the study:

1. The result shows that there was a significant effect of the governmental hurdles on sports; therefore, the researcher recommends that for the elimination of corruption; the government may introduce a policy. The media and government may play their role to make the people aware of the benefits of sports.
2. The result shows that the effect of institutional barriers was significant; therefore, the researcher recommends that proper curriculum of physical activities and spots may be introduced at the primary level to provide a firm base for the students of secondary schools level. In each school, sports tournaments and sports gala may be introduced. All heads of the institution may play their role in the improvement of sports at secondary schools level. All physical education teachers may introduce sports programs according to the interest of students. Physical education should be taught as a compulsory subject at the secondary level.
3. The effect of cultural and religious hurdles was significant; therefore, the researcher recommends that the attitude of the general public may be changed toward the favor of the sorts and the proper knowledge about the sports activities may be provided to the peoples.
4. The results show that the effect of financial hurdles was significant; therefore, researcher recommends that more funds may be allocated for sorts at the secondary school level. Furthermore, the provided funds may be used in the proper way.
5. The result shows that the effect of parents and student barriers is significant; therefore, the researcher recommends that the parents and students misconception may be eliminated through the knowledge of sports.

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## Research Article

# Health status and lifestyle habits of college freshmen students: Basis for a proposed intervention program

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### ABSTRACT

This study was aimed to determine the health status and lifestyle habits of college freshmen students. In addition, it also aimed to identify the preferred future physical activity and physical exercise schedule of the student respondents. The results of this study would serve as a basis for crafting a proposed sports and recreation intervention programs for the students. A descriptive method of research was employed in the study. By means of using Slovin's formula, 293 freshmen students who are currently enrolled in physical education during the academic year 2018–2019 were included as the respondents. Stratified random sampling technique was also employed in facilitating the survey questionnaires. Frequency, weighted mean, one-way ANOVA, and independent sample *t*-test were the statistical tools used in computing and presenting the data. The results demonstrated that most of the respondents were experiencing chest pain, dizziness, and weight problem (underweight) and diagnosed with asthma, anemia, and diabetes. While on the other hand, diabetes, hypertension, and asthma were the top three family health problems. In terms of lifestyle habits of the student respondents, health-related fitness, disease prevention, and nutrition got the lowest category rating of "Needs Improvement" while the rest lifestyle category got "Good Rating." Badminton, basketball, and running/walking were the most preferred future activities of the freshmen students and they are willing to participate in the program every day between 4:00 pm and 7:00 pm (1 h daily). The test of significant difference in the responses on the lifestyle habits revealed significant difference in the stress management, emotional well-being, environmental, and health protection when grouped according to age. Similarly, there were significant differences on the health-related fitness, avoiding chemical dependency, personal hygiene, and personal safety when grouped according to sex. When grouped according to the previous school attended, there is a significant difference health-related fitness. Finally, a proposed wellness intervention program was proposed to provide fun, enjoyable, and suitable health and wellness activities for freshmen college students.

**Keywords:** Freshmen students, Health status, Health-related fitness, Intervention program, Lifestyle habits

## INTRODUCTION

Globally, statistics shows that communicable diseases are no longer the most prevalent diseases, but rather non-communicable diseases (NCDs). According to the World Health Organization (2018).<sup>[1]</sup> NCDs kill around 41 million people each year, equivalent to 71% of all deaths globally. Cardiovascular diseases account for most NCD deaths, or 17.9 million people annually, followed by cancers (9.0 million), respiratory diseases (3.9 million), and diabetes (1.6 million). Similarly, according to the Philippines Statistics Authority (2013),<sup>[2]</sup> diseases of the heart (118,740 deaths) and stroke

(54,578 deaths) were also the top two causes of death, while diabetes (27,064 deaths) ranked fifth in the Philippine archipelago. Meanwhile, smoking, physical inactivity, irresponsible alcohol drinking, and unhealthy eating diets all increase the risk of dying from a NCDs.<sup>[1]</sup>

In addition, physical inactivity caused more than 5.3 of the 56 million global deaths in 2008<sup>[3]</sup> while it is currently the fourth leading cause of death around the globe.<sup>[4]</sup> The present projections indicate that time spent being physically inactive will continue to increase substantially.<sup>[5]</sup>

These data only signifying that the need to have a healthy and active lifestyle habits is very much needed. However, lifestyle changes are not made easily. Systematic education, motivation, and continuous monitoring by health professionals might be very helpful for encouraging lifestyle changes.<sup>[6]</sup>

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Nowadays, it is now one of the priorities of each universities and colleges to promote a healthy lifestyle habits among students and employees as it is critical to their overall well-being. Good health no longer is viewed as simply the absence of illness. The notion of good health has evolved considerably in the past few years and continues to change as scientist learn more about lifestyle factors that bring on illness and affect wellness. In this context, physical education and sport professionals have come to acknowledge students' need to be exposed to effective lifestyle management practices, and an efficient management system needs to be designed to strengthen the physical and psychological health of university students.<sup>[7]</sup>

Thus, the need for a well-organized sports and physical activities and programs is very significant to encourage and develop healthy lifestyle habits. Student-oriented programs such as intramural and extramural promoting wellness must put into top consideration.

### Objectives of the Study

The study aimed to determine the current health status and lifestyle habits of collegiate freshmen students of Marikina Polytechnic College, Marikina City, during the academic year 2018–2019. Specifically, it sought to determine the: (1) Profile of the student respondents; (2) health status of the student respondents in terms medical history; (3) current lifestyle habits of student respondents; (4) preferred future physical activity and physical exercise schedule; and (5) if there is a significant relationship between the profile of the respondents in terms of age, sex, and school and current lifestyle habits of the student respondents.

The researchers believe that giving top priorities on a well-designed sports and recreational activities and programs for all students that will enhance their overall well-being is highly needed. Thus, this paper endeavored to assess the students' health status and lifestyle habits to design wellness programs suited for their preferences and capabilities.

## MATERIALS AND METHODS

### Participants

The study utilized descriptive method of research. Stratified random sampling was employed in facilitating the survey questionnaires. Using Slovin's formula, 293 freshmen students who are currently enrolled in physical education during the academic year 2018–2019 were included in the study. The researchers gathered a total of 293 or 100% service freshmen students during the gathering of data.

### Procedure

An adapted researcher-made questionnaire was used to determine the profile of the student respondents, health status of the student respondents in terms medical history, preferred

future physical activity, and physical exercise schedule, while Wellness Lifestyle Questionnaire was adapted from the book of Hoeger *et al.* (2013) to assess current lifestyle habits of student respondents. A letter of permission was also forwarded to the college president to secure permission to conduct the survey among the respondents. After the approval of the office concern and the research director of the college, the survey questionnaires were personally distributed to the respondents.

After retrieving all the accomplished questionnaires, the data were then prepared for tallying and statistical treatment. Collected data were tallied using Microsoft Excel and were forwarded to statistician for statistical treatment. The gathered data were computed using the following statistical treatment techniques appropriate for each problem: Frequency, weighted mean, one-way ANOVA, and independent sample *t*-test.

## RESULTS AND DISCUSSION

### Profile of the Respondents

Most of the respondents are 17–19 years old, with 220 or 75.1% followed by 20+ years old with 73 or 24.9%. Out of 293 respondents, 170 or 58% were male, while 123 or 42% were female. On the other hand, 277 of the respondents or 94.5% are single while 234 or 79.9% of the respondents were graduated from public schools. On the other hand, 141 respondents or 48.1% are Bachelor of Industrial Technology (BIT) students, 56 or 19.1% of respondents are enrolled in certificate on technology, while 96 or 32.8% of respondents are Bachelor of Technical Vocational Teacher Education (BTVTED) students. When it comes to physical activity engagement other than PE classes, majority of the freshmen students engaged themselves in sports activities such as basketball, volleyball, and alike with 134 respondents or 45.7% and followed by outdoor activities such as hiking, camping, and fun run with 89 respondents or 30.4% and third in the rank is dance activities such as ballroom, Zumba, and alike with 70 respondents or 23.9% [Table 1].

According to Rappler,<sup>[8]</sup> basketball has been a favorite sport by many Filipinos. Nearly every barangay actually has a basketball court of its own; some are even just on the road as long as it has a basketball ring. During their free time, young kids wearing slippers would practice their layups and dunks. According to Henson (2015),<sup>[9]</sup> volleyball, on the other hand, has also marked an improvement in the history of sports, especially with a firm foundation of players and enthusiasts. It provides amusement and enjoyment not only to the players but also to the audience supporting them. This only reveals that majority of the freshmen students are more oriented in sports such as basketball and volleyball because of the popularity of this sports and easy accessibility of the facilities of this sports that may help them improve their skills and enhance their fitness level.

**Table 1: Profile of the respondents**

	F	%
Age		
17–19 years old	220	75.1
20+ years old	73	24.9
Sex		
Male	170	58
Female	123	42
Civil status		
Single	277	94.5
Married	16	5.5
Course/program		
COT	56	19.1
BIT	141	48.1
BTVTED	96	32.8
Type of high school graduated		
Public	234	79.9
Private	45	15.4
Semi-private	10	3.4
No response	4	1.4
Physical activity engagement other than PE classes		
Sports (basketball, volleyball, and alike)	134	45.7
Outdoor (hiking, camping, and fun run)	89	30.4
Dance (ballroom, Zumba, and alike)	70	23.9

### Health Status of the Student respondents in Terms of Medical Background

Data reveal that respondents experience signs and symptoms such as “chest pain” who got the highest frequency of 56 or 19.1% followed by “dizziness” with 55 or 18.8% and “underweight” with 47 or 16.0%. According to Veeram Reddy and Singh (2010),<sup>[10]</sup> there have been over 650,000 physician visits per year in patients aged 10–21 solely due to chest pain. That may alarm parents but a serious disease does not normally cause chest pain in children, unlike in adults that may lead to coronary ischemia.

Pediatric chest pain can be divided into two: Cardiac and non-cardiac chest pain. More than 98% of the children and adolescents who complained had non-cardiac chest pain in origin. It can be inferred that chest pain is common for children and teenagers and although it is alarming, it is not as serious as the chest pain in adults [Table 2].

On the other hand, respondents diagnosed with “bronchial asthma” which ranked first with a frequency of 14 or 4.8% followed by “anemia” with 12 or 4.1% and “diabetes” with 7 or 2.4%. This supports the study of Sarkar *et al.* (2012)<sup>[11]</sup> saying that children who endured pneumonia during their

**Table 2: Medical background**

	F	%
Signs and symptoms		
Chest pain	56	19.1
Dizziness	55	18.8
Underweight	47	16.0
Diagnosed with health conditions		
Bronchial asthma	14	4.8
Anemia	12	4.1
Diabetes	7	2.4
Family history		
Diabetes	36	12.3
Hypertension	32	10.9
Bronchial asthma	27	9.2

early years had higher risk for bronchial asthma. It presented important connections between maternal asthma and children bronchial asthma. The study also found that among secondary school students, passive smoking may have something to do with it. This passive smoking has been considered an asthmatic symptom since there is a high chance that it is the cause of a greater bronchial irritability and increase in bronchial obstruction. This only shows that respondents who were diagnosed with bronchial asthma may have worsen their illness with passive smoking.

In terms of their family medical history, respondents believe that they have “diabetes” with a frequency of 36 or 12.3% followed by “hypertension” with 32 or 10.9% and “bronchial asthma” with 27 or 9.2%. According to the Department of Health (2017),<sup>[12]</sup> the Philippine Health Statistics discovered in 2013 that the 6<sup>th</sup> leading cause of death among Filipinos is diabetes. Also in 2016, as stated by the Philippine Center for Diabetes Education Foundation, there are over 6 million Filipinos have diabetes. This proves that diabetes is indeed a top common health issue among the Filipinos.

### Current Lifestyle Habits of Student respondents

Table 3 shows that in terms of current lifestyle habits of student respondents, the respondents obtained a category rating of needs improvement in terms of “Health-Related Fitness” with a weighted mean of 11 and “Disease Prevention” with a weighted mean of 12. While in terms of “Nutrition,” “Stress Management,” “Personal Hygiene,” “Personal Well-being,” “Personal Safety,” and “Environmental Health,” the respondents obtained a category rating of good with a weighted mean ranging from 13 to 16. On the other hand, the respondents obtained a category rating of excellent in terms of “Avoiding Chemical Discrepancy,” with a weighted mean of 17. The result of the evaluation in terms of health-related fitness implicates the statement of Barler (2013)<sup>[13]</sup> that during their 4 or so



**Table 3: Current lifestyle habits**

	Mean	Category rating
Health-related fitness	11	Needs improvement
Nutrition	13	Good
Avoiding chemical discrepancy	17	Excellent
Stress management	14	Good
Personal hygiene	15	Good
Disease prevention	12	Needs improvement
Personal well-being	16	Good
Personal safety	15	Good
Environmental health	16	Good

years in college, many people find it difficult to live a healthy lifestyle that includes healthy eating and exercising. In addition, they could not balance their school and work responsibilities with sleep and going out with friends weekly. Based on the study of Eichorn *et al.* (2018),<sup>[14]</sup> sleep habits, diet, social life, homework, and other extracurricular activities are some of the factors that influence how college students exercise. Even though they know these, it is not always that they do something to make their habits different. Moreover, whatever their habits in exercising during college are what would usually be their same habits even after they graduate [Table 3].

The study of De Irala *et al.* (2009)<sup>[15]</sup> supported the result of item disease prevention. Based on the results of the study, it was reported by students that it was mostly from their friends that they have acquired information about love and sexuality. However, even with that being said, they revealed that the opinion of their parents has more worth for them than that of their friends. Furthermore, it was almost half of the respondents that thought wrongly about condoms giving them assurance that it can avoid STIs or pregnancies. It only implies that majority of the freshmen-respondents are not fully aware of diseases that they can get such as warning signs for heart attack, cancer, and the like. They do not have an annual medical and dental checkup for disease prevention. And finally, they are not fully aware of the different sexually transmitted diseases that they can acquire during unprotected sexual intercourse.

### Preferred Future Physical Activity and Physical Exercise Schedule

An analysis of Table 4 shows that majority of the respondents' preferred "Badminton" as their future physical activity obtaining a weighted mean of 3.7 and rank 1. Rank 2 is "Basketball" with the weighted mean on 4.4. Third in rank is "Running/walking" with a weighted mean of 4.5 while fourth in rank is "Zumba/Dance Aerobics/Tae-bo and alike" with a weighted mean of 4.9. The majority of the respondents feel to schedule their exercises everyday between 4:00 and 7:00 pm (1 h) with a total of 68 respondents and rank 1<sup>st</sup> in terms of physical exercise schedule while 48 respondents believed that

**Table 4: Future physical activity and physical exercise schedule**

Physical activity	Mean	Rank
Badminton	3.7	1
Basketball	4.4	2
Running/walking	4.5	3
Zumba/dance aerobics/tae-bo and alike	4.9	4
Physical exercise schedule	Total	Rank
Every day between 4:00 and 7:00 pm (1 h daily)	68	1
Three times a week between 11:00 am and 2:00 pm	48	2
Three times a week between 7:30 and 9:30 am	32	3

the best physical exercise schedule is 3 times a week between 11:00 am and 2:00 pm and rank 2<sup>nd</sup>. Meanwhile, 32 respondents believed that 3 times a week between 7:30 and 9:30 am is the best schedule for physical exercise and rank 3<sup>rd</sup> on the list.

The result shows that basketball and badminton are still popular among students. Based on the survey of www.thetoptens.com (2009),<sup>[16]</sup> basketball got the top 1 as the most popular sport and badminton obtained the top 3. It shows that basketball and badminton are some of the popular sports among students because of easiness of these sports and the availability of the facilities in different schools in the country. It is also part of the curriculum in Philippine education to educate the students about these sports for more promotion of physical fitness.

### Significant Difference between the Profile of the Respondents in Terms of Age, Sex, and School and Current Lifestyle Habits of the Respondents

As shown in Table 5, stress management, emotional well-being, and environmental and health protection have  $t = -2.261, -2.027$ , and  $-2.511$ , respectively. With that, we can say that it is  $<0.05$ , which we call that  $P = 00.05$  is considered to be the assumed level of importance. For that reason, the null hypothesis is not accepted. Meaning when the respondents are grouped based on age, their assessment differs in a significant manner.

According to Ricciotti and Hur (2018),<sup>[17]</sup> stress management is not something that one person can master at any age. For many reasons, as people get older, they tend to find it harder to cope with stress as one's body will struggle physically. In addition to that, the heart and lungs might not be able to do what they do and the body may struggle more from stressful events. Furthermore, coping with stress mentally is also a serious task. It can be inferred from the data that the respondents' assessment of stress management varies significantly when grouped depending on the age of the individuals.

As found in the study by Raposo *et al.* (2017),<sup>[18]</sup> older adults experience better emotional well-being when they can fulfill



**Table 5: Test of significant difference between the profile of the respondents in terms of age, sex, and school and current lifestyle habits of the respondents**

Age	17–19	20 above		t-value	P-value	Decision	Remarks
Stress management				–2.261	0.025	Reject Ho	Significant
Emotional well-being				–2.027	0.044	Reject Ho	Significant
Environmental and health protection				–2.511	0.013	Reject Ho	Significant
Sex	Male	Female		t-value	P-value	Decision	Remarks
Health-related fitness				2.863	0.005	Reject Ho	Significant
Avoiding chemical dependency				3.948	0	Reject Ho	Significant
Personal hygiene				2.853	0.005	Reject Ho	Significant
Personal safety				2.957	0.003	Reject Ho	Significant
School	Public	Private	Semi private	F-value	P-value	Decision	Remarks
Health-related fitness				3.618	0.028	Reject Ho	Significant

emotionally meaningful goals. In situations where older adults cannot achieve their relational goals, they do not experience age-related emotional benefits. It can be inferred from the data that perception of 17–19 years old and 20+ years old respondents on the emotional well-being is significantly different, depending on the age of the respondents.

According to Acharya (2013),<sup>[19]</sup> the younger generation can always help to protect and improve the environment. It affects the environment when they change how they live. There are many environmental-friendly practices such as recycling, preserving water, and electricity that the youngsters can adapt in homes, schools, and youth involvements. Making the youth, the main star of this environmental switch will not only make a positive impact on their behaviors but also likely influence the people surrounding them, especially their family. It is concluded that the respondents' assessment of environmental and health protection varies significantly when grouped according to their age.

On the other hand, health-related fitness, avoiding chemical dependency, personal hygiene, and personal safety have  $t = 2.863, 3.948, 2.853,$  and  $2.957$ , respectively. We can say that it is  $<0.05$ , which we call that  $P = 0.05$  is considered to be the assumed level of importance. For that reason, the null hypothesis is not accepted. It just means that when respondents are grouped based on sex, their assessment varies significantly.

The result in health-related fitness was supported by the study of Hands *et al.* (2016).<sup>[20]</sup> It proves that no matter the age or measure, males are more active in doing fitness activities than females. That's why females tend to be more at risk when it comes to their health in the long run. It only implies that males are more oriented in physical activity compared to female.

Based on the report of the National Institute on Drug Abuse (2018),<sup>[21]</sup> men are looking more into treating their substance use disorders while women are most probably looking to treat

their dependence on sedatives such as antianxiety and sleep medications. Furthermore, throughout history, as it has been reported, men pursue treatment for heroin use, but recently, the rate of women pursuing the same treatment has increased, as well.

It can be gleaned also in Table 5 that health-related fitness has  $F = 3.618$  with  $P = 0.028$ . It is  $<0.05$ , which we call that  $P = 0.05$  is considered to be the assumed level of importance. For that reason, the null hypothesis is not accepted. These shows that when the respondents are grouped based on type of school graduated in high school, their assessment varies significantly.

The result supported the statement of Koerber (2016)<sup>[22]</sup> saying that students studying in private and catholic schools are probably more physically active than other students, giving credit to specialist sports teachers. Furthermore, costly private schools and affordable catholic schools prioritize physical education unlike in public primary schools. Koerber even discovered in Australia that there is only one public school that has a trained physical education specialist, out of 10 public schools. It only implies that students graduated from private schools are more oriented in health-related fitness compared to graduates of public schools. Some of the factors for this reason are lack of physical education specialists among public schools.

## CONCLUSION AND RECOMMENDATION

Based on the findings of the study, the researchers had drawn the following conclusion:

The majority of the respondents were male, belonging to 17–19 years old group. Majority also of the respondents are single, with a course of BIT, graduated from public schools and engaged in different physical activity other than PE classes such as sports (basketball, volleyball, and alike), outdoor (hiking, camping, and fun run), and dance (ballroom, Zumba, and alike).

The study concludes that chest pain, dizziness, and underweight are the most common signs and symptoms they are experiencing in. In addition, majority of the respondents were diagnosed with bronchial asthma, anemia, and diabetes, while hypertension, bronchial asthma, and diabetes are the common family health problems.

In terms of the current lifestyle habits of student respondents, finding reveals that the majority of the respondents are always aware in the category of avoiding chemical discrepancy while majority of the respondents obtained a category rating of good in terms of nutrition, stress management, personal hygiene, personal well-being, personal safety, and environmental health. On the other hand, when it comes to health-related fitness and disease prevention, most of the respondents are never aware of these factors and obtained a category rating of needs improvement.

The study also shows that in terms of preferred future physical activity, majority of the respondents preferred badminton, basketball, running/walking, and Zumba/dance aerobics/tae-bo and alike and preferred their physical exercise schedule everyday between 4:00 and 7:00 pm (1 h daily).

In terms of significance relationship between profiles of the respondents, there is a significant difference on perceived on stress management, emotional well-being, and environmental and health protection when grouped according to age. Similarly, there is no significant difference on the perceived on health-related fitness, avoiding chemical dependency, personal hygiene, and personal safety when grouped according to sex. On the other hand, there has been no significant difference on the perceived on health-related fitness when grouped according to school graduated in high school.

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## Research Article

# Physical fitness habits as a strategy to reduce absenteeism

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### ABSTRACT

In many countries, there are companies and institutions that have already integrated wellness programs as part of the professional enhancement program to help employees become more productive in the workplace. Among the prevalent problems, confronting any institution or agency is employee's absenteeism. This study sought to answer how physical activities and other health programs can reduce absenteeism in the workplace. Specifically, it answers the following questions: What is the demographic profile in terms of age, sex, civil status, department, length of service, monthly family income, and number of children? What are the physical fitness activity habits of the employees that can help reduce absenteeism? What are the most common causes of absenteeism? Is there a significant relationship between the respondents' demographic profile and their physical fitness activity habits? Is there a significant relationship between the respondents' demographic profile and the causes of their absenteeism? Ninety-five employees were the respondents of the study. Statistical Package for the Social Sciences version 19 was used to process and analyze the data. The findings of the study show that there is a significant relationship between the respondents' age and length of service and their physical fitness activity. Furthermore, there is a significant relationship between and among the respondents' age, length of service, civil status, and number of children and the causes of their absenteeism.

**Keywords:** Absenteeism, Physical fitness habits

## INTRODUCTION

The development of strong and healthy bodies requires many challenges. It takes effort and energy, but the result is growth for all who perseveres. Everybody wants to be fit and active. Individuals who are well are not only free from sickness and malady but are happy, vibrant, and able to solve personal problems. Physical fitness activities generally can be done for enjoyment and exercise throughout life. Participation in these activities is much needed and virtually ensures that every individual has opportunities for good fellowship and enjoy these as recreation. In this sense, activities are functional skills that can be used by the individual to enjoy and participate more fully in life in the community. Moreover, the effects of physical fitness are total and the researchers believed that it even affects the work performance of an individual. It is one factor that helps everyone tremendously to strive and to have a longer and more useful life. Kelly (2004) stated that the workplace

should provide a unique setting to promote a holistic approach to health within a supportive working environment. However, Baptiste (2008) explained that the importance of employee's well-being and fitness at work has been a neglected area of inquiry in human resource management. This was collaborated by Henley and Redmond (2006) as they cited the workplace is still underutilized as a site to promote healthy lifestyles.

Today, many employers are investing a large amount in a fitness program due to the benefits that it brings to the employees as well as the organization. Organizations that support these programs consider them an inexpensive benefit that produces the following returns: (a) Increased ability to attract competent employees; (b) improved attitudes and loyalty; (c) a reflection of the firm's concern for the non-work aspects of the employee's lives; (d) indirectly, increasing productivity; (e) employees' fitness programs may reduce the impact of stress; and (f) increasing the fitness level of employees should improve productivity and reduce absenteeism.

Tiwari (2014) articulated that absenteeism is the absence made by the workers from regular work without prior permission. It

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is also an employee's intentional or habitual absence from work (Folger, 2015). It is considered as one of the most common problems facing employers in today's workplace. Arriving late, leaving early, and taking longer breaks than allowed are considered forms of absenteeism. In addition, Folger (2015) also commented that absences made by workers might be incidental (absences such as staying home from work due to a cold) or disability (absences of more than a week and up to several years). While employers expect workers to miss a certain number of workdays each year, excessive absences can equate to decrease productivity and can have a major effect on company finances, morale, and other factors.

According to Badland and Schofield (2003), the high absenteeism turnout may have an effect on worker's productivity. Improving physical activity may reduce absenteeism, ultimately improving employee's quality of life and help reduce the cost to the organization. There is a growing trend for workplaces worldwide to conduct physical activity and health programs to overcome the burden of lifestyle-related illness and increase worker productivity. In support of this, Wattles and Harris (2003) recommend worksite fitness programs due to the potential to lower absenteeism and job turnover and increase job productivity and morale. Falkenberg (2007) concludes that fitness increases workplace productivity at all, as higher fitness levels do benefit the body and mind in many positive ways.

In the Philippines, more and more companies are either planning or have already integrated wellness programs into their organization's routine. This is in response to the Civil Service Commission Memorandum Circular No. 6, s. 1995 requiring all agencies to adopt "The Great Filipino Workout." It is the physical fitness project that promotes a healthy lifestyle and a regimen of regular physical fitness activities as a strategy to reduce the level of the risk factor of heart disease and other possible diseases and possibly can help minimize the emerging number of absenteeism in the workplace.

Based on the survey on the institution where the study was conducted, there was evidence in the significant number of sick leave applications that are considerably higher compared to other types of leaves filed by its employees. Confronted to this reality, this study finds out the primary cause of absenteeism among the employees and what are the physical fitness habits that can help reduce absenteeism in the workplace.

### The Problem

This study sought to answer how physical activities and other health programs can reduce absenteeism in the workplace. Specifically, it answers the following questions;

What is the demographic profile in terms of age, sex, civil status, department, length of service, monthly family income, and number of children?

What are the physical fitness activity habits of the employees that can help reduce absenteeism?

What are the most common causes of absenteeism?

Is there a significant relationship between the respondents' demographic profile and their physical fitness activity habits?

Is there a significant relationship between the respondents' demographic profile and the causes of their absenteeism?

## METHODOLOGY

Data collection was conducted using questionnaires adapted from the study of Folger. Total of 95 respondents distributed in the eight departments of the institution. The Statistical Package for the Social Sciences (SPSS) version 19 was used to process and analyze the data and determine the distribution of the respondents by frequency, percentage, and descriptive statistics. In the interpretations of data, the researchers used ranking and cumulative frequency. The cumulative frequency was used to determine a specific number of responses of all the respondents to particular questions or items. Multiple regressions were utilized to identify a significant relationship between the respondents' profile, physical fitness activity, and habits and causes of absenteeism.

### Findings of the Study

#### *Demographic profile of the respondents*

The demographic profile of the respondents included variables such as age, sex, civil status, educational attainment, and length of service, gross monthly income, and number of children. Frequency distribution was utilized in giving this data for a very visual presentation. The majority (25) or 26.32% of the respondents were aged 26–30 years old. In addition, there are 19 (20%) and 13 (13.68%) whose age range from 26 to 30 and 31 to 35 years old, respectively. Only 2 (2.11%) of them belong to age bracket 61–65 years old. Considering their age as one of the variables in this study, it can be concluded that most of the respondents involved in this study were still young.

The majority (75) or 78.95% of the respondents were females, while the remaining 20 (21.05%) of them were male. Therefore, the total number of female is greater than male employees. The analysis revealed that the majority, 65 or 68.42% of the employees are married, followed by 22 or 23.26% who were still single. Four or 4.21% were widowed and 3 or 3.16% were separated. Of 73 respondents who were married, 28 or 38.36% of them have only one child while 18 or 24.66% of them have two children. Fourteen or 19.18% and 13 (17.80%) of the respondents have two and three children, respectively.

The majority (54) or 56.84% of them have earned units in the master's degree (MA/MS) while 33 or 34.74% of them finished



baccalaureate degrees. Two or 2.11% finished their master's degree (MA/MS) while 4 or 4.22% had already finished their doctorate degree. The majority (44) or 46.32% of them have a monthly salary between P16,000.00 and P20,000.00, followed by 27 or 28.42% whose monthly salary falls within P21,000.00–P25,000.00. 46 or 48.42% of the respondents had been in the service for at most 5 years. This was followed by 16 or 16.84% who had been in the service between 5 and 6 years, and only 2 or 2.11% of the respondents spent 36 years and above in the institution. Forty-six or 48.42% respondents had been in the service for at most 5 years. This was followed by 16 or 16.84% who had been in the service between 6 years and 5 years, and only 2 or 2.11% of the respondents spent 36 years and above in the profession serving the institution.

Data presented on Figure 1 indicates that among the 95 respondents, 40 of them do walking like brisk walking and 30 min walking as a form of exercise to maintain fitness. Twenty of the respondents do jogging and 16 were engaged in dance aerobics (Zumba, Aero-dance, and Aerobics). It can also be gleaned from the graph that there were respondents who do or perform other physical activities such as playing sports (Basketball, Volleyball, Badminton, Soccer, Tennis, and Frisbee), swimming, power yoga, and weight training.

According to Bertera (1990), fitness significantly lowers absenteeism. Badland and Schofield (2003) supported his pronouncement as they endorsed to conduct physical activity and health programs in the workplace to overcome the burden

of lifestyle-related illness and to increase worker productivity. Der-Karabetian *et al.* (1986) also suggested that every company should focus on employee fitness since it reduces absenteeism (sick days) and increases morale of the employees which will increase productivity. Therefore, based on the result of the study, the researchers recommend a fitness program for the employees and employers need to introduce a holistic approach as to how physical fitness program should be done in the workplace.

Table 1 shows the respondents' absenteeism reports, as indicated by the number of days they spent in their work experience over the past 30 days (1 month). Analysis reveals that the respondents missed their classes for 3 days on the average due to problems related to sickness, ailments, or diseases involving self and/or family members. Moreover, respondents also spent 2 days missing an entire day because of stress. These findings validate the study conducted by Chaudhury *et al.* (2006) which disclosed that most of the employees' absenteeism is attributed to illness. Thereby, these respondents who are sick or have sick family members will not attend school but stay at home to recover or to take care of the sick person and these may lead to persistent absenteeism.

Significant relationship between the respondents' demographic profile and their physical fitness habits.

Table 2 analysis reveals that among the respondents' demographic profile, age, and length of service were found

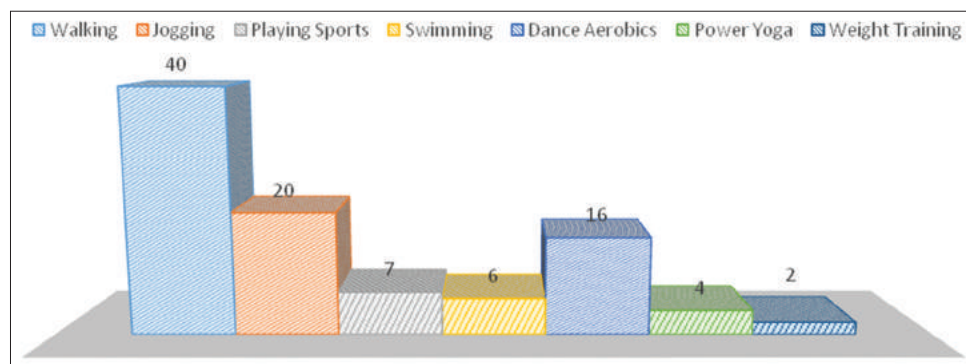


Figure 1: Respondents' physical activities and habits

Table 1: Respondents' absenteeism monthly report

	Minimum number of days	Maximum number of days	Mean
F1: Miss an entire day due to problems with physical health (sickness, ailments, diseases, fatigue)	1	4	2.12
F2: Miss an entire day due to stress	1	8	2.05
F3: Miss part of work due to family, personal, and marital problems	1	6	3.01
F4: Miss part of a work for any other reason (attending to child's school activities, house concerns, etc.)	1	4	1.39



**Table 2: Respondents' profile and physical activities and habits**

Physical activities and habits	Respondents' personal profile						
	<i>P</i> -values						
	Age	Sex	Civil status	Number of children	Educational attainment	Monthly income	Length of service
Walking	0.035**	0.088	0.368	0.340	0.234	0.306	0.02**
Jogging	0.012**	0.698	0.081	0.076	0.348	0.782	0.006**
Playing sports	0.002**	0.260	0.773	0.409	0.456	0.286	0.003**
Swimming	0.008**	0.499	0.372	0.330	0.245	0.092	0.001**
Dance aerobics	0.043**	0.882	0.091	0.459	0.119	0.265	0.004**
Yoga	0.003**	0.359	0.178	0.179	0.241	0.092	0.006**
Weight training	0.026**	0.391	0.880	0.462	0.273	0.183	0.003**

\*\*Significant at 0.05 level of significance

**Table 3: Respondents' profile and causes of absenteeism**

	Respondents' personal profile						
	<i>P</i> -values						
	Age	Sex	Civil status	Number of children	Educational attainment	Monthly income	Length of service
Absenteeism	0.002**	0.492	0.001**	0.001**	0.982	0.283	0.008**

\*\*0.05 level of significance

significantly related to their physical fitness habits since *P*-values are less than the indicated level of significance. This result is supported by the research published in the British Scientific Journal Age and Ageing conducted by the International Council on Active Aging in 2011 as it found out that older employees are highly knowledgeable about the health benefits of physical activity, yet many remain inactive due to the many barriers to participation such as (1) Lack of interest; (2) shortness of breath; joint pain; (3) perceived lack of fitness; (4) lack of energy; and doubting that exercise can lengthen life. It can be concluded that age, length of service, and respondents' physical fitness habits are statistically significant.

However, the analysis also shows that other employees' demographic profile such as gender, civil status, monthly income, educational attainment, and number of children have no significant relationship with their physical fitness habits since their *P*-values are greater than the indicated level of significance. The indicated *P*-values tested at 0.05 level of significance confirms that their relationships were statistically insignificant.

Significant relationship between the respondents' demographic profile and absenteeism.

There is a significant relationship between the respondents' demographic profile and absenteeism, as shown in Table 3. Chi-square test of independence was utilized with the aid of

SPSS, tested at 0.05 level of significance. *P*-values confirmed that the association between the respondents' age, length of service, civil status, and number of children was statistically significant to absenteeism. This means that old age, being married and having too many children, and working for too many long years may contribute to being absent from work. These can considerably contribute to illness and or diseases that can affect employees' abilities and capabilities to go to work and can be a factor for them to miss their work. Guzman (2013) said that employees who are too busy in their family and work no longer have time to do physical activities. Since the nature of their work is to sit for a number of hours, they develop improper posture and create an imbalance in their system when energy intake exceeds energy expenditures. These can increase the prevalence of heart problems, overweight and obesity, and back problems among persons of ages.

These results support the hypothesis that there are variables that may contribute absenteeism among the faculty. Hence, a physical fitness activity/program may be recommended as remediation.

## CONCLUSIONS

Based on findings, it is concluded that: (1) Absenteeism can be minimized if employees are healthy and sick-free; (2) aging workers, having a large family, and working too many hours at the office may impede employee to do exercise and physical activity, and therefore they are more prone to illness

and diseases; and (3) exercising and doing PA at work can help an employee actively perform his work effectively and can help reduce absenteeism due to health-related problems.

### Recommendations

Since the demographic profile such as age, civil status, number of children, and length of service were found to have a significant relationship with absenteeism, the researchers recommend a worksite fitness and wellness intervention programs such as personalized fitness training such as weight training, running, jogging, walking, plyometric, and swimming; and organize classes and activities such as yoga and Zumba as well. It is also recommended that playing sports such as Basketball, Volleyball, Badminton, Soccer, Tennis, and Frisbee be introduced to worksite to reduce health- and physiological-related problems.

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## Research Article

# A comparative study on strength endurance and cardiovascular endurance of female athletes

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### ABSTRACT

Sport refers to any physical activity which includes movement of body muscles by excreting bodily energy by incorporating certain skills. To perform in any sport, people require certain types of physical fitness. Muscular endurance implies the ability of an athlete or person to perform muscular activities repeatedly using muscle group. Cardiovascular endurance refers to efficiency of one's heart to work properly during any physical activity. The present study was carried out to compare the muscular endurance and cardiovascular endurance of female athletes. A sample of 270 female athletes belonging to Dakshina Kannada, Shimoga, and Dharwad zone was selected using a purposive random sampling procedure. The bent knee sit-up test and 3 min step test were administered to measure muscular endurance and cardiovascular endurance, respectively. The obtained data were analyzed using one way ANOVA. The findings of the study suggest that a significant difference in the muscular endurance and cardiovascular endurance of female athletes. Further, it was also revealed that the zone has a significant influence on the muscular endurance and cardiovascular endurance of female athletes.

### INTRODUCTION

Athletic participation requires a high level of physical fitness. Physical fitness is a major requirement to become a successful athlete in any area of sports. The selection of athletes to different athletic events depends on their present physical fitness level. The fitness of athletes is measured using different physical fitness tests. The periodic measurement of physical fitness elements such as muscular strength, muscular endurance, cardiovascular endurance, flexibility, and agility helps to ensure the physical fitness standards among athletes. This further helps to get the proper training to maintain or enhance their physical fitness and achieve success in the athletic career.

Muscular strength endurance refers a person's ability to put external force using bodily muscle groups many times or in repeated exercises. The muscular endurance can be measured by how many repetitive physical activities that an individual

can perform in a given time. The most prominently used measure for this is sit-up and push-up exercises.

Cardiovascular endurance refers to the potential ability of heart and lungs to function in an optimum level when the individual is under any physical activity. It is assessed by measuring the maximum amount of oxygen intake during physical activities. It was defined by Johnson and Nelson (1988) as "the ability of the circulatory and respiratory system to adjust and to recover from the effects of exercise or work."

The general research studies emphasize that there is a significant difference in the physical fitness of male and female athletes. According to those studies, male athletes hold higher

**Table 1: The mean and standard deviation scores of muscular endurance among female athletes belonging to three different zones**

Variable	Zone of female athletes		
	Dakshina Kannada (n=87)	Shimoga (n=88)	Dharwad (n=88)
Mean	17.79	17.78	15.95
SD	2.95	2.93	3.36

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**Table 2: The one way ANOVA for muscular strength endurance among female athletes belonging to three different zones**

Variable	Sources of variance	Sum of squares	Df	Mean sum of squares (MS)	F
Muscular strength endurance	Between groups	214.951	2	98.481	10.329
	Within groups	2478.992	260	9.535	
	Total	2675.954	262		

\*\*\*Significant at 0.001

**Table 3: The mean and standard deviation scores of cardiovascular endurance among female athletes belonging to three different zones**

Variable	Zone of female athletes		
	Dakshina Kannada (n=87)	Shimoga (n=88)	Dharwad (n=88)
Mean	12.93	14.84	11.83
SD	5.07	4.29	5.10

physical fitness standards compare to female athletes. Many studies were carried out by researchers to study physical fitness among male athletes in India. However, there are a few studies pertaining to physical fitness among female athletes in India. In this regard, the present study gains more importance.

## REVIEW OF LITERATURE

Karak and Mandal (2016) founded out the difference in the physical fitness between athletes and non-athlete students age ranging from 17 to 20 years. They selected 60 samples and administered AAHPER youth fitness test. The data were then analyzed using an independent *t*-test. The results revealed that athletes possess significantly higher muscular strength and endurance, cardiovascular endurance, speed, and agility than the non-athletes.

Kumar (2016) measured the difference in the cardiovascular fitness of athlete women and non-athlete women aged 20–24 years. Harvard bench step test was administered to assess the cardiovascular fitness of 15 athlete women and 15 non-athlete women. The data were treated using an independent *t*-test. The findings showed significantly higher cardiovascular fitness among athlete women than non-athlete women. Thus, it was evident that regular practice improves cardiovascular fitness among women athletes.

Another study conducted by Devi and Kumara (2014) on the physical fitness of 100 female athletes of different colleges in Patiala. Physical fitness factors such as speed, strength, endurance, agility, and explosive power among female athletes were studied by administering AAHPER youth fitness test. The results implied that on the whole, the female athletes are physically not so fit. They are found to be average in speed and explosive power; and sub-average in strength, endurance, and agility.

Kim (2010) explored the benefits of 12 weeks training on certain pi muscular strength and driver shot performance. Further, two groups were formed in which nine female golf players belonged to the training group and eight female golf players belonged to the control group. From the results, it was concluded that training enhances the physical fitness among female golf players in relation to all physical fitness variables.

## METHODOLOGY

### Aim

The aim of the study was to study the muscular strength endurance and cardiovascular endurance of female athletes of different zones.

### Hypothesis

- There would be a significant difference in the muscular strength endurance of female athletes belonging to three different zones.
- There would be a significant difference in the cardiovascular endurance of female athletes belonging to three different zones.

### Research Design

A purposive sampling research design was used for the study.

### Procedure

The female student-athletes studying in different colleges of three different zones such as Dakshina Kannada zone, Shimoga zone, and Dharwad zone were approached for the study. The purpose of the study was explained to them. Then, their consent to participate in this study was obtained. Then, the physical fitness tests, namely, bent knee sit-up test and 3 min step test, were administered to measure muscular strength endurance and cardiovascular fitness, respectively.

### Tool Used for the Study

Two physical fitness tests were used to measure muscular strength endurance and cardiovascular endurance among female athletes.

#### *Bent knee sit-up test*

It is used to measure abdominal strength endurance. After doing warm-up for 10 min, athlete lies on the mat with the knees bent, feet flat on the floor, and their hands on their ears.

**Table 4: One way ANOVA for cardiovascular endurance among female athletes belonging to three different zones**

Variable	Sources of variance	Sum of squares	df	Mean sum of squares (MS)	F
Cardiovascular endurance	Between groups	408.517	2	204.259	8.741
	Within groups	6075.802	260	23.368	
	Total	6484.319	262		

\*\*\*Significant 0.001

Another person holds athletes feet on the ground. When the “start” signal was given, the athlete performs as many sit up as possible for the duration of 30 s. The number of correct count is considered as the score.

### Three-minute step test

It was developed by two people, namely, Skubic and Hodgkins, to assess the cardiovascular endurance of females. The female athletes must step 24 steps in every minute. After this exercise, the female athletes are supposed to sit for a minute during which their palpitations are counted. Finally, these scores are compared with the established norms to determine the level of cardiovascular endurance. In the case of athletes, those who cannot complete stepping in 3 min their total time taken is noted and their pulse rate shall be counted after 1 min, usually for 30 s. Then, the scores compared with the established norms to determine the level of cardiovascular endurance.

### Statistical Analysis

The descriptive statistical methods such as mean, standard deviation, and one way ANOVA was used to compare the muscular strength endurance and cardiovascular endurance among female athletes.

## RESULTS AND DISCUSSION

Table 1 depicts the mean and SD scores of female athletes on muscular endurance belonging to three different zones. The results reveal that female athletes belonging to Dakshina Kannada zone have obtained a mean score of 17.79 (SD = 2.95), the female athletes belonging to Shimoga zone have obtained a mean score of 17.78 (SD = 2.93) while the female athletes belonging to Dharwad zone have obtained a mean score of 15.95 (SD = 3.36). Thus, from the mean scores, it is evident that the female athletes belonging to Dakshina Kannada zone hold significantly higher muscular endurance than the female athletes of Shimoga zone and Dharwad zone, respectively. One way ANOVA results are provided below.

Table 2 shows one way ANOVA for muscular endurance among female athletes belonging to three different zones. The obtained F ratio is 10.329, which is highly significant at 0.001 level. Thus, from the findings, it is evident that there is highly significant difference muscular strength endurance among female athletes belonging to three different zones. Thus, zone has a significant influence on the cardiovascular

endurance of female athletes. Therefore, we accept the first hypothesis – “There would be a significant difference in the muscular strength endurance of female athletes belonging to three different zones” is accepted.

Table 3 depicts the mean and SD scores of female athletes on cardiovascular endurance belonging to three different zones. The results reveal that female athletes belonging to Dakshina Kannada zone have obtained mean score of 12.93 (SD = 5.93), the female athletes belonging to Shimoga zone have obtained a mean score of 14.84 (SD = 4.29) while the female athletes belonging to Dharwad zone have obtained a mean score of 11.83 (SD = 5.10). Hence, it is clear that the female athletes belonging to all three zones differ in their level of cardiovascular endurance. The female athletes belonging to Shimoga zone hold significantly higher cardiovascular endurance than the female athletes of Dakshina Kannada zone and Dharwad zone, respectively. One way ANOVA results are provided below.

Table 4 shows one way ANOVA for cardiovascular endurance among female athletes belonging to three different zones. The obtained F ratio is 8.741, which is highly significant at 0.001 level. Therefore, from the above results, it is clear that there is a highly significant difference cardiovascular endurance among female athletes belonging to three different zones. Thus, zone has a significant influence on the cardiovascular endurance of female athletes. Hence, we accept the second hypothesis – “there would be a significant difference in the cardiovascular endurance of female athletes belonging to three different zones” is accepted.

## CONCLUSIONS

- There is a significant difference in the muscular strength endurance of female athletes belonging to three different zones. The female athletes belonging to Dakshina Kannada zone hold significantly higher muscular endurance than the female athletes belonging to Shimoga zone and Dharwad zone, respectively.
- There would be a significant difference in the cardiovascular endurance of female athletes belonging to three different zones. The female athletes belonging to Shimoga zone hold significantly higher cardiovascular endurance than the female athletes belonging to Dakshina Kannada zone and Dharwad zone, respectively.



- The concerned authorities and parents have to provide proper training facilities to enhance muscular endurance and cardiovascular endurance among female athletes.

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## Research Article

# Yoga as a present and future in India

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### ABSTRACT

Today yoga is a special subject across in India, which is given to peace of mind and sound health with wonderful career scope in all over the country. Yoga has gained tremendous popularity in the last few years, it is the most rapidly growing health movement despite it was developed thousands of years ago. Age, religion, caste, and sex are no bar with breathing and meditation techniques. However, yoga teaching, when compared to other professions, is less lucrative, but it is the mental satisfaction attached with the profession that draws the attention of individuals. Yoga is an art of successful healthy living. It is a tool for positive change. Yoga is recommended as physical exercise for the all-round development of human personality.

**Keywords:** Healthy living, Physical exercise, Yoga

## INTRODUCTION

Many thousands of years ago in India, Rishis explored nature and the cosmos in their meditations. They discovered the laws of the material and spiritual realms and gained an insight into the connections within the universe. They investigated the cosmic laws, the laws of nature and the elements, life on earth, and the powers and energies at work in the universe both in the external world as well as on the spiritual level. Human beings are made up of three components – body, mind, and soul corresponding these there are three needs health, knowledge, and inner peace. Health is a physical need, knowledge is our psychological needs, and inner peace is spiritual need when all three are present, then there is harmony. Yoga is a practical philosophy involving every aspect of a person's being. It teaches the evolution of the individual by the development of self-discipline and self-awareness. Anyone irrespective of age, health circumstances of life, and religion can practice yoga.

## PRESENT

Today yoga is a special subject across in India, which is given to peace of mind and sound health with wonderful career

scope in all over the country. Recently, UN has declared on June 21, 2015, as the “International day of yoga.” Today Government of India has been every year to celebrate June 21 as an “International Yoga day” across the country. We are today living in a world where people have become more health-conscious than they ever were, we can also owe this sudden change due to the nature of jobs and increasing lifestyle disease. Yoga is one of the most natural ways of keeping the human body fit and in shape. It is something that has also spread its wing to most western countries as well. The current century is known as the fastest century, we are running behind success. In the race to win, we have forgotten the time, we are not giving full time to eat, sleep, and rest. Due to this, we are facing many physical and mental problems in our routine life. In short, we have forgotten physical activities in the fast life. Physical activities can reduce many physical problems. Even we have forgotten natural laugh. That's why today, the laughing class has begun. However, natural is always natural. No doubt today people are too serious about health, all are doing lots of physical exercises to fight against physical and mental problems.

Yoga has gained tremendous popularity in the last few years; it is the most rapidly growing health movement despite it was developed thousands of years ago. Age, religion, caste, and sex are no bar with breathing and meditation techniques. There are many types of yoga and it may be hard for beginners which yoga types he and she want to do. The most important benefit

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of yoga is physical and mental therapy, the very essence of yoga lies in attaining mental peace, improved concentration power and a relaxed state of living. In this modern world, our environment is fighting for survival and we humans suffer from more and more physical and psychological stress, we cannot always control them but can learn how to face them and to this end, yoga is as good an invention it has ever been. The aim of yoga is attainment of physical, mental, and spiritual health.

Yoga is one of the best physical and mental exercises from which anyone could get the best mental and physical balance; it is not easy to ask what yoga is? What are the effects of yoga? Yoga is a practical science and it is an open book, to know the benefits of yoga, one should practice it. Yoga is an ancient art based on a harmonizing system of development for the body, mind, and spirit. The continued practice of yoga will lead you to a sense of peace and well-being, and also a feeling of being at one with their environment. This is a simple definition.

If, we would go to survey, we could find 7 people of 10 are doing yoga, we could see so many persons on the gardens, clubs here, and there practicing of yoga, as I have already mentioned that we are surrounded by mental, emotional, and physical problems due to ear boring routine lifestyle today in 21<sup>st</sup> century, a spiritual heritage is being reclaimed of which yoga is very much a part. Which yoga's central theme remains the highest physical and mental cleansing and strengthening is one of yoga's most important achievement goals of human spiritual truth, yogic practices give direct and benefit tangible to everyone regardless of their spiritual aim. In this respect, yoga is far from simply being physical exercise. It is an aid to establishing a new perception what is real, what is necessary, and how to become established in the way of life, which cannot be understood intellectually connecting with their true selves and will only become living and knowledge through Asana.

To compare with other games and exercises which provide only muscular and cardiovascular fitness, yoga gives an all-round development. Yoga are not only deals with this broad definition of health but also deals with other aspects such as healing of injury and psychological disorders and provides curative treatment of many diseases. Yoga along with Naturopathy, Ayurveda, and Acupressure provides solution of many complicated diseases. Yoga is a universal remedy for one who sincerely wants to seek it. Due to the modern lifestyle, man is suffering from various postural deformities and diseases such as diabetes, migraine, hypertension, obesity, cancer, anxiety, depression, insomnia, cardiac disease, constipation, allergy, and asthma. Various postural deformities such a kyphosis, lordosis, scoliosis, and knocked knee can be seen in the modern population. For these deformities, congenital can be there, but the acquired, especially the lifestyle of an individual, is more responsible than other reasons. The population involved in chair job and driving generally suffered from kyphosis and

as a result, cervical spondylitis occurs. Yogasanas such as Bhujangasana, Matsyasana, and Chakrasana yields the best result, but in the advance stage of disease Sukshma Yoga is people generally suffer from backache, especially in the lumbar region. In lordosis, scoliosis, and knocked knee, whether acquired or genetic, yoga provides the best solution. In the present era of science, the human muscle is suffering from atrophy due to a lack of muscular activities. This results in weakness, sprain, and strain due to atrophy of skeletal muscle. Atrophy of involuntary visceral muscle results in constipation and other digestive ailments. The regular practice of yoga eradicates them forever.

As it was discussed above about the needs of YOGA is current life but the main needs, as per my view, are mental peace, satisfaction, calm, confidence, physical fitness, etc., as I have already mentioned that yoga is a practical science and hence to know the benefits of yoga one should do it regularly. To sit in the first row of success, we have forgotten something and that is an important to our life/healthy, even we have to visit laughing club to laugh, we have forgotten many ancient practices which were used by us in our routine life and hence that all have been included in the yoga.

## FUTURE

The future of yoga is really bright because it is bright in the present and it would be more bright because today's life is very tough with lots of physical, mental, and emotional pain. We really want some boost either mental or physical or positive thoughts and it will be achieved through yoga only yoga gives you all-around fitness, weight loss, stress relief inner peace, improved immunity, living with greater awareness, better relationships, increased energy, better flexibility, and posture not only this but also yoga gives us physically, mentally positive-ness. I am unable to say about the future of yoga but I will definitely say that if I wish to have a bright and healthy future with joy and peace, I must follow the yoga on a regular basis.

Today the world is Fastest, then faster we all are running, and hence students of the KG or preliminary have spectacles, height problems, blood problems, different types of disease, in secondary, higher secondary, and colleges students are getting angry just for nothing and getting disturbed in that matter. Why students needed counselor because they are not doing yoga in daily life again, I will say that due to this fastest life, we all are behaving like a machine and hence each of the fields requiring physical and mental relaxation and it is available in yoga only. I do not think that there is a need to mention the benefits of yoga in physical and mental health.

Yoga is the richest and noblest legacy, the ancient Indian has gifted to the world. It is a timeless pragmatic and spiritual

science, it is a cult-cum -art – science, it is grandest of all sciences, and it is mother of all science. Yoga is the science of being's evolution. It is the sense of activating inner energies. It is scientific study of blossoming of human potential to its fullness. It is the science of balanced intellectualism. It is the sum total of creation. Yoga is, thus, the scientific tool to get positive experience-truth to its depths and dimension. Yoga is an art of successful healthy living. It is a tool for positive change. It is the sovereign remedy for all miseries. It is science of creativity and personality development it a voyage discovering truth and knowing reality. It is a utilitarian commodity. Thus, yoga is as old as civilization. Yoga is intimate and ultimate. It is a living tradition and a proven system of realizing divinity. "Caring, sharing, and empowering" are the philosophy of yoga. People all over the world are more than 190 countries have now embraced yoga as a way of life. Yoga has a great message for mankind. The government of India established two organizations – central council for research of yoga and naturopathy at New Delhi to look after research and development in the field of yoga and naturopathy, "Morarji Desai National Institute of Yoga," New Delhi. These organizations took several initiatives to promote yoga in the country, major activities undertaken by CCRYN the basic objectives lines in yoga and naturopathy, and to undertake any education, training, research, and other programs in yoga and naturopathy.

Yoga teacher uses yoga to help improve and people's physical and mental health. Yoga involves simple movements and positions, as well as breathing, relaxation, and meditation. Yoga can be a form of exercise, for fitness, flexibility, and stress relief. There is also yoga therapy, which uses yoga to help specific medical conditions. Salaries in yoga field a fresher can earn Rs. 10,000–20,000 a month. With experience, the salary climbs higher at a faster pace. However, yoga teaching, when compared to other professions, is less lucrative, but it is the mental satisfaction attached with the profession that draws the attention of individuals. But also know that if good in your field, there is an option of doing better as this field has been taken to the liking of many and people have realized the importance of yoga. After completing one's education, a student of yoga science can look for a job in the following areas.

Research officer in yoga and naturopathy, yoga therapist, yoga teacher, yoga instructor, trainer and instructor in wealth fitness clubs, yoga aerobic and instructor, assistant ayurvedic doctor, clinical psychologist, therapist, and naturopaths.

## CONCLUSION

However, yoga teaching, when compared to other professions, is less lucrative, but it is the mental satisfaction attached with the profession that draws the attention of individuals. But also know that if good in your field, there is an option of doing better as this field has been taken to the liking of many and people have realized the importance of yoga. If we can start the debate to count and compare all the yogic exercises with the past and current work, it can take a couple of days. No doubt modernism can be said as a revolution of machines which human being can save maximum time and energy. However, we can see a reality that, today man is only running for earning, for example, someone told that "A most active person has found an alarm watch while the laziest person found snooze in the same watch." This 5–7-min snooze habit has created stress-related problems and hence Shavasana and Yoga Nidra are more popular today. The current scenario is full of stress, tension, and mental and physical problems, we all want to get out from this trap, and we all know the best way is yoga, but we have so many excuses or exist to not follow it on regular basis, If we see some exercises for the beginners in yoga, it is same exercises which we were followed in our routine life, but due to modernization we are not following it and thus the exercises have taken plan in yoga.

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## Research Article

# Effects of isolated and combined strength endurance training on muscular strength of Kabaddi player

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### ABSTRACT

The purpose of the study is to examine the effect of isolated and combined strength and endurance training on muscular strength of the kabaddi players. To achieve the purpose of the study, 60 men kabaddi players studying in various colleges affiliated to Sri Krishnadevaraya University, Ananthapuramu district, Andhra Pradesh, India, during the academic year 2014–2015 was selected as subjects. The subjects were selected in the age group of 18–22 years and they were randomly assigned into four equal groups of 15 each. Experimental Group-I performed strength training, experimental Group-II performed endurance training, experimental Group-III performed combined strength, and endurance training and Group-IV was acted as control. The muscular strength was selected as dependent variable. To nullify the initial mean differences, the data collected from the four groups before and post-experimentation on selected dependent variables was statistically analyzed to find out the significant difference if any by applying the analysis of covariance.

**Keywords:** Isolated and combined strength and endurance training, Muscular strength, Kabaddi

### INTRODUCTION

Kabaddi is one of the most popular team based sports and has been played by both men and women throughout the world. Kabaddi is basically an outdoor team game, played in the tropical countries of Asia. The excitement and thrill provided by the game has made it very popular. Kabaddi is rightly called as “Game of the masses,” since spectators totally involve themselves and give the players a great deal of encouragement. Strength is one of the most important components in bio-motor fitness and a vital necessity for many sports. Strength training as an exercise program where free or stationary weights are used for the purpose of increasing muscular strength, muscular endurance, and power, through which skills can be improved (Moran and McHlynn, 1990). Improvements in muscular strength, as measured by the force produced during a maximal voluntary contraction, occur as a result of an increase in muscle cross sectional area and the ability to effectively activate motor units (Sale, 1992). The increase in cross-sectional area of muscle is considered to occur as a result of protein synthesis, primarily actin and

myosin in the myofilaments, which produces a greater number of contractile units (Goldspink, 1992). Enhanced motor unit activation results from a greater number of fibers being recruited, increased firing frequency, decreased co-contraction of antagonists, better synchronization of motor unit activation, and inhibition of reflexive mechanisms such as the Golgi tendon organ that normally govern the amount of force that can be generated (Sale, 1992; Wilson, 1994). The benefits of strength training include greater muscular strength, improved muscle tone and appearance, increased endurance, enhanced bone density, and improved cardiovascular fitness (Abernethy, 1997). It has also been established that increase in muscular speed (Explosive Power) accompanies an increase in muscular strength (Riley, 1982).

### METHODOLOGY AND MATERIALS

To achieve the purpose of this study, 60 men Kabaddi players studying in various colleges affiliated to Sri Krishnadevaraya University, Ananthapuramu district, Andhra Pradesh, India, during the academic year 2014–2015 was selected as subjects. The subjects were selected in the age group of 18–22 years and they were randomly assigned into four groups of 15 each, Experimental Group-I performed strength training, Experimental Group-II performed endurance training,

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Experimental Group-III performed combined strength, and endurance training and Group-IV was acted control. The muscular strength was selected as dependent variable for the study and it was assessed by leg press test. The data on the muscular strength were collected before the commencement of experiment (pre-test) and after 12 weeks of training period (post-test). Both the pre- and post-tests were administered under identical conditions, with the same apparatus, testing personal, and testing procedures.

### Statistical Technique

The data collected from the experimental and control groups on muscular strength were statistically analyzed by paired “*t*-test” to find out the significant difference if any between the pre- and post-test. Selected dependent variables were statistically analyzed to find out the significant difference if any by applying the analysis of covariance. Since, four groups involved, whenever obtained “*F*-value” in the adjusted post-test mean was found to be significant, the Scheffe’s test was applied as *post hoc* test to determine the paired mean differences, if any. The level of confidence is fixed at 0.05 for significance.

## RESULTS

The descriptive analysis of the data showing mean and standard deviation, range, mean differences, “*t*-ratio,” and percentage of improvement on muscular strength of experimental and control groups are presented in Table 1.

Table 1 shows that the mean, standard deviation, range, and mean difference values of the pre and post-test data collected from the experimental group on muscular strength. Further, the collected data were statistically analyzed by paired “*t*-test” to find out the significant differences if any between the pre and post data. The obtained “*t*” values of strength training, endurance training, and combined training groups are 15.66, 9.13, and 14.09, respectively, which are greater than the required table value of 2.15 for significance at 0.05 level for 14 degrees of freedom. It revealed that significant differences existed between the pre- and post-test means of experimental groups on muscular strength. However, there is no significant differences existed between the pre- and post-test means of control group on muscular strength since, the obtained “*t*” value 0.64 is lesser than the required table value of 2.15 for significance. The result of the study also produced 11.42% of improvement due to strength training, 3.63% of improvement due to endurance training, and 7.31% of improvement due to combined training.

The pre- and post-test data collected from the experimental and control groups on muscular strength are statistically analyzed using analysis of covariance and the results are presented in Table 2. Table 2 shows that the pre-test means and standard deviation on muscular strength of strength training, endurance

training, combined training, and control groups are  $63.07 \pm 5.61$ ,  $62.60 \pm 6.45$ ,  $61.93 \pm 5.47$ , and  $61.27 \pm 4.80$ , respectively. The obtained “*F*” value 0.29 of muscular strength is lesser than the required table value of 2.77 at 3, 56 df at 0.05 level of confidence, which proved that the random assignment of the subjects were successful and their scores on muscular strength before the training were equal and there was no significant differences.

The post-test means and standard deviation on muscular strength of strength training, endurance training, combined training, and control groups are  $70.27 \pm 5.97$ ,  $64.87 \pm 6.48$ ,  $66.47 \pm 4.96$ , and  $60.87 \pm 3.44$ , respectively. The obtained “*F*” value of 7.98 on muscular strength is greater than the required table value of 2.77 at 3, 56 df at 0.05 level of confidence. It implied that significant differences exist between the four groups during the post-test on muscular strength.

The adjusted post-test means on muscular strength of strength training, endurance training, combined training, and control groups are 69.50, 64.52, 66.72, and 61.73, respectively. The obtained “*F*” value of 61.06 on muscular strength is greater than the required table value of 2.77 of 3, 55 df at 0.05 level of confidence. Hence, it is concluded that significant differences exist between the adjusted post-test means of strength training, endurance training, combined training, and control groups on muscular strength.

Since, the obtained “*F*” value in the adjusted post-test means is found to be significant, the Scheffe’s test is applied as *post hoc* test to find out the paired mean difference, and it is presented in Table 3.

As shown in Table 3 the Scheffe’s *post hoc* analysis proved that significant mean differences existed between strength and endurance training groups, strength, and combined training groups, strength training and control groups, endurance and combined training groups, endurance training and control groups, combined training, and control groups on muscular strength since, the mean differences 4.98, 2.78, 7.77, 2.20, 2.79, and 4.99 are higher than the confident interval value of 1.72 at 0.05 level of significance.

Hence, it is concluded that due to the effect of isolated and combined strength and endurance training the muscular strength of the subjects is significantly improved. It is also concluded that isolated strength training is significantly better than combined training and isolated endurance training whereas combined training is better than isolated endurance training in improving muscular strength of the kabaddi players.

The pre-, post-, and adjusted post-test mean values of strength training, endurance training, combined training, and control groups on muscular strength are graphically represented in Figure 1.

**Table 1: Descriptive analysis of the pre- and post-test data and “t-ratio” on muscular strength of experimental and control groups**

Group	Test	Mean	Standard deviation	Range	Mean differences	“t-ratio”	Percentage of changes
Strength training	Pre-test	63.07	5.61	17.00	7.20	15.66*	11.42%
	Post-test	70.27	5.97	20.00			
Endurance training	Pre-test	62.60	6.45	24.00	2.27	9.13*	3.63%
	Post-test	64.87	6.48	23.00			
Combined training	Pre-test	61.93	5.47	20.00	4.53	14.09*	7.31%
	Post-test	66.47	4.96	19.00			
Control group	Pre-test	61.27	4.80	16.00	0.40	0.64	0.65%
	Post-test	60.87	3.44	10.00			

Table t-ratio at 0.05 level of confidence for 14 (df) =2.15. \*Significant

**Table 2: Analysis of covariance on muscular strength of experimental and control groups**

	Strength training group	Endurance training group	Combined training group	Control group	SoV	Sum of squares	df	Mean squares	“F-ratio”
Pre-test mean	63.07	62.60	61.93	61.27	B	27.78	3	9.26	0.29
SD	5.61	6.45	5.47	4.80	W	1764.40	56	31.51	
Post-test mean	70.27	64.87	66.47	60.87	B	682.05	3	227.35	7.98*
SD	5.97	6.48	4.96	3.44	W	1596.13	56	28.50	
Adjusted post-test mean	69.50	64.52	66.72	61.73	B	484.07	3	161.36	61.06*
					W	145.34	55	2.64	

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 .05 level of confidence

**Table 3: Scheffe’s *post hoc* test for the differences among paired means of experimental and control groups on muscular strength**

Strength training group	Endurance training group	Combined training group	Control group	Mean difference	Confidence interval
69.50	64.52			4.98*	1.72
69.50		66.72		2.78*	1.72
69.50			61.73	7.77*	1.72
	64.52	66.72		2.20*	1.72
	64.52		61.73	2.79*	1.72
		66.72	61.73	4.99*	1.72

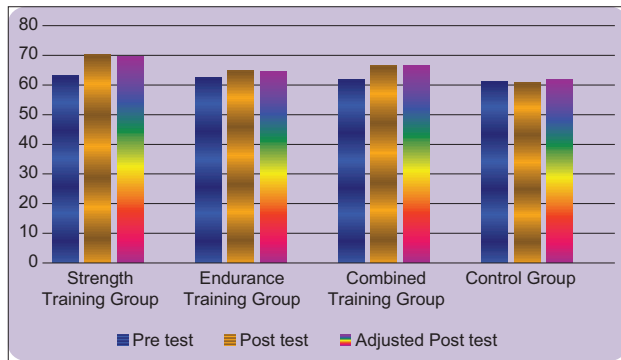
\*Significant at .05 level

## DISCUSSION

The results of the study suggest that in improving muscular strength of the kabaddi players strength training is significantly better than combined training and endurance training whereas combined training is better than isolated endurance training. Hence, it is suggested that kabaddi players need to follow strength and conditioning program that aims toward them peaking at certain stages of the year. To prevent, injury, and to enable a full season to hopefully be completed, it is essential that strength training routine be implemented to enable the

kabaddi players to stay in optimum performance during matches. It is well known that to increase power, muscle strength of the entire kinetic chain must also be increased. Strength training has, therefore, become a vital aspect of training. It has been suggested that strength training should be performed often during the competitive season.

It has been observed that strength training has become an important aspect of training for sports. Hence, it is important for both coaches and athletes to have knowledge of the potential effects of strength training. Since, strength training is beneficial



**Figure 1:** The pre-, post-, and adjusted post-test mean values on muscular strength of experimental and control groups

to kabaddi performance, and then it would be reasonable to undergo strength training. It has been suggested that to maintain strength, strength training sessions of the kabaddi players should not be routinely missed.

## CONCLUSION

The following conclusions have been derived after analyzing the experimentation results through the appropriate statistical tools:

1. Due to the effect of isolated and combined strength and endurance training the muscular strength of the subjects is significantly improved
2. It is also concluded that isolated strength training is better than combined training and isolated endurance training, whereas combined training is better than isolated endurance training in improving muscular strength of the kabaddi players
3. The result of the study also produced 11.42% of improvement due to isolated strength training, 3.63%

of improvement due to isolated endurance training, and 7.31% of improvement due to combined strength and endurance training in muscular strength of the kabaddi players.

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