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## **Burn out Among Sports Persons At Inter-College And Inter-University Levels Competition**

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### **Abstract**

Background: Chronic fatigue is a major symptom of burnout. The aim of the study was to measure three dimensions, i.e.; emotional exhaustion, personal accomplishment and depersonalization of the female sports-persons. Methods: A sample of 600 female sports-persons was selected; out of which 300 Ss were from inter-college level and 300 Ss were from inter-university level competition. They were administered Maslach's Burnout Inventory. Results: The results of the study revealed, that no significant differences were found on all the three dimensions of burnout, i.e; emotional exhaustion, personal accomplishment and depersonalized as well as total burnout. Conclusion: In the study differences were not significant on three dimensions of burnout and total burnout between inter-college and inter-university level female sports persons of individual sports. But in case of team games, significant differences were found on emotional exhaustion, personal accomplishment and total burnout between inter-college and inter-university level female sports-persons, where inter university level female athletes were more emotionally exhausted, having low personal accomplishment and more burned out than inter college level counterparts. Key Words: - Burnout, Sports-persons, inter-college, inter-university level competition

### **Introduction**

Burnout is the physical or emotional exhaustion that results from long-term stress and frustration. Chronic fatigue is a major symptom of burnout. One feels physically, emotionally and spiritually exhausted "The emotional and physical fatigue is a serious matter for both athletes and coaches, professional and amateur, young and old, "say Eminent Psychologists". According to Dr. David Yukelson, "People most susceptible to burnout are high achievers, perfectionists and idealists. Athletes who get burned out begin to withdraw from once enjoyable activities." "What used to be a passion has now become drudgery. The athlete appears to be listless, even exhausted, just going through the emotions. All these characteristics are a reaction to emotional stress."

Burnout is a common phenomenon in the competitive sports; because modern sport has become an activity full of strains and stresses, anxiety, tension and it is laden with many emotional problems. Victory or defeat after the competition brings a lot of excitement, joy, dejection, regrets and sometimes grief when players have to face unexpected defeat. So coaches should have the knowledge about these psychological obstacles which are likely to occur in these days of higher level of competition.

Burnout has been defined as a reaction to chronic stress that involves negative interactions between environmental and personal characteristics. Burnout has also been characterized as a chronic condition that develops when one is working too hard for too long in a highly pressure situation. Furthermore, burnout is conceptualized as uncontrollable, negatively perceived events occurring over a period of time that lead to three negative psychological responses i.e. emotional exhaustion, depersonalization and a lack of personal accomplishment.

Burnout is when an athlete feels fatigued or frustrated because his devotion to sports and the relationship with other athletes and others involved in the game have failed to produce the rewards he expects. While this feeling is certainly stressful, burnout occurs when athletes feel they have no buffer and no support system. Henschen (1986) describes experiences that athletes endure before burnout occurs, including the so-called performance slump where nothing seems to go right. Accompanying this is loss of self-confidence in performance ability and self-defeating attempts to compensate and work harder. (Kelley & Gill, 1993; Kelley, 1994).

As defined by Raedeke (1997), burnout in sports and exercise is "a syndrome of physical/emotional exhaustion, sports devaluation, and reduced athletic accomplishment. Emotional exhaustion is associated with intense training and competition. The experience of a reduced sense of accomplishment for the athlete is in terms of skills and abilities. The athlete may be unable to achieve personal goals or performs below expectations.

Several studies have employed a qualitative research approach to the study of athlete burnout, e.g.; Cohn (1990) Coakley, (1992), Gould et al (1996,1997), Audrey et al (1997), Harlick & McKenzie (2000), Tenebaum et al (2003). Cohn (1990) was able to examine sources of stress and perceived causes of burnout by interviewing 10 active high school golfers. The results identified too much playing/practice, lack of fun and enjoyment, no new goals to strive for, going into a slump, and pressure to do well from self, coaches and parents as the primary causes of their burnout.

Collins (2002) examined the factors influencing entrapment and burnout among collegiate female hockey and lacrosse coaches. The purpose of investigation of Dale (2003) was to examine the role of selected job related variables to potential burnout. Results indicated that personal health status and job satisfaction were significantly predictive of emotional exhaustion. Personal health status and job satisfaction were significantly associated with depersonalization.

Black and Smith (2004) investigated the athletic identity, perceived control, and burnout in adolescent swimmers. They reported that perceived stress was the dominant predictor of athletes' burnout. Higher stress and lower swimming identity predicted higher burnout.

Raedeke and Smith (2004) examined whether coping behaviors and social support satisfaction (a) had indirect stress mediated relationships with burnout or (b) disjunctively (independently) or conjunctively (in combination) moderated the relationship between perceived stress and burnout. The results revealed that perceived stress, general coping behaviors, and social support satisfaction were related to burnout.

Cresswell and Eklund (2005) examined relationships and potential causal directions among burnout and types of motivation differing in degree of self determination. The results show that the least self-determined type of motivation had a large positive association with burnout.

Bawa, Harmanpreet (2005) in his study concluded that (i) emotional exhaustion has been found to have a significant positive correlation with depersonalization in case of gymnastics and wrestling, boxing, football, hockey coaches as well as coaches of individual and combative sports discipline. (ii) Gymnastics coaches have been found to have greater amount of personal accomplishment as compared to boxing, wrestling, football and hockey coaches.

Sandhu, Kulwinder et al (2011) in their study found that (i) significant differences exist on three components of burnout among coaches of different games; (ii) there are significant differences on the three components of burnout between the coaches of individual games and team games; where team games coaches are more emotionally exhausted and the individual games coaches are more depersonalized and have lack of personal accomplishment.

### **Methodology And Procedure**

In the present study, descriptive and survey method was used for measuring variables of the study. A standardize test was administered to the female sports-persons of inter college and inter university levels of competition. Here burnout is dependant variable whereas types of competition and types of games i.e. team games and individuals sports are the independent variables. A sample of 600 female sportspersons was selected, out of which 300 Ss were from inter college level and 300 were from inter university level competition. An attempt was made to have 50% of the sample from the team games and 50% players from the individual games. The players of the team games were selected from Basketball, Handball and Softball and the players of the individual sports were from Athletics, Cycling, and Badminton.

### Tools Used

All the sportspersons were administered Maslach' Burnout Inventory (M.B.I., 1986) by Maslach, Jackson and Schwab. It consists of 22 statements with three sub-scales; i.e. emotional exhaustion (9 items), depersonalization (5 items) and personal accomplishment (8 items). Burnout is conceptualized as a continuous variable, ranging from low to moderate to high degrees of experienced feelings. This inventory has high reliability and validity.

### RATIONALE OF THE STUDY

It is revealed that burnout has been studied in a variety of human services and professionals including business organizations, nurses, community workers, lawyers, police officers and also coaches. But the concern for athletes' burnout is of utmost importance. This is because of prolonged psychological stress of athletes which can lead to both mental and physical ill health of the sports persons and this way significantly impair the working relationship they have with coaches. This may also affect the quality of performance as well as commitment they are required to display. Thus, a general concern to improve the sports performance has forced today's researchers to recognize the area of research as very important.

### Statistical Analysis

The objective of the study is to make comparison between female sports-persons of inter-college and inter-university level competition on different dimensions of burnout. For this purpose, mean scores, and standard deviations of the scores for the three dimensions of burnout as well as total burnout were calculated for the inter-college and inter-university level female sport-persons and then their t-ratios were computed in order to find out if significant differences existed and if so, at what level of confidence

Table 1 gives the mean scores differences on the three dimensions of burnout and total burnout between the female sports-persons of inter-college and inter-university level competition. t- values show whether the differences are significant or not and if, so at what level of confidence.

Table 1

Means, SDs and t-ratios of burnout variables between inter-college and inter-university level female sports-persons

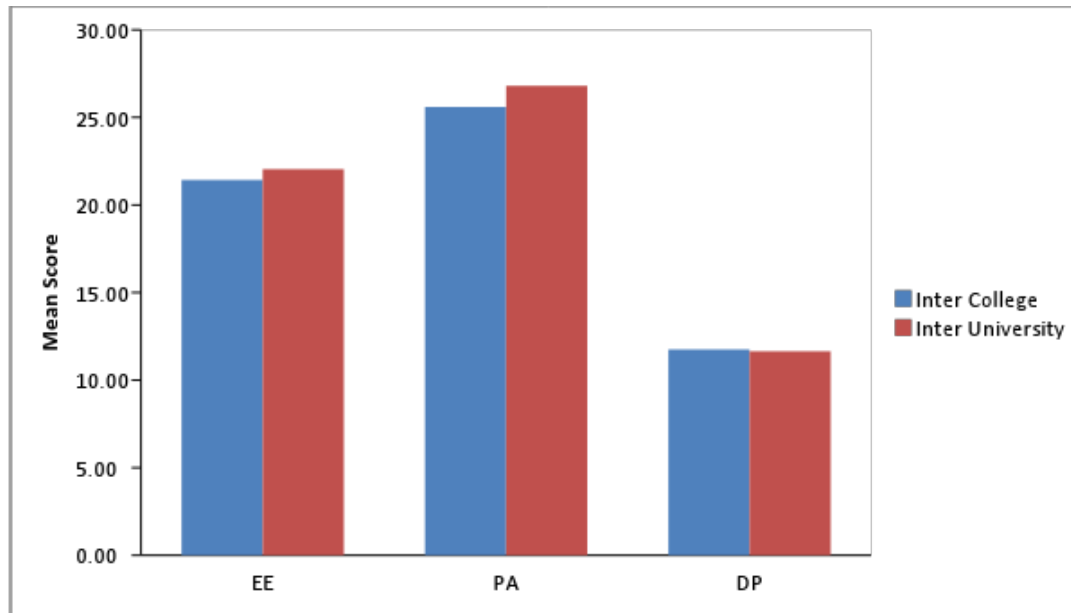
Variables	Institutes	N	Mean	Std. Dev.	t-value	p-value
Emotional Exhaustion	Inter-College	300	21.43	7.86	.959	.338
	Inter-University.	300	22.04	7.72		
Personal Accomplishment	Inter-College	300	25.59	8.67	1.723	.085
	Inter-University	300	26.80	8.53		
Depersonalization	Inter-College	300	11.76	5.01	.254	.800
	Inter-University	300	11.66	5.27		
Total Burnout	Inter-College	300	58.79	16.35	1.306	.192
	Inter-University	300	60.50	15.76		

As per the above table, no significant differences are found between inter-college and inter-university level female sports-persons on all the three dimensions of burnout as well as on total burnout, as the t-values of 0.959, 1.723, 0.254 and 1.306 are not found to be statistically significant. It means that all the female sports-persons whether they participated at inter-college or inter-university level competition have the same level of burnout, as the mean scores are almost at the same level and differences are very low among them.

All the players and athletes at what ever level they participate have stress, strains anxiety and tension before the competition. A competitive sport is itself a stressful event. Burnout is likely to occur in all types of players. Many studies in the sports settings have also approved of this contention. Hence the results of this study have failed to accept the hypothesis that there would be significant differences on three dimensions among female athletes of inter-college and inter-university levels of competition, as no significant differences could be found

Figure 1 shows the bar-diagrams of the mean scores of three dimensions of burnout, i.e. emotional exhaustion, personal accomplishment and depersonalization between inter-college and inter-university level female sports-persons.

Figure 1. Bar-Diagrams of the mean scores of three dimensions of Burnout Between inter-college and inter-university level female sports-persons.



An attempt was made here to make comparison between inter-college and inter-university level female sports-person of individual games and team games on three dimensions of burnout; i.e.; emotional exhaustion, personal accomplishment and depersonalization. The individual sports consisted of athletics, badminton and cycling; whereas the team games consisted of basketball, handball and softball players. For this purpose, mean scores, and standard deviations of the scores for the three dimensions of burnout as well as total burnout were calculated for the inter-college and inter-university level female sport-persons of individual games and team games players and then their t-ratios were computed in order to find out if significant differences existed and if so, at what level of confidence. Table 2 gives the mean scores differences on the three dimensions of burnout and total burnout between the female sports-persons of inter-college and inter-university level competition of individual games. t-values show whether the differences were significant or not and if so, at what level of confidence.

Table 2 Means, SDs and t-ratios of burnout variables between inter-college and inter-university level female sports-persons of Individual Games

Variables	Institute	N	Mean	Std. Dev	t-value	p-value
Emotional Exhaustion	Inter-College	150	21.81	7.87	.752	.452
	Inter-University	150	21.11	8.24		
Personal Accomplishment	Inter-College	150	25.97	8.04	.448	.655
	Inter-University	150	26.41	8.95		
Depersonalization	Inter-College	150	11.77	5.21	.869	.385
	Inter-University	150	11.23	5.55		
Total Burnout	Inter-College	150	59.55	15.62	.426	.670
	Inter-University	150	58.75	16.87		



As per the above table, no significant differences were found between inter-college and inter-university level female sports-persons of individual games on all the three dimensions of burnout as well as on total burnout, as the t-values of 0.752, 0.448, 0.869 and 0.426 were not found to be statistically significant. It means that all the female sports-persons of individual games whether they participated at inter-college or inter-university level competition had the same level of burnout, as the mean scores were almost at the same level and differences were very low among them.

Table 3 gives the mean scores differences on the three dimensions of burnout and total burnout between the female sports-persons of inter-college and inter-university level competition of team games. t-values show whether the differences were significant or not and if, so at what level of confidence.

Table 3 Means, SDs and t-ratios of burnout variables between inter-college and inter-university level female sports-persons of Team Games

Variables	Institute	N	Mean	Std. Dev.	t-value	p-value
Emotional Exhaustion	Inter-College	150	21.05	7.86	2.224*	.027*
	Inter-University	150	22.97	7.07		
Personal Accomplishment	Inter-College	150	25.22	9.27	1.971*	.050*
	Inter- University	150	27.20	8.09		
Depersonalization	Inter-College	150	11.76	4.82	.579	.563
	Inter-University	150	12.09	4.96		
Total Burnout	Inter-College	150	58.03	17.08	2.316*	.021*
	Inter-University	150	62.26	14.42		

As per the above table, significant differences were evinced on emotional exhaustion ( $t=2.224$   $p<0.05$ ), personal accomplishment ( $t=1.97$   $p<0.05$ ) as well as total burnout ( $t=2.316$   $p<0.05$ ) and not in case of depersonalization. The mean scores indicate that the female players of inter-university level of team games were having more emotional exhaustion ( $M=22.97$ ) and personal accomplishment ( $M=27.20$ ) as compared to inter-college team.

## Discussion:

While studying the differences on the different dimensions of burnout between the female sports-persons of inter-college and inter-university level competition for individual sports and team games separately, it is observed that no significant differences are found between the inter college and inter university level sports-persons of individual games. But the team games female athletes of inter-college and inter-university levels competition differs on emotional exhaustion, personal accomplishment dimensions and total burnout, but not on depersonalization dimension. Here again inter-university level female players are found to be more emotionally exhausted and have less personal accomplishment.

Coakley's (1992) qualitative study with 15 adolescent athletes reported that burnout is caused by the social organization of high performance sport interfering with their development of autonomy and independence, and also individuals constraining the development of the athlete's identity outside of sports.

In their series of studies, Gould and Colleagues (Gould et al, 1996; Udry et al, 1997) interviewed 10 former elite tennis players who experienced high levels of burnout during their junior tennis careers. This research identified both physical and mental characteristics of burnout.

## Conclusions

1.While comparing between female sports-persons of inter-college and inter-university level competition on burnout, it was found that no significant differences are found on all the three dimensions of burnout, i.e; emotional exhaustion, personal accomplishment and depersonalized as well as total burnout.

2. Differences are not significant on three dimensions of burnout and total burnout between inter-college and inter-university level female sports-persons of individual games. But in case of team games, significant differences have been found on emotional exhaustion, personal accomplishment and total burnout between inter-college and inter-university level female sports-persons, where inter university level female athletes are more emotionally exhausted, having low personal accomplishment and more burnout than inter college level counterparts.

## References

- Bawa, Harmanpreet (2005):-Study of Personality Hardiness, Trait Anxiety and Burnout among coaches. Unpublished PhD thesis Physical Education, Kurukshetra University, Kurukshetra.
- Black, J.M. and Smith, A.L. (2004):- Athletic identity, perceived control and Burnout in Adolescent swimmers. *Journal of Sports and Exercise Psychology*, 26: 535.
- Coakley, J. (1992): - Burnout among adolescent athletes: A personal failure or social problem? *Sociology of Sport Journal*, 9, 271-285.
- Cohn, P (1990):- An exploratory study on sources of stress and athlete burnout in Youth golf. *The Sport Psychologist*, 4, 95-106.
- Collins, K.E. (2002):- An Examination of factors influencing entrapment and burnout among collegiate female field hockey and lacrosse coaches. *Dissertation Abstracts, International*, 63 (4): 1288 A.
- Cresswell, S.L. & Eklund, R.C. (2005):- The athlete burnout syndrome: possible early signs. *Journal of Science and Medicine*, 7(4), 481-487.
- Dale, G.A. (2003):- Distractions and coping strategies of elite decathletes during their most memorable performances. *The Sport Psychologist*, 14, 17-41
- Dale J and Weinberg R.S. (1989):- The relationship between coach's leadership style and burnout. *Sport Psychologist*, 3, 1-13.
- Gould, D, Tuffey, S., Udry, E., & Loehr, J. (1996): - Burnout in competitive junior tennis players: I.A quantitative psychological assessment. *Sport Psychologist*, 10,322-340.
- Gould, D, Tuffey, S, Udry, E & Loehr, J (1996):- Burnout in competitive junior tennis players: II. Qualitative content analysis and case studies. *The sport Psychologist*, 10,341-366.
- Gould, D., Tuffey, S., Udry, E., & Loehr, J. (1997): - burnout in competitive junior tennis players: III Individual differences in the burnout experience. *Sport Psychologist*, 11,257-276.
- Harlick, M & McKenzie, A (2000):- Burnout in junior tennis. A research report. *The New Zealand Journal of Sport Medicine*.28 (2). 36-39.
- Henschen, K.P (1998): - Athletic staleness and burnout: Diagnosis, prevention and treatment. In J.M. Williams (Ed.). *Applied sport psychology: personal growth to peak performance* (Pp398-408). Mountain view, CA: Mayfield.
- Kelley, B.C. (1994): - A model of stress and burnout in collegiate coaches: Effects of gender and time of season. *Research Quarterly for Exercise and Sport*, 65, 48-58.
- Kelley, B.C., & Gill, D.L. (1993): - An examination of personal/ situational variables, stress appraisal, and burnout in collegiate teacher-coaches. *Research Quarterly for Exercise and Sport*, 64, 94-102.
- Raedeke Thomas D (1997):- Is athlete burnout more than just stress? A sport commitment perspt. *Journal of Sport and Exercise Psychology* 19,396-417
- Sandhu, K.S; Sharma, R.K. Singh, Agyajit (2011):- Burnout among Indian Coaches. Friends Publication, New Delhi
- Scott L & Eklund R.C. (2006):- The nature of player burnout in Rugby: Key characteristics and Attributions. *Journal of Applied Sport Psychology* 183,219-239.
- Tenebaum, G., Jones, C.M., Kitsantas, A, Sacks, D. N. & Berwick, J.P.(2003):- Failure adaptation: An investigation of the stress response process in sport. *International Journal of Sport Psychology*, 34, 27-62.
- Udry, E., Gould, D., Bridges, D., & Tuffey, S (1997):- People helping people? Examining the social ties of athletes coping with burnout and injury stress. *Journal of Sport & Exercise Psychology*, 19,368-395.
- Yukelson, D (1997):- Principles of effective team building intervention in sport: A direct services approach at Penn State University. *Journal of Applied Sport Psychology*, 9, 73-96.

## **Psychological Characteristics Of Inter-College And Inter-University Level Female Athletes**

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### **Abstract**

Background: There has been an increasing amount of attention to the inter-relationships of personality characteristics with athletic performance. The aim of the present study is to measure the personality characteristics, like sociability, dominance, extraversion, self-concept, conventionality, mental toughness and emotional stability as well as internal and external locus of control. Methods: A sample of 600 female sportspersons was selected, out of which 300 were from inter college level and 300 were from inter university level competition and they were administered two standardized tests for measuring Sports Specific Personality Test and Locus of Control Scale. Result: It was found that no significant differences were observed on almost all the personality characteristics between inter-college and inter-university level female sports-persons except mental toughness and external locus of control variables. Conclusion: It is found whereas the inter college level female athletes were having better mental toughness and more externally oriented than inter university level female players. Key words:- Psychological characteristics, Female sports-persons, Inter-College competition, Inter-university level competition

### **Introduction**

In recent years, there has been an increasing amount of attention to the inter-relationships of personality characteristics with athletic performance. In fact, the major dimension of the study of psychological aspect of sports is concerned with inquiries into the personality of sportsmen and sportswomen. Several investigators have directed their attention towards an understanding of the relationship between personality and level of performance. Hence one of the most popular issues in sport personality concerns the relationship between personality and sport participation. (Singh, 1992).

One of the most popular issues in Sport Psychology concerns the relationship between personality and sports performance. Although most sport personality research has focused on the description of personality characteristics in athletes and the influence of personality on sport behavior, the study of the effects of sport participation on personality development and change has also been an important area of research. It seems logical to consider that certain personality attributes (e.g.; competitiveness, self-confidence) are important in achieving success in sport. Another popular belief is that certain personality attributes (e.g.; self-esteem, emotional control) may be developed or modified through sport participation i.e.; participation in sports and physical activities enhances psychological as well as physical development.

Personality of sportspersons which has influenced the performance is affected by many factors like anxiety, will to win, and attitude (Kamlesh, 1982). Personality traits like sociability, dominance, extraversion, self-concept, conventionality, mental toughness, and emotional stability among the athletes should be looked into.

The construct of locus of control is a personality dimension involving an individual's perceived control over events occurring in his life. People are having internal or external locus of control. Locus of control refers to a person's beliefs about control over life events. Locus of control is the extent to which people believe that they are responsible for their behavioral outcomes. Some people feel personally responsible for the things that happen to them. Those people are labeled internals. People with an internal locus of control tend to believe their behavior influences outcomes, while those with an external locus of control tend to attribute outcomes to outside forces such as fate, chance, luck and other people.

Foster (2002) conducted a study to determine if 16 personality variables as measured by the Cattell's "16 PF" test could discriminate between successful and less successful or outstanding athletes participating in football, basketball and baseball.

The results of a study conducted by Jaskaran Singh (2005) revealed that: (i) winner and non winner sportspersons, as a whole, do not differ in their personality make up; (ii) socio-economic status is not a significant determinant of personality make-up of sportspersons in terms of neuroticism and extraversion, though low SES seems to enhance psychotic tendencies among sportspersons; (iii) the psychotocism among sportspersons has shown a dependence on socio economic status, where low SES acts as a catalyst to increase psychotic tendencies among non winner sportspersons.

According to a study conducted by Girder Singh and Nishan Singh Deol (2009) "the interuniversity cycling riders were found to be significant better than the inter college cycling riders. Neal Garg and Kang (2009) concluded that there are significant differences between the personality of winners and losers.

Dalbara & Singh (2015) concluded in his recent study that no significant differences are found between male and female sports persons on many personality traits except mental toughness.

The results of the study conducted by Surjit and Agyajit (2017) show that on locus of control, athletes and non-athletes differed on the external and not on the internal LOC; where athletes were found to be better on external locus of control than non-athletes.

The objective of the present study was to measure the personality characteristics, like sociability, dominance, extraversion, conventionality, self-concept, mental toughness and emotional stability as well as internal and external locus of control of the female sports-persons participating at inter-college and inter-university levels of competitions. The hypothesis of the present study was that there would be no differences on seven traits of personality, and locus of control among the sports-persons of inter-college and inter-university levels of competition.

## **Methodology And Procedure**

In the present study descriptive and survey methods are used for measuring two variables of study. Here personality characteristics are depended variable, and locus of control is an independent variable. Type of the games i.e.; ball games and combat sports were the respondents variables. In order to achieve the stipulated objective, a sample of 600 females sportspersons was selected, out of which 300 were from inter college level and 300 were from inter university level competition. An attempt was made to have 50% of the sample from the ball games and 50% players from the combat sports.

## **Tools Used**

All the sportspersons were administered the following two standardized tests for measuring their psychological characteristics.

1. Sports Specific Personality Test:-For the measurement of personality traits of sportspersons; Specific Sports Personality Test devised by Cheema and Singh (2005) was administered in Punjabi/English version to all the subjects of the study. This test consists of 100 items and measures seven traits of personality. It is a reliable and valid test.

2. Locus of control Test: - Locus of control scale by Hasnain and Joshi has been identified as an instrument that measures the locus of control of subjects. The scale measures the internal and external locus of control of the subjects. The scale has 36 items with 16 positive items (1, 3, 6, 7, 9, 13, 15, 16, 18, 23, 26, 27, 29, 30, 34 and 35) which measures internal locus of control and 20 negative items (2, 4, 5, 8, 10, 11, 12, 14, 17, 19, 20, 21, 22, 24, 25, 28, 31, 32, 33 ad 36) which measures external locus of control.

## Rationale Of The Study

Sports scientists have always expressed a great desire to know psychological characteristics for improving sports standards. Now a day there is a great race to win medals. Psychological factors were identified as important factors responsible for excelling in sports. Unless the players are prepared psychologically for the contest, they are not able to achieve the desired results. Athletics and sports require not only physical fitness, but top level sports depend on psychological adjustment, social and emotional maturity and many other psychological characteristics. Psychological factors help physical educators and coaches to understand the reality of fitness and personality traits of the players before and during competition.

## Statistical Analysis

The objective of the study was to make comparison between female sport-persons of inter-college and inter-university level competition on personality characteristics like sociability, dominance, extraversion, conventionality, self-concept, mental toughness and stability as well as internal and external locus of control. For this purpose, mean scores, standard deviations and standard errors of the scores for all the personality characteristics were calculated for the inter-college and inter-university level female sports-persons and then their t-ratios were computed in order to find out if significant differences existed and if so, at what level. These results are given in Table 1.

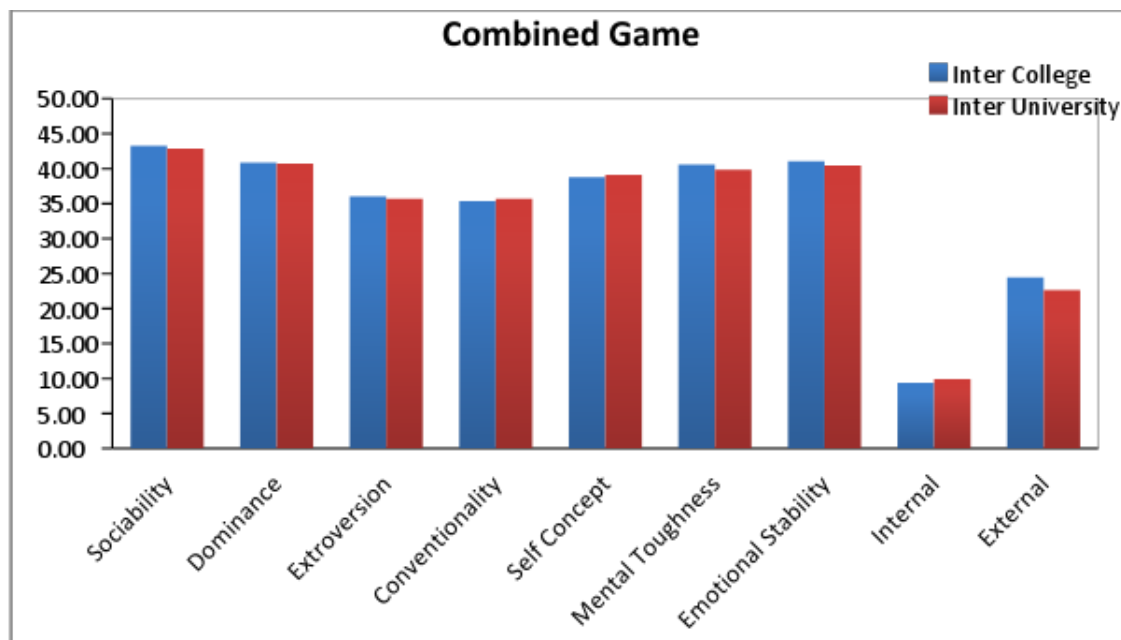
Table 1 Means, SDs and t-values of personality characteristics Between inter-college and inter-university level sport-persons

Variables	Institute	N	Mean	SDs	SEm	t-value	df	p-value
Sociability	Inter-College	300	43.28	6.34	0.37	.885	598	.376
	Inter-University	300	42.86	5.33	0.31			
Dominance	Inter-College	300	40.86	4.37	0.25	.347	598	.729
	Inter-University	300	40.74	4.10	0.24			
Extraversion	Inter-College	300	36.04	5.36	0.31	.763	598	.446
	Inter-University	300	35.72	4.67	0.27			
Conventionality	Inter-College	300	35.37	4.50	0.26	.978	598	.328
	Inter-University	300	35.71	4.08	0.24			
Self Concept	Inter-College	300	38.76	5.37	0.31	.800	598	.424
	Inter-University	300	39.09	4.83	0.28			
Mental Toughness	Inter-College	300	40.58	5.01	0.29	1.976*	598	.049*
	Inter-University	300	39.84	4.12	0.24			
Emotional Stability	Inter-College	300	41.03	5.45	0.31	1.292	598	.197
	Inter-University	300	40.48	4.90	0.28			
Internal LOC	Inter-College	300	9.42	4.98	0.29	1.291	598	.197
	Inter-University	300	9.92	4.49	0.26			
External LOC	Inter-College	300	24.43	7.03	0.41	3.457*	598	.001**
	Inter-University	300	22.61	5.76	0.33			

\*\*Significant at 0.01 level (t should be more than 2.58)

\*Significant at 0.05 level (t should be between 1.96 and 2.58)

The mean scores of all personality characteristics of inter-college and inter-university level female sports-persons have been depicted graphically through histograms which have been given in the Figure 1. Histograms showing the mean scores of all personality characteristics of inter-college and inter-university female sports-persons



Here the inter college level female athletes are found to be more mentally tough and were more externally oriented as compared to those of inter-university level female players. On the other hand, the inter-college and inter-university level sports-persons do not differ much on all other personality characteristics, and if there were differences, they are very minor and hence they have the same level of personality traits. It has also been found by some other studies that the sports-persons whether they play at inter college or inter university level competition, have the in-built personality traits which have predisposed them to become sports-persons. Dalbara & Singh (2015) concluded in a recent study that school levels sports persons do not differ on all personality traits, but inter college level players differ except on sociability. Surjit and Agyajit (2017) proved that on locus of control, athletes and non-athletes differed on the external and not on the internal LOC; where athletes were found to be better on external locus of control than non-athletes. School level athletes and non-athletes were also having differences on the external and not internal, where as college level athletes and non-athletes did not differ either on external or internal. Athletes of school level were better on external LOC.

#### **Analysis Of Data And Result:**

As per the table 1, no significant differences were found between inter-college and inter-university level female sports-persons on almost all the personality characteristics except mental toughness and external locus of control variables. In case of mental toughness, t-value was found to be 1.976 which is significant at 0.05 level and in case of external locus of control; the same was 3.457 which is significant at 0.01 level. Their mean scores indicate that college level sportspersons were having high mental toughness ( $M=40.58$ ) as compared their university level counterparts ( $M=39.84$ ). Similarly inter college level female players were more externally oriented ( $M=24.43$ ) than inter university level players ( $M=22.61$ ). In all other personality characteristics they stood at the same level, as no significant differences were found out.

## **Discussion:**

There are many personality traits which are required in order to become good sports-persons, As the tool used for measuring the personality characteristics was the sports specific personality inventory which consists of those traits of personality which should be inherent in athletes, e.g.; sociability, dominate, extraversion, conventionality, self-concept, mental toughness and emotional stability. Without these traits of personality, they could not think of participating in sports at any level. Hence the hypothesis of the study that there would be significant differences on personality characteristics between the inter-college and inter-university level female sports-persons had been rejected by the findings of this study.

The major dimension of the study of psychological aspect of sports is concerned with inquiries into the personality of sportsmen and sportsmen. Several investigators have directed their attention towards an understanding of the relationship between personality and level of performance hence one of the most popular issues in sports personality concerns the relationship between personality and sport participation. (Singh, 1992).

The results of the study conducted by Surjit and Agyajit (2017) show that on locus of control, athletes and non-athletes differed on the external and not on the internal LOC; where athletes were found to be better on external locus of control than non-athletes.

## **Conclusion**

1. No significant differences are observed on almost all the personality characteristics between inter-college and inter-university level female sports-persons except mental toughness and external locus of control variables.
2. The inter college level female athletes are having better mental toughness and more externally oriented than inter university level female players.

## **References**

- Dalbara Singh & Singh, Agyajit (2015):- Sports Personology: A study of Indian Sports-Persons. Patiala. Twenty-first Century Publications.
- Foster (2002): "A Discriminant analysis of selected personality variables and motor ability of players and non players." International journal of sports physiology. P.No.221.
- Gurdev Singh and Nishan Singh Deol (2009): "A study of personality characteristics of cyclists at various level of performance" Souvenir of 3<sup>rd</sup> National conference on Opportunities & Challenges in Physical Education, Pbi. Uni. Patiala, PP.6
- Hasnain, N & Joshi, D.D. (1992): Manual for Locus of Control Scale. Lucknow, Ankur Psychological Agency
- Jaskaran Singh (2005): "A comparative study of personality makes up of winner and non-winner students sportspersons on Sports Psychology, Dr. Ambedkar College, Nagpur.pp.25.
- Kamlesh, M.L.(1982):-A comparative study of high and low performers in athletics on some selected variable of personality. Unpublished PhD thesis Punjabi Uni.Patiala.
- Singh, Agyajit (1992): Sports Psychology: A study of Indian sportsmen, New Delhi, Friends Publications.
- Singh, Agyajit & Cheema, H.S. (2004):- Sports Specific Personality Test. National Psychological Corp. Agra.
- Surjit Singh & Singh Agyajit Singh (2017):- Psychological Characteristics of Sports Persons: An Indian Perspective. New Delhi.: IAHRW Publication Pvt. Ltd.

## The Efficacy Of Plyometric Training On Speed And Power Production Among Youth Basketball Players

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### Abstract

Basketball is one of the most popular sports in the world which requires different bio-motor abilities. Plyometric is a popular form of exercise training which enhance basketball fitness. The purpose of this study was to investigate the efficacy of plyometric training on speed and power production among 34 high schools male basketball players (age =  $18.5 \pm 0.2$  years). Participants were purposively categorized into experimental (18) and control groups (16). Pre-test was taken at the base line of the intervention and post-test was taken at the end of the training program (8-weeks of plyometric exercise training). Speed was measured and recorded with a single maximum sprint over 30 meters dash and agility performance was assessed with Illinois Agility Test. Explosive leg power (vertical jump) was measured carefully following David K. Miller bio-motor testing protocol. The experimental group performed polymeric training twice per week throughout the training program (8-weeks) besides to the normal exercise training schedule given by their coach, however; the control group did not received any additional polymeric training except performing normal basketball game. All analyses were computed using SPSS. The result obtained showed that, experimental group significantly ( $p < 0.05$ ) improved all the bio-motor abilities and a mean value of 0.58; 1.55 and 1.55 were obtained for speed, agility and explosive power respectively; however; the control group did not show any significant ( $p > 0.05$ ) results on the same dependent variables. In conclusion, the present study indicated that 8-weeks of well-designed plyometric training enhance the bio-motor performance of youth basketball players. Therefore, balanced plyometric exercises should be incorporated in basketball training program in order to maximize the bio-motor ability of the players. Keywords: Plyometric, Balanced, Youth, Bio-motor ability

### INTRODUCTION

Basketball is one of the most popular sports in the world today. The sport of basketball is categorized as a contact sport. The U.S. Trends in Team Sports (2000) reported that with nearly 40 million active male and female participants yearly, basketball is America's most popular team sport, but individuals can be seen playing basketball in almost every country in the world. The game of basketball is played in a continuous movement. There is a smooth transition from offense to defence and all players perform similar movements (i.e., rebounding and shooting) on the basketball court during a game. These movements differ in their mode of activity (e.g., running, shuffling or jumping) and degree of intensity (McInnes *et al.* 1995). Basketball is a sport that entails both aerobic and anaerobic conditioning, strength, and agility.



The development of optimal training program for basketball player is important in all seasons of the training program (offseason, preseason and in season) but with varying training volume and intensity. A true challenge for the player or coach is to begin the season in near peak condition, and maintain peak performance throughout the season (Riezebos *et al.* 1983).

A number of investigators reported that success in basketball appears to be more dependent upon the athlete's anaerobic power and endurance rather than on aerobic power, *per se* (Hoffman & Maresh 2000). Although only 15% of the playing time in a basketball game has been described as high intensity (McInnes *et al.* 1995), it is these actions that can determine the outcome of a contest. The quick change of direction and explosive speed needed to free oneself for an open shot or defend, the ability to jump quickly and repetitively, and the speed needed to reach loose balls and run a fast break, are examples of high intensity activities common to basketball. These components of anaerobic ability (i.e., speed, vertical jump and agility) have also been demonstrated to be strong predictors of youth basketball players (Hoffman *et al.* 1996).

Plyometric is a term that is used to describe exercises that involve the muscle being stretched and then shortened to accelerate the body or limb. As such, plyometrics is often described as a stretch shortening exercise, a description that may be more appropriate. Plyometric training is generally incorporated into an athlete's training program to improve power and increase vertical jump height. Plyometric drills are often combined with a traditional resistance training program with the premise that vertical jump performance may be enhanced to a significantly greater extent than if performing either resistance training or plyometric training alone (Hoffman & Maresh 2000).

Even though the importance of plyometric exercise training is well documented in different sports training program; experience shows that most Ethiopian basketball coaches seem to do not well understand its benefits and also they lack it in which seasons the training program must be incorporated. Regarding to this issues scholars in the area of basketball training program highly recommended that plyometric exercises should be incorporated into the athlete's training program and it should be used primarily during the off-season and preseason training programs. During the season the number of plyometric sessions, although not necessarily eliminated, are substantially reduced. Scientifically well-educated basketball coaches generally agreed the time when using plyometric drills during the season. As a result they recommend that for basketball players that play several games per week and are continuously scrimmaging during practice, the addition of plyometric exercises may pose more of a risk for injury than enhancing power performance.

A few literatures indicated that basketball-specific drills should be performed throughout the training program. It is imperative that the athlete continues to shoot and play basketball during the off-season conditioning program. Speed and agility training is usually performed during the preseason conditioning program. However, some athletes looking to enhance their speed or agility may begin such training during the off-season conditioning program. Many different exercises are available for improving agility in basketball players. Ideally, an exercise should be selected that incorporates movements that are common to the game of basketball and can be performed on the court (Caterisano *et al.* 1997 and Parret *al.* 1978).

Few studies demonstrated the effectiveness of plyometric training on different sport activities performance such as on most field events of athletics, volleyball and soccer players and also in untrained or recreationally trained athletes, but not in basketball players. The ability of plyometric training to improve speed, agility, and jumping ability in youth basketball player is still not well understood and studied as compared to other team sports.

Therefore, the current study tried to investigate the efficacy of plyometric exercise on speed, vertical jump, and agility among youth basketball players.

## Materials & Methods

This study was conducted at Addis Ababa, Ethiopia, with selected preparatory and high school male students (18 experimental and 16 control groups; age =  $18.5 \pm 0.2$  years). The participants had previous basketball playing experience when they were in grade 9<sup>th</sup> & 10<sup>th</sup>. All participants filled health history questionnaire and none of them had neither health problem nor upper or lower extremity injuries. Both the experimental and the control groups were tested the three major motor abilities (speed, agility and vertical jump) twice i.e. at the base line and end of the 8-weeks. Participants were purposively divided into two groups of polymeric (PG) and control group (CG). The former group executed polymeric training twice in a week throughout the training time (8-weeks) besides to the normal exercise training schedule given by their coach. The polymeric training mode (type) focused on diagonal cone hops; hexagon drill; double leg hops; single leg bounding; lateral jump over obstacle; standing jump and reach; front cone hops and also side to side ankle hops. All these polymeric training sets and repetitions were executed following principle of progressively overload. The CG performed only the usual exercise training (did not received any form of additional plyometric exercise).

### Measurement Procedure

#### Vertical Jump: Test Administration and Direction

This test is one of the most reliable (0.93) and valid (0.78) field tests to evaluate explosive leg power of the lower extremities. The objectivity of the test (coefficient > .90) have been reported. All measurement procedure was done using test administration and direction procedure formulated by David K. Miller (1998). A yardstick or tape measure was taped to the wall to measure the distance between two chalk marks. The test performer (1) stands with the dominant side toward the wall and feet flat on the floor; (2) holding a piece of chalk (1 inch in length) in the dominant hand, reach as high as possible and makes another mark on the wall; and (3) jumps as high as possible and makes another mark at the height of the jump. Three trials were administered. All tests performers should practice the jump until it can be executed correctly before attempting the test. Scoring: for each jump the score was the distance between the two chalk marks, measured to the nearest half inch. The greatest distance was the test score.

#### Agility: Test Administration and Direction

Agility performance was assessed with Illinois Agility Test (Getchell, 1979). The length of the course is 10 meters and the width (distance between the start and finish points) was 5 meters. Four cones were used to mark the start, finish and the two turning points. Another four cones were placed down the center an equal distance apart. Each cone in the center was spaced 3.3 meters apart. Subjects should lie on their front (head to the start line) and hands by their shoulders. On the 'Go' command the stopwatch was started, and the athlete gets up as quickly as possible and runs around the course in the direction indicated, without knocking the cones over, to the finish line, at which the timing was stopped. An excellent score of the two trials with five to six minutes recovery was recorded.

#### Speed: Test Administration and Direction

The test involves running a single maximum sprint over 30 meters, with the time recorded. A thorough warm up were given, including some practice starts and accelerations. Start from a stationary position, with one foot in front of the other. The front foot must be on or behind the starting line. This starting position should be held for 2 seconds prior to starting, and no rocking movements are allowed. The tester provided hints for maximizing speed (such as keeping low, driving hard with the arms and legs) and encouraged to continue running hard through the finish line. Results: Two trials were allowed, and the best time was recorded to the nearest 2 decimal places. The timing starts from the first movement (if using a stopwatch) or when the timing system was triggered, and finishes when the chest crosses the finish line and/or the finishing timing gate was triggered.

#### Statistical Analysis

All analyses were completed using SPSS (Version 20, SPSS Inc, and Chicago, IL). The normality of distribution for dependent variables was confirmed with the Shapiro-Wilk Test. Results of the pre- and post-tests were compared using the Paired-sample t test within each group. The differences between pre- and post-tests of the groups analysed with Independent t-tests (2-tailed). Statistical significance was set at  $p \leq .05$ .

## Results

Descriptive characteristics of participants are shown in Table 1. There were no significant differences between PG and CG based on age, height, and weight ( $p > .05$ ).

Table 1. Descriptive Characteristics of Groups (PG & CG).

Variables	PG (n= 18)		CG= (n= 16)		P
	Mean	SD	Mean	SD	
Age (yrs.)	18.5	0.2	18.1	0.4	0.23
Height (cm)	167.3	5.2	166.8	4.8	0.73
Weight (kg)	53.4	7.3	52.8	5.7	0.40

Key: PG = Polymeric Exercise Group; CG= Control Group

Table 2. The Efficacy of Plyometric Training on three Dependant Variables (speed, Vertical jump & agility)

Variables	Groups	Pre-Test	Post-Test	MD	P-value
Speed	PG	4.99 + 0.32	4.41 + 0.21	0.58	0 .000
Vertical Jump	CG	4.87 + 0.30	4.86 + 0.26	0.01	0 .846
	PG	50 ± 2.96	54.7 + 3.68	4.7	0 .000
Agility	CG	49.01 + 2.39	49.8 + 2.34	0.79	0 .064
	PG	18 + 0.62	16.45 + 0.56	1.55	0 .000
	CG	18.43 + 0.73	18.33 + 0.68	0.1	1.000

Key:

PG = Plyometric Group; CG = Control Group. The P- Value for both group is set ( $p < 0.05$ ).

## Discussion

Plyometric is a popular form of exercise training that utilizes the stretch-shortening cycle to help in the development of muscular power. It has been shown that the stretch shortening cycle can contribute up to 20% to 30% of the power in a stretch-shortening-type activity, such as a maximal vertical jump needed for high-jump performances. By performing plyometric training, improvements in speed and power production can be achieved. Plyometric range from low-intensity (standing hops) to high-intensity drills (drop or depth jumps from different heights). Examples of plyometric exercises include the following: standing vertical jumps, long jumps; hops and skips; standing hops; depth or drop jumps from different heights; push-ups with hand claps; medicine ball throwing drills (Kraemer, Fleck, & Deschenes, 2012).

Speed has been generally determined by a timed 40- or 30-yard sprint. The 40-yard sprint may have greater popularity due to the familiarity with performance times associated with football players. However, the 30-yard sprint may be more specific for the basketball athlete because of the similarity between this distance and the length of the basketball court (Hoffman & Maresh 2000). Agility is also considered an important component in basketball. This is not surprising considering the rapid changes in movement and direction during the game of basketball. However, there does not appear to be any widely accepted method of measuring agility in basketball players' performance (Hoffman *et al.* 1996). Strength in basketball players has primarily been reported as the 1RM strength (repetition maximum; in the bench press, squat and power clean exercises. These dynamic constant resistance exercise tests are used to assess upper body strength, lower body strength and explosive strength, respectively. Lower body strength (1RM squat) has been shown to be a strong predictor for playing basketball (Kraemer & Häkkinen 2002).

The importance of lower body strength for the basketball player is for "boxing-out" and positioning during a basketball game. In addition, the importance of leg strength for these athletes may also be related to its positive relationship to both speed and agility (Hunter *et al.* 1993; & Hoffman & Maresh 2000).

Many studies revealed that plyometric training programs were effective to improve motor abilities like sprint, agility and vertical jump if it is well designed (Ramirez-Camillo et. al.2013) on the other hand a few studies did not fully accept the role of plyometric exercise training in vertical jump ability. This discrepancy might be on the variation of exercise training program, like intensity, frequency, repetition, sets and also interval between sets. In the present study, a frequency of twice training program per week with eight-week plyometric exercise training significantly increased the above mentioned motor abilities (Table-2). The improvement in the aforementioned motor abilities may be a result of multifaceted variables. These are the exercise designed pattern (set, repetitions, frequency and mode); the commitment of participants and the coaching style and overall performance. This study clearly indicated that bio-motor abilities can be enhanced and showed significant change within eight-weeks of plyometric exercise for basketball players if it is well designed and appropriate to the age level of the participants without causing any injuries as a result, the participant skills and motor ability greatly increased. As it is clearly indicated in table-2 the three motor ability showed significant change in the experimental groups however; significant change was not observed in the control groups. Thus it is possible to conclude that bio-motor abilities can be maximized through well-structured plyometric training. The result of the present study is supported by the previous studies like (Hoffman et al. 1996; Hoffman & Maresh 2000; Kraemer & Häkkinen 2002). The main differences between the present study design and results and those of the previous studies is on the exercise designed pattern (intensity, duration, number of set, repetition and frequency) are different however; the exercise mode or type is nearly similar except some variations. In the present study the training was performed on the schools playing ground area and basketball courts. Therefore, the present study confirmed that plyometric exercise can significantly enhance speed, explosive lower leg power (vertical jump) and agility and the improvement of all these motor ability play great role in the game of basketball. This is because basketball requires all this motor abilities in addition to the aerobic and anaerobic fitness. Thus coach, who give training, in different levels should give due attention to plyometric exercise if they would like to win besides to focusing only on the tactical and techniques strategies of the game. One of the major limitation in this study was that, the number of participants might be less in number.

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### **References**

- Caterisano, A., Patrick, B.T., Edenfield, W.L. & Batson, M.J. (1997). The effects of a basketball season on aerobic and strength parameters among college men: Starters vs. reserves. *Journal of Strength and Conditioning Research* 11, 21–24.
- Getchell B. (1979). *Physical Fitness: A Way of Life*, 2nd Ed. New York: John Wiley and Sons, Inc.
- Hoffman, J.R. & Maresh, C.M. (2000) *Physiology of Basketball*. In: W.E. Garrett & D.T. Kirkendall, eds. *Exercise and Sport Science*, pp. 733–744. Philadelphia: Lippincott Williams & Wilkins.
- Hoffman, J.R., Tennenbaum, G., Maresh, C.M. & Kraemer, W.J. (1996) Relationship between athletic performance tests and playing time in elite college basketball players. *Journal of Strength and Conditioning Research* 10, 67–71.
- Hunter, G.R., Hilyer, J. & Forster, M.A. (1993). Changes in fitness during 4 years of intercollegiate basketball. *Journal of Strength and Conditioning Research* 7, 26–29.
- Kraemer, W.J. & Häkkinen, K. (eds) (2002) *Strength Training for Sport*. Blackwell Science, Oxford.
- Kraemer, W.J., Fleck, S.J., & Deschenes, M.R. (2012). *Exercise Physiology: Integrating theory and Application*. Philadelphia, Lippincott Williams & Wilkins, a Wolters Kluwer business.
- McInnes, S.E., Carlson, J.S., Jones, C.J. & McKenna, M.J. (1995). The physiological load imposed on basketball players during competition. *Journal of Sport Science* 13, 387–397
- Miller, D.K. (1988). *Measurement by the Physical Educator: Why and How*. Indianapolis, Indiana. Benchmark, Press, Inc.
- Parr, R.B., Hoover, R., Wilmore, J.H., Bachman, D. & Kerlan, R.K. (1978) Professional basketball players: Athletic profiles. *Physician and Sportsmedicine* 6, 77–84.
- Ramirez-Campillo R, Andrade DC, Izquierdo M. Effects of plyometric training volume and training surface on explosive strength. *Journal of Strength and Conditioning Research*, 2013; 27(10): 2714-2722
- Riezebos, M.L., Paterson, D.H., Hall, C.R. & Yuhasz, M.S. (1983) Relationship of selected variables to performance in women's basketball. *Canadian Journal of Applied Sport Science* 8, 34–40.
- U.S. Trends in Team Sports (2000) Sporting Goods Manufacturer Association, North Palm Beach, FL.

## **The Level Of Martabe (Maratabat/Sipug/Malatabat) On Sportsmanship Among Muslim Athletes Of Mindanao State University System**

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### **Introduction**

Sportsmanship is not only a requirement in games but in almost social functions and even in business transactions. And apparently many people put premium to the value of sportsmanship by always partnering it with honesty. Thus, considering the high level of sports competition now a day's sportsmanship is one issue that athletes are facing in every sports competition. In the same vein as maratabat/sipug/malatabatis opined to be the motive why most players wanted to show sportsmanship maratabat/sipug/malatabatin games. In other words, the two terms (sportsmanship and maratabat) could be interchange or cause and effect relationship if both have to be equated with self-respect or self-esteem. In that perspective, sportsmanship may affect or touch the maratabat/sipug/malatabat of any players on many game situations.

The word "maratabat" is often misinterpreted by many as merely "self-pride" particularly by non-Meranaws. However, this is not only found among the Meranaws but common to most Filipinos as well. But for those who are most sensitive in observing how this personal and social value operates in a Meranaw and his society may offer a better perspective and understanding of the real meaning of "Maratabat."

According to Disoma (2000), foreign scholars such as Melvic Mednick (1964), Carlton Remier (1976) and Peter Gowing (1979) developed similar conceptions of maratabat from an etymological standpoint. They say that maratabat is a corruption of the Arabic term, martabat. According to Mednic, the Arabic word denotes rank and position in the structure of society. Remier says that it connotes the status and respect that are due to a particular rank or to a status holder. But the Meranaw meaning they all claim goes beyond the meaning of the Arabic word. The Meranaw has surrounded it with many psychological and sociological concepts of their own.

Furthermore, the word martabat is used in Malaysia and Indonesia. Though variations exist, the corruptions from the original Arabic martabe mentioned in Raja Nasr's An English Colloquial Arabic Dictionary may have other similar sounding terms. A University of the Philippines student from Egypt, an Arab young lady, said in an interview that there is an Arabic word, martabe (meaning rank, status), and the word martabat, the plural form of martabe (Disoma, 2000).

In the 1950's Abraham Maslow postulated that people are motivated by unsatisfied needs. As each of these needs is significantly satisfied, it drives and forces the next need to emerge. Maslow grouped these into higher order and lower order needs. The physiological and safety needs were the lower order needs and these were to be satisfied externally. The social system, and self-actualization needs are the higher order needs and are generally satisfied internally, or within oneself. If both higher and lower order needs are met, then the individual has reached a point where his potentials have been met which may result in high levels of performance in whatever endeavor he may take up. In sports, there is always the desire of players to be on top of any games being played, thus most likely it is assume that the value of *maratabat* will interplay with sportsmanship as players tries to satisfy their higher needs of self-esteem and self-actualization.

The self-efficacy theory was believed to correspond to specific domains, necessitating the construction of task-specific measures in various domains. Lent and Hackett (1997) described self-efficacy as a concern about the ability to perform a given task and outcome expectation as the expected consequences of performing the tasks. Self-efficacy theory was seen as useful for investigations of behavior and behavior change in sports. So long as the players perform well to achieve a certain goal, his performance will be more appealing positively with commitment and satisfaction especially with *maratabat* serving as a motivating factors the achievement of goals and sportsmanship could be possible .

The theory of Locke and Latham (1990) goal setting provides frameworks that have potential to enable players to increase their performance and strategies. Motivational mechanisms by which specific, challenging goals produce their effects include choice, effort and persistence. By choice attention, it is directed to actions that are relevant to achieving the goal. Adjusted efforts for unreasonably difficult goals are required to achieve them and so is persistence of efforts. The study can relate to this theory also.

### **Statement of the Problem**

This study aimed to determine the Level of *Martabe* on Sportsmanship among Meranaw, Maguindanaon, and Tausug, male team event athletes on selected campus of Mindanao State University. Specifically this study aimed to answer the personal profile and athletic characteristics in terms of age, years of playing experience, estimated monthly family income, type of sports, level of competitions and Muslim group?Is there a significant relationship between Level of *Martabe* and age, years of playing experience, estimated monthly family income, type of sports, level of competition, and Muslim group?Is there a significant relationship between Sportsmanship and age, years of playing experience, estimated monthly family income, type of sports, level of competition, and Muslim group?Is there a significant relationship between Sportsmanship and Level of *Martabe*?

### **Methods**

#### *Samples*

The respondents of this study are the Meranaw, Maguindanaon and Tausug male student athletes of selected three campuses of Mindanao State University System with a total of 102 who actively competed in different level of sports competitions. The study employed the purposive sampling procedure in gathering the data. As stated above, all the 102 Meranaw, Maguindanaon, and Tausug male team sports student athletes of selected three campuses of Mindanao State University System were considered as the target respondents of this study. They were purposively selected due to the following reasons: (1) they are the perceived most dominant tribes of the 13 Moro groups, and (2) these tribes concentrated in those respective campuses of the MSU System.

#### *Instrumentation*

In this study, a modified self-made questionnaire was used to gather information or data from the respondents.

This questionnaire was developed based on the different variables used in the study. The questionnaire is composed of two parts. The first part deals with the personal profile and athletic characteristic of the respondents like age, years of playing experience, estimated monthly family income, type of sports, level of competition and Muslim group.

The second part used a modified self-made questionnaire. It comprises of 10 positive and 10 negative questions to measure the level of *maratabat* and sportsmanship of the respondents. There are five (5) classifications to determine the degree of *maratabat* of the respondents in this study. These are the following: "Very Much", "Much", "Little", "Very Little", and "Not at All".

The questionnaire was pilot tested for reliability to selected Meranaw, Maguindanaon, and Tausug male student-athletes of Mindanao State University main campus who participated during 2015 University Intramural Games. Based on the results, all positive statements do not reach the 0.8 reliability requirement while on the negative statements, seven (7) out of ten (10) statements reach the reliability requirement. To make it justifiable, the researcher added eight (8) negative statements to make it fifteen (15) statements and this has the results of 0.867 reliability.

Furthermore, the second part is a combination of Level of *Martabe* and Sportsmanship questionnaire that were treated as one.

## Statistical Analysis

To analyse the descriptive data, this study used the descriptive statistics in the form of mean, frequency, and percentage distribution to analyse the personal profile and athletic characteristics of the respondents. In determining the relationship between variables, the coefficient of correlation was utilized using the Product Moment of Correlation or Person  $r$ .

## Results And Discussions

### Profile

The profile of the respondents is composed of six (6) items: age, years of playing experience, estimated monthly family income, type of sports (event), level of competition, and Muslim group.

**Age.** Among the 102 respondents, 49 out of 102 or 48.0% were in the age of 18-19 years old. This was followed by the range of 20-21 years old with 27 respondents (26.5%). On the other hand, the youngest among the respondents which is 16 years old is in the age range of 16-17 years old with the lowest percentage of 11.8%. The results showed that the age of the respondents was varied. Data indicated that the respondents' age range was from 16 years old to 23 years old. The majority of the respondents, however, were in the age range of 18-19 years old compared to the rest of the groups. The age bracket of 18-19 years old had the most number of frequency in terms of age.

**Years of Playing Experience.** High percentage of the respondents played on their chosen event for 4-5 years with 39.2%, followed by 2-3 years with 30.4%. There were respondents, however, who played more than 5 years with 23 respondents out of 102, and less than 1 year with 8 out of 102 respondents.

The data showed that most of the respondents start playing in their chosen event since high school level and continued in the tertiary level. Some shifted in other event in the later part in high school and early part in college.

**Estimated Monthly Family Income.** 33 out of 102 or 31.4% of the respondents have the estimated family monthly income of Php20,001.00-Php30,000.00; followed by respondents with less than Php10,000.00 estimate family monthly income with 28.4% (29 out of 102). There was only 3 respondents with estimated family monthly income of more than Php 40 000.00.

The data revealed that most of the respondents regardless of their culture belong to low to middle level of socio-economic status. This justified that Mindanao State University is a school for people who are not fully blessed in financially.

**Type of Sports.** Among the 102 respondents, 36 out of 102 or 35.3% of the respondents preferred to play Basketball as their event and this is closely followed by 32 respondents playing Volleyball with 31.4%. On the other hand, among the 102 respondents only 12 or 11.8% are playing Baseball.

The results revealed that Basketball is really the top in rank sports among others not just in MSU campuses but in the Philippines as a whole for men and followed by the volleyball.

**Level of Competition.** Regional sports competition has the highest percentage of 83.3% or 85 out of 102 of the respondents. The remaining 17 respondents with 16.7% had a chance to compete in the national level of sports competition.

The data show that only few Muslim athletes of MSU are qualified and can compete in the national level, with 17 respondents for the past years. Never the less, majority of the respondents can compete in the regional level of different sports competition.

**Muslim Group.** The high percentage of the respondents (47 out of 102) or 46.1% were the Maguindanaon, followed by the Meranaw with 31.4% or 32 out of 102 of the respondents. Tausugs are the lowest in percentage of the respondents with 25.6%.

The results showed that among the MSU campuses, MSU Maguindanao has the most number of Muslim male student athletes in different team events because their campus is isolated by the Maguindanaon people.

**Level of Martabe.** Mostly or 50 out of 102 of the respondents had a moderate level of *martabe* with 49.0%. 12 out of 102 of the respondents are with very low level of *martabe* while only 1 respondent had very high level of *martabe*.

The results show that, though the respondents had a similarity with *Martabe* but because of sports and attending sports competitions the level of *Martabe* of each tribe changed to moderate. Sportsmanship. Mostly of the respondents or 50 out of 102 are in average sportsmanship followed by 19.6% or 20 out of 102 of the respondents are in poor level. While only 1% had very poor sportsmanship. The data showed that through sports and sports competition the attitude of an athlete towards abiding and following the rules of the game can really help the Muslim athletes to develop their sportsmanship.

#### Correlations of the Variables

The correlation between variables utilized the Pearson Correlation Coefficient [ $r$ ] to answer questions numbers 2, 3, and 4 of the problem that further led to the decision making of the postulated null hypothesis numbers 1 [ $H_{01}$ ], 2 [ $H_{02}$ ], and 3 [ $H_{03}$ ] all tested at 0.05 level of significance. If the obtained probability value [ $p$ ] between compared variables is lesser than or equal to 0.05 [ $\leq 0.05$ ], the relationship is considered significant [\*\*\*] but for  $p$  values greater than 0.05 [ $p > 0.05$ ] the established relationship is determined as not significant. There are 2 possible outcomes for the relationship, linear if  $r$  is positive and negatively linear when  $r$  is negative.

Intervening and Independent Variables. The intervening variables of Estimated Monthly Family Income [ $p=0.475$ ], Playing Experience [ $p=0.191$ ], Type of Sport [ $p=0.069$ ], and Highest Level of Competition [ $p=0.823$ ] showed no significant relationship to level of Martabe (independent variable). For these results, accept [ $H_{01}$ ].

But the intervening variables of Age [ $p=0.032$ ] and Muslim group [ $p=0.000$ ] revealed significant relationships to level of Martabe. Reject  $H_{01}$  for these results.

The first significant result confirmed that age has linear [ $r=0.212$ ] significant relationship to level of Martabe. Linear means that as the age increases, the level of Martabe also increases. Therefore, those younger respondents showed lower level of Martabe while those with older demonstrated higher level of Martabe. The second significant result exposed that the Tausugs demonstrated the highest level of Martabe [mean=50.30], followed by the Meranaws [mean=42.53], and with the lowest level of Martabe [mean=38.98] the Maguindanaos.

Intervening and Independent Variables. The intervening whose  $p$  values exceeded 0.05 (the set level of significance) and disclosed no significant relationship to Sportsmanship are Estimated Monthly Family Income [ $p=0.475$ ], Years of Playing Experience [ $p=0.191$ ], Type of Sport [ $p=0.069$ ], and Highest Level of Competition [ $p=0.823$ ]. So, accept  $H_{02}$  for these exclusive findings. Meaning, the strengths of the relationships existing between the paired variables are very weak.

However, the intervening variables of age [ $p=0.032$ ] and Muslim Group [ $p=0.000$ ] inclined significant relationship to the dependent variable of Sportsmanship. Reject  $H_{02}$  for these results.

Age disposed negative linear relationship [ $r=-0.212$ ] to the Sportsmanship. The implication of the finding is those younger respondents demonstrated good Sportsmanship, while those older ones showed poor Sportsmanship.

On the other hand, among the Muslim groups; the Maguindanaos [mean=51.02] displayed the good Sportsmanship, followed by the Meranaws [mean=47.47], and then the Tausugs [mean=39.70] that displayed the poor Sportsmanship.

Independent and Dependent Variables. The obtained  $p$  value of 0.000 [ $p=0.000$ ] is lesser than 0.05 and a negative value [ $r=-1.000$ ] which declares a significant negative linear relationship when the Level of Martabe and Sportsmanship are correlated. Reject  $H_{03}$  for this finding. Meaning; as the level of Martabe increases, inversely the Sportsmanship decreases. In other words, those respondents with higher Level of Martabe demonstrated poor Sportsmanship while those with lower Level of Martabe expose good Sportsmanship.

#### Conclusions

Based on the findings and the statistical results of the study, the following conclusions are as follows:

There is no significant relationship between estimated monthly family income, years of playing experience, type of sports, and highest level of competition attended and the variable of level of Martabe. However there is significant relationship, between the age and Muslim group as moderating variable and the level of Martabe was revealed.



Therefore, Hypothesis no. 1 is accepted with the exception of age and muslim group which is significantly related. There is no significant relationship between estimated monthly family income, years of playing experience, type of sports, and highest level of competition attended and the variable of sportsmanship. There is significant relationship, however, between the age and Muslim group as moderating variable and the sportsmanship was revealed. Therefore, Hypothesis no. 2 is accepted with the exception of age and muslim group which is significantly related.

There is significant relationship between the independent variable of level of martabe and sportsmanship as independent variables. Therefore, null Hypothesis no. 3 is, rejected. The findings implied that at young age people are very competitive that is why their desire to win is very strong in which case there is a possibility that they will use their value such as maratabat to interplay with sportsmanship in their motive to achieve their goal.

## Recommendations

After completing the study and determining the relationship between the different variables of this study, the following recommendations are hereby presented: The findings show that there was really a correlation between maratabat and sportsmanship. Thus it is strongly suggested that further studies shall be conducted to deal deeper into the concept of *Martabe* in relation to sportsmanship and performance among other individual and dual sports.

Likewise, similar studies should be conducted among other ethno-linguistic groups to find out similarities and differences on the concept of *Martabe* or feeling of pride and shame using other variables or factors.

Further, it is recommended that there must be a promotion on understanding and awareness on the effect and implications of *Martabe* on the performance not only in sports but also in other fields of endeavour. Moreover, this study recommends to develop strategies to channel the good effect of *Martabe* to enhance or improve performance and sportsmanship in sports and in life.

In the same manner as it is recommended to design programs, activities and active participation in sports competition that will improve the sportsmanship and performance to reduce the negative effect of *Martabe* on the individual and the society as a whole.

Lastly, the researcher strongly recommends that other avenues for discourse on the concept of *Martabe*, its values, effects and implication to individuals, family, school administration and society in general may be facilitated.

## References

- Baradas, David B. (1973). Ambiguities in Meranao Social Rank Differentiation, *Philippine Sociological Review*, 21
- Bartolome, Claribel D. (2001). Maratabat and Rido : Implication for Peace and National Development. MSU Marawi City: Department of Graduate Studies/Psychology, College of Social Sciences and Humanities.
- Brett & Kate McKay, 2009, *Etiquette, Health & Sports, Relationship & Family. Be a Good Sport: A Guide to Sportsmanship.*, Retrieved October 29, 2016 from <http://www.artofmanliness.com/2009/08/04/be-a-good-sport-a-guide-to-sportsmanship/>.
- Bruno, Juanito A. (year). *The Social World of the Tausug (Study in Culture & Education)*.
- Disoma, Esmail R. (2000). *The Role of Violence in Social Organization : The Case of the Meranao and their Maratabat*. MSU Marawi City: Office of the Vice Chancellor for Research and Extension
- Gowing, Peter G. (1964). *Mosque and Moro: A Study of Muslims in The Philippines*. Manila: Philippine Federation of Christian Churches.
- Madale, Nagasura T. (1981). Aspect of Meranao Taritib as Reflected in Radia Indarapatra, *Mindanao journal*, Vol. 3, Nos. 3-4.
- Mednick, Melvin (1964). Sultan and Mayors: the relationship of a Nationl to an Indigenous Political System, In Peter Gowing and McAmis D. Robert (eds.) *The Muslim Filipinos*. Manila: Solidaridad Publishing House.
- Meriam-Webster Dictionary, (2016).
- Morgan and Meier, K. (1988). *Philosophic Inquiry in Sports*. Champaign Illinois: Human Kinetic Publisher
- Remier, Carlton (1976). *Meranao Maratabat and the Concept of Pride, Honor and Self Esteem*. Dansalan College Occasional Paper No, 4.
- Saber, Mamitua, Tamano, Mauyag and Charles Warriner (1976). *The Maratabat of the Meranao*. In Mamitua Saber and Abdullah Madale (eds.). *The Meranao* Quezon City: Solidaridad Publishing House.

## **Comparative Analysis Of Agility Performance Among Inter District Level Hockey Players**

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### **Abstract**

The purpose of the study was to compare the performance of agility among Inter District level Hockey players. To achieve the purpose of the study sixty junior boys hockey players (N=60) who have attained first four positions in the 7<sup>th</sup> inter district junior hockey championship-2018 held at Madras Veterinary College, Chennai. The first four qualified were Trichy District (Winner), Ariyalur District (Runner), Ramnad District (Third position) and Dindigul District (Fourth position). The age of the players ranged between 12-14 years. The selected teams were considered as Independent variables. The performance of agility was chosen as dependent variable. The 4 x10 meters shuttle run test was administered to observe the agility performance and final scores were recorded in seconds. The one way analysis of variance (ANOVA) was used to find out the significant differences, if any, among the four teams. The level of significance was set at 0.05 level of confidence for observe the significant difference. The results of the study pointed out that there was a significant difference on the performance of agility among the four teams.

Keywords: 1 .Inter District 2. Junior Boys 3. Agility 4. Hockey 5. ANOVA

### **Introduction**

Physical fitness is the ability to perform daily task with energy and enjoy leisure time pursuits and to meet the unpredicted emergencies. Physical fitness is defined as a set of ability to carry out physical ability. Regular physical exercise is an important part to remain fit and active in the long run and we also feel better. Exercise can help you to remove some diseases like diabetes, prevention of cancer and heart problems (Rao, 2010). Hockey is referred to as intermittent sports due to the pattern of repeated short bursts of high intensity activity interspersed with active and passive recovery. Such a pattern requires lactate removal and rapid regeneration of phosphocreatine (PCr) stores to allow for sustained performance. Muscle strength is relevant to striking the ball and to tackling and tolerating physical impacts with other players. Anaerobic power is also important in accelerating the body during short movements and changing direction quickly. Players who can sustain a high work-rate throughout a match gain an advantage over equally skilled players, whose energy can approach depletion towards the end of a game or after a series of high intensity efforts, resulting in reduced performance (Reilly, et al., 2000). Changing directions and being able to manoeuvre quickly around other players is key skill in Field Hockey. Players need to be flexible and agile. Increasing one's flexibility helps to and maintains stability and balance, which is also important for injury prevention. Agility is the ability to rapidly change the body's momentum from one direction to another. Field Hockey fitness is all about perfecting a move in order to make it happen rather than just remembering it. It must become an automatic reaction. Hence the present study an attempt was made to compare the agility performance among the Inter District Hockey players.

## Materials And Methods:

### Experimental Design:

The purposive random group design was used to find out the performance of agility among the Inter District Hockey players. The Independent variables, Trichy District (winner), Ariyalur District (runner), Ramnad District (third place) and Dindigul District (fourth). The performance of agility was chosen as criterion variable.

### Participants:

Sixty junior boys hockey players (N=60) who entered first four places in the 7<sup>th</sup> Inter District Junior Hockey Championship-2018 held at Chennai. The district teams were Trichy, Ariyalur, Ramnad and Dindigul.

### Testing Procedure:

The performance of agility of all the players were tested by, 4 x 10 meters shuttle run test, the players' performance was recorded 1/10<sup>th</sup> seconds.

### Data Analysis:

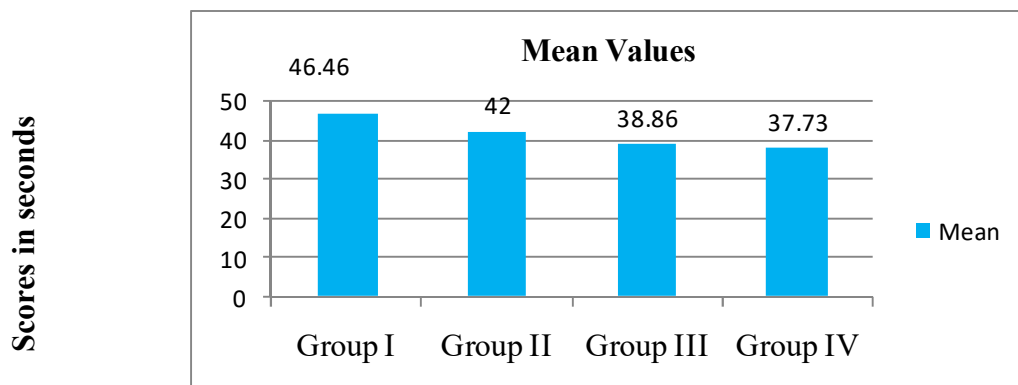
The one way analysis of variance (ANOVA) was applied to find out any significant difference among the selected teams on the performance of agility. The 0.05 level of confidence was fixed to test the significance difference among the groups.

Table-I THE COMPUTATION OF ANALYSIS OF VARIANCE ON AGILITY AMONG THE FOUR TEAMS  
(Performance in seconds)

Variable	Mean				Source of Variance	Sum of Square	Mean Square	Obtained 'F' value
	G1 (Winner)	G2 (Runner)	G3 (Third Position)	G4 (Fourth Position)				
Agility	6.23	6.83	7.01	7.26	Between	8.75	2.92	11.03*
					Within	14.81	0.2	

The Table-I shows the analysis of variance on performance of agility among the four teams. The mean value on agility of group-1 (winner) was 6.23, group-2 (runner) 6.83, group-3 (third position) was 7.01 and group-4 (fourth position) was 7.26. It can be seen from table-1 the significant differences were found with regard to the performance of agility among top four teams. Since the obtained 'F' ratio 11.03 was greater than the required table 'F' value 2.77. Therefore, the four teams were found to be significant at 0.05 level of confidence for the degrees of freedom 3 and 56.

Figure -1 MEAN VALUES ON AGILITY AMONG THE TEAMS



**Table-II:SCHEFFE’S POST HOC TEST PAIRED MEAN DIFFERENCES ON AGILITY AMONG THE FOUR TEAMS**  
(Performance in seconds)

Comparisons		Mean Difference	CI Value
G1 (Winner) (6.23)	G2(Runner) (6.83)	0.6*	<b>0.59</b>
	G3 (Third position) (7.01)	0.78*	
	G4 (Fourth position) (7.26)	1.03*	
G2 (Runner) (6.83)	G3(Third Position) (7.01)	0.18	
	G4 (Fourth position) (7.26)	0.43	
G3 (Third position) (7.01)	G4 (Fourth Position) (7.26)	0.25	

Table- II shows the results of Scheffe’s Post-Hoc test to assess pair wise difference of performance of agility among the four groups.

Comparison 1 (Winner and Runner): The comparison of Agility performance between winner and runner teams shown significant, because of the mean difference value 0.6 was higher than the confidential interval value 0.59. Hence the agility performance was greater in winner team than the runner team.

Comparison 2 (Winner and third position): The comparison of agility performance between winner and third position teams shown significant, because of the mean difference value 0.78 was higher than the confidential interval value 0.59. Hence the agility performance was greater in winner team than the third position team.

Comparison 3 (Winner and fourth position): The comparison of agility performance between winner and fourth position teams shown significant, because of the mean difference value 1.03 was higher than the confidential interval value 0.59. Hence the agility performance was better in winner team than fourth position team. Comparison 4 (runner and third position):The comparison agility performance between runner and third position teams shown insignificant, because of the mean difference value 0.18 was lesser than the confidential interval value 0.59. Hence the performance of agility was similar in both the team.

Comparison 5 (runner and fourth position): The comparison of agility performance between runner and fourth position teams shown insignificant, because of the mean difference value 0.43 was lesser than the confidential interval value 0.59. Hence the performance of agility was similar in both the team.

Comparison 6 (Third and fourth position):The comparison of agility performance between third and fourth position teams shown insignificant because of the mean difference value 0.25 was lesser than the confidential interval value 0.59. Hence the performance of agility was similar in both the teams.

#### **DISCUSSION ON FINDINGS:**

The analysis of data using analysis of variance (ANOVA) test showed that variations exist among the selected teams. Sandeep Chaudhary and Vandana Verma (2018) conducted a Comparative Study of Selected Physical Fitness among University Level Hockey and Football Players. They found that No significant difference has been found between speed variable of hockey and football player. Significant difference has been found between agility variable of hockey and football player. Sunil Sen and Bhagat (2013) conducted a Comparative study of motor fitness of school state level hockey and football players of Himachal Pradesh. They found that Hockey and Football players had almost same level of agility, speed, endurance and strength component pull-ups. Bashir Ahmad Mir and Bari (2017) conducted a study on Cardiovascular Endurance, Explosive Strength of Legs and Agility among female Inter-University Handball & Hockey players. They found that The Handball Players had better Cardiovascular Endurance than Hockey Players, the Hockey players had better explosive strength of legs than Handball players and Agility was same in both the groups. Ajayaghosh (2017) conducted a study on Comparative study of selected physical fitness variables among men football and hockey players. He found that hockey players shown the better physical fitness. The findings of the present study well documented in line with above mentioned earlier studies.

**CONCLUSION:**

It is concluded that, significant differences were found among the four different District Hockey players on agility performance. The winner (Trichy District) team players have better performance on Agility than the other three team players. The runner (Ariyalur District) team players have better in Agility than the third and fourth position team players and third position (Ramnad District) team players have better Agility than the fourth position (Dindigul) team players.

**REFERENCES:**

- Ajayaghosh (2017). "Comparative study of selected physical fitness variables among men football and hockey players". *International Journal of Physiology, Nutrition and Physical Education* 2017; 2(2): 792-794
- Bashir Ahmad Mir and Bari (2017). "A Comparative Study on Cardiovascular Endurance, Explosive Strength of Legs and Agility among female Interuniversity Handball & Hockey players". *International Journal of Multidisciplinary research*. Volume-2, Issue-II, February 2017
- Rao, P.J(2010) "A comparative study on physical fitness among swimmers and Athletics between age group of 12 to 14 years". *Asian journal of physical education and computer science in sports*, 2, 225-229.
- Reilly, T. and Bretherton, S. (1986). *Multivariate Analysis of Fitness of female Field Hockey Players*. In *Perspectives 148 in Kinanthropometry* (Edited by J.A.P. Day) Champaign, IL: Human Kinetics, PP.135–142.
- Sandeep Chaudhary and Vandana Verma (2018). "A Comparative Study of Selected Physical Fitness among University Level Hockey and Football Players". *International Journal of Physical Education and Sports*. Volume: 3, Issue: 01, Pages: 20-22, Year: 2018
- Sunil Sen and Bhagat (2013). "Comparative study of motor fitness of school state level hockey and football players of Himachal Pradesh" *International Journal of Physical Education, Sports and Yogic Sciences* Vol. 2 No. 3 (May, 2013): 24- 25.

## Physical Education Curriculum in Standard-Based and Competency-Based Education.

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### Abstract.

The study described the present situation of the teachers' abrupt adjustment in the implementation of Physical Education (PE) curriculum in the Standard-based and Competency-based education. Teachers as the key implementers are expected to respond amidst of convoluted curriculum changes in order to achieve the relevant competencies needed for the students' survival in the 21<sup>st</sup> century. The integration of standard-based and competency-based curriculum has become a breakthrough however; it poses great challenge to teachers. This adjustment could never be seen as much problem, if not for the PE subject's specific curricular changes and the unresolved perennial problems that writhed the subject for years. Today, the PE teachers are stunned by several dilemmas in the implementation which if not undertaken is detrimental to the students and educational system at large. Utilizing a qualitative case study approach where universal sampling of the informants in all public secondary schools from one of the first class municipalities in Cebu province, a thorough analysis of essential data has led the development of themes: *Incognizance of Standard-Based and Competency-Based Policy, Content-Bound Pedagogies and Unresolved Drawbacks*. The overall research findings concluded that the implementation experiences and practices of the teachers did not meet the required content standards and performance standards of Grade 10 Physical Education curriculum. Thus, this study recommends for a comprehensive re-tooling of the teachers in the K to 12 Physical Education Curriculum.

**Keywords:** Philippines K to 12, Curriculum, Standard-Based and Competency-Based Education, Learning Competencies

### Introduction

The Philippine government's passion to develop Filipinos capable in surviving 21st century standards around the nation and across the globe did not come off-notice. Many years of data collection and deliberation has been done before the K to 12 basic education was finally implemented in the year 2012 and become a law under the Republic Act No. 10533 or The Enhanced Basic Education Act of 2013. In order to ensure compliance of this law, (Department of Education) DepEd Order No. 31, Series of 2012 and DepEd Order No. 73, Series of 2012 have been instigated so that all the curriculum developers and implementers should align their learning approaches and assessments to the standards and competencies in the curriculum.

On the other hand, the PE curriculum has shifted its curricular orientation where the focus is from developing the learners to become athletes to a health-related sensitive curriculum that highlights physical literacy. It indicates that the fundamental expectation of the PE curriculum in K to 12 does not only develop a healthy person but a physically literate and health conscious individual who is capable of influencing the wider society. However, several dilemmas are hampering the implementation of PE curriculum.

The abrupt revamp in the overall education system, along with the particular changes in the PE curriculum, the prodigious demand for better quality teaching, existing problem in the insufficiency of PE resources and the waning status of PE subjects worldwide, compromised the implementation of PE subjects (Ballet, Kelchtermans & Loughran (2006); Ballet & Kelchtermans (2008); Ballet & Kelchtermans (2009); UNESCO (2008); Cariaga (2014); Kahiga (2014) and SHAPE (2016)).

The country's rapid overhaul in the education system, added up to the changing demand of society has caused implementation gaps particularly with the adjustment of teachers in the new curriculum. With this, a continual update that focuses on the implementation of the curriculum outcomes is necessary to ensure quality learning. Fullan (2007) said that when change occurs in the curriculum, teachers as the key implementers should also adjust to the changes. Teachers and the curriculum are needed to work together to ensure success in the implementation. It is therefore within these contexts that this study is considered. By describing and examining the teachers' implementation of the LCs in PE, it will uncover rich information to further improve the PE curricula and uplift its status not only in the academe but also in the larger society.

#### **Literature Review.**

The introduction of K to 12 basic education has paved way to a new paradigm that fulfills the promise of a complete and comprehensive education relevant to the present needs of the people in the country. Together with the wide-spectrum of paradigm, PE subject has also upgraded and modified its curricular orientation where its overall aim is to develop learners to have a more mature movement patterns and skills from different forms of exercises, sports and dance activities to enhance their overall fitness. These specific curricular changes could never be seen as much problem for the PE teachers, if not for the unresolved perennial problems that PE subjects have been struggling for years.

According to the World-wide Survey of School Physical Education: Final Report (2013) of the United Nations Educational, Scientific and Cultural Organization or UNESCO, PE policy implementation still remains inconsistent worldwide due to the problems such as lack of facilities and resources, time allocation, teacher training and budget appropriation. Likewise, in the 2016 SHAPE of the Nation report or the Society of Health and Physical Educator, it was described particularly that there is a large disparity in the requirements and implementation of PE program in different states of America which affected the children's participation and engagement in physical activities in school. This inability to participate regularly to any different physical activities could be the causative factor of the degrading health amongst the children as indicated by UNESCO (2008) and World Health Organization or WHO (2016). In fact, WHO (2010) opined that physical inactivity has become pandemic and it causes millions of deaths globally which resulted to be the fourth-leading risk factor for global mortality. For this reason, WHO (2013) and National Association for Sports and Physical Education or NASPE (2012) acknowledged the importance of PE as the key solution to the rising inactivity among the youth worldwide. However, multiple challenges incessantly threaten the vision of many PE practitioners and advocates.

WHO (2007), Badugela (2012), UNESCO (2013), Kahiga (2014) found out that inadequate training of PE teachers and the lack of resources have long been the problem in the implementation of PE in the K to 12 program. Nkosi's (2014) corroborated that the PE student-teachers' lack of knowledge on Curriculum and Assessment Policy Statement or CAPS impedes the worthwhile success of the curriculum implementation where the lack of commitment on the parts of school communities. This issue is not far different in the Philippine setting.

#### **Objectives the Study.**

This study aimed to describe and to examine the teachers' implementation of Grade 10 Physical Education Curriculum in the Standard-Based and Competency-Based Education. Specifically, it sought to answer the following questions: What are the Learning Competencies that the teachers taught in Grade 10 Physical Education? ; How are these Learning Competencies implemented? What are the challenges in the implementation? ; Based on the findings, what recommendations could be proposed?

#### **Methodology:**

This study utilized qualitative case study approach to get a better understanding on how the teachers implement the Grade 10 Physical Education Curriculum in the Standard-Based and Competency-Based Education. Precisely, this approach ensured that the issue was not explored through one lens, but rather a variety of lenses which allowed the researchers to get an in-depth multiple facets of the phenomenon.

This was done in all public secondary schools from one of the first class municipalities in Cebu province where twelve (12) key informants were chosen using universal sampling. MAPEH coordinators as auxiliary informants were purposively identified to triangulate the statements made by the key informants. The main instruments of the study are the researcher. This highlights the role of the researcher during interviews and observations process. Interviews were highly unstructured in order to get a pure and in-depth qualitative ground data. The rich information gathered were then analysed using descriptive-narrative analysis and thematic analysis.

To facilitate trustworthiness, credibility, dependability, transferability and conformability was considered by the researcher. (1) *Credibility*. Meticulous transcriptions of all the informants' responses through persistent replaying of audio recording; persistent crosschecking of relevant documents, artifacts and interviews were utilized and, thorough review of the written narrative transcriptions was done by the key informants themselves to warrant accuracy of information. (2) *Dependability*. The researchers' journal was used to keep track and to document the data collection process, procedures and the time frame within the audit trail. *Transferability*. Detailed descriptions of the study have allowed the readers to apply this study to other topics or settings. Finally, for *Conformability*, the researchers guaranteed that there are no any form of biases and personal interest in the research findings by employing scrupulous strategies such audit trail, documentation and triangulation to make this research objective, factual and transparent from process to product. Moreover, the following ethical considerations were strictly observed in this study. First, permission and ethical clearance from university ethical committee was done in order to ensure that the study abides by the ethical and scientific criteria. Second, participation in this study was done voluntarily. Study informants are fully informed of the procedures of the study. The strict adherence of confidentiality and anonymity was observed through the use of pseudonyms, instead of their real names.

### **Findings and Discussion**

This chapter presents a thorough description and examination of the teachers' experiences in the implementation of Grade 10 Physical Education Curriculum in the Standard-Based and Competency-Based Education. With the use of Brunelle, Drouin, Godbout, and Tousignant (1988) Model of Intervention adapted by Fraser-Thomas and Beaudoin (2002), the data were analyzed and categorized according to its five interrelating variables. This model has been recognized by the researchers in PE as an effective instrument to gain full understanding and comprehensive explanation of teachers' experiences in the classroom setting that is vital for planning, interaction and evaluation. As data were analyzed, it was determined that the emerging themes are related well to the variables of the model namely the presage, context, program, and process variables. Hence, the five resulting themes were organized in that manner.

**Theme 1: Incognizance of Standard-Based and Competency-Based Policy.** The first theme is categorized in the *presage variable* where in the intervention model refers to the traits and characteristics of teachers and students during class interactions. In this study, the first question: "What are the Learning Competencies that the teachers taught in Grade 10 Physical Education?" explored particularly their awareness of the basic policy of Standard-based and Competency-based education which is the implementation of learning competencies prescribed in the PE curriculum. The findings revealed that teachers were very optimistic in the implementation process; however, their incognizance of the Standard-based and Competency-based education policy delimits their opportunity to make their lessons more worthwhile for the students. Among the 12 key informants who were asked to enumerate or described the LCs of PE, only three confirmed that they are cognizant. Two of them are aware because they were able to participate several trainings. The other one have self-studied the curriculum. The remaining nine were unsure of their answers and confirmed that they are unaware of the LCs. As stated by the informants:

Informant 1: *"I am not aware of the Learning Competencies and I don't know that it is very important to implement them all in my lesson. What I think is that for as long as you have achieved all the objectives in your lesson plan and discussed and performed the activities in the Learner's Material, you are already successful in your lesson."*

Informant 2: *"Ako honest jud ko nga wala ko kibaw anang "Learning Competencies" kay wala mana gitudlo sa seminar."*(I honestly do not know about the "Learning Competencies" because it was not taught during the seminar)



*Informant 8: "I never attended seminars in MAPEH specifically in Physical Education. I am not also a Physical Education graduate and I have no experience in teaching PE. Generally, I had covered all the lessons in the book."*

Hence, the findings can be deduced that most of the informants believed that the lessons found in the learner's materials or student's reference book are the key of a successful teaching and curriculum implementation. A clear manifestation that defies the mandates of DepEd Order no. 31, series of 2012 and DepEd Order no. 73, series of 2012 where implementation of the curriculum should be based on the outlines outcomes in the form of content and performance standards expressed in LCs. According to Fisher (2014), in assessing the student's learning in competency-based education, the aim is to measure the demonstration and application of competencies, rather than on the rote memorization of facts. Thus, learning exercises that allow students to demonstrate their prowess and skills could prove useful in our workforce (Camacho, 2016). However, teachers in the field are still hooked in the use of books as their doctrines of effective instruction. Their too much reliance to these materials have caused them not to further inspect and understand the necessary policies and changes in the curriculum, which if not undertaken is detrimental to the students and to the educational system at large. True indeed that the teacher's knowledge and understanding of the curriculum's objectives and goals should be considered in the curriculum evaluation (Nkosi, 2014).

**Theme 2: Content-Bound Pedagogies.** The second theme described the *process variable* of the intervention model which describes and examines the teachers' strategies and methods used to implement the learning competencies. Hence, the fourth question: "How are these Learning Competencies implemented?" was employed. The findings revealed that the most common strategies used are *activity-based approach*, *direct instruction* and *cooperative learning* while the assessment methods are *performance assessments*, *pen and paper tests* and *portfolio*.

The findings revealed that the lessons that most of the teachers taught in PE are more on skill-building for sports and dance. They required their students to do mini-culminating activities as their final performance task after they taught the basic skills. When the researcher asked about what they wanted to assess in the performance, most of them answered that they desired to evaluate how well the students memorized and performed the basic skills in front of the audience. Another informant also added that after the students' performance, it signals the end of the lesson. This clearly implies that they were more concerned on developing students to become good athletes or dancers. They fell short on processing these lessons to the health which in the first place the focus of the LCs of PE curriculum. According to Mendenhall (2012), the fundamental premise of competency-based education is that teachers should be able to clearly define what students should know and be able to do such as the demonstration of relevant competencies necessary for industries and work. This means that the first thing to do is to define the competencies, implement the competencies and develop valid and reliable assessment that will measure the right things to measure. Although the pedagogies and assessments that informants used were truly effective in achieving the goals of their lessons but they are all abortive in the sense that they did not give emphasis on the achievement of the LCs.

On the other hand, it is likewise important to note that there has been a great confusion from the teachers whether what to really implement in the PE class. The informants particularly described that they were too focused in implementing the activities and lessons in the learner's material instead of achieving the learning competencies. Hence, the subtheme *Content vs. Learning Competency* has been developed. This designated the *program variable* of the intervention model which describes the contents and subject matter in the curriculum.

The informants of this study strongly argued that all the contents in the book are in line to the curriculum standards, thus, they claim that when they follow achieving the content is also implementing the LCs. This situation clearly implies that teachers' perception about the successful implementation of the PE curriculum depends whether you have covered all the topics and lessons in the book. Informant 1 further commented that *"for as long as you have achieved all the objectives in your lesson plan and discussed and performed the activities in the learner's material, you are already successful in your lesson"*. An indication that teachers undermined the processing and teaching of LCs due to the too confinement of the lessons and activities in the learner's material. This account was even strengthened by the statement of Informant 7 who stated that *"ikaw nalang bahala'g analyze kung naigo ba sa Learning Competencies akong gitudlo"*. (It is up to you (researcher) to analyze if I have hit the Learning Competencies in my lesson.)

Their propositions may not be always true because of the fact that the competencies in the PE subject are profound that it cannot be immediately attained through merely discussing the topics. Some competencies should be executed and integrated in the real-life situation in order to attain its main aim. For example: Learning Competency No. 7 indicates that, the student should be able to *“express a sense of purpose and belongingness by participating in physical activity-related community services and programs”*. Hence, the competency tells us that learning does not only limited in the classroom but also in the community.

In today's Physical Education, the improvement of health-related fitness of the students are already given much focus. This shift of the goals in Physical Education subjects deviated from the previous goal which is about athleticism (K to 12 Curriculum Guide, 2013 and Cariaga, 2014). According to Stanec (2013), a person who is physically literate with competence and confidence to do physical activities will grow healthy and active for life. She added that Physical Education has a role in achieving this goal and that teachers should not only give attention to the teaching of the basic skills of sports and other physical activities but to teach the students on how these skills are being utilized to benefit their health. This current view of Physical Education in school has been adopted in the K to 12 Physical Education curriculum in the Philippines. However, the findings have shown a great deviation from the ideologies of PE. Majority of the informants implemented only the lessons and topics in the learner's material and not the Learning Competencies in the curriculum.

**Theme 3: Unresolved Drawbacks.** The third theme described the *context variable* of the intervention model where contextual factors such as the school environment, time, parents' concerns, students' issues and learning environment at large during the implementation of the curriculum are likely to have an impact in the implementation of the curriculum either directly or indirectly. The question of this study: “What are the challenges in the implementation?” examined particularly the contextual factor that affected the implementation of the PE curriculum. The findings of this study hold true to this contention. The data revealed that teachers have encountered challenges in the implementation particularly in the lack of PE facilities and equipment, concerns for students' safety, insufficient seminars and trainings, inadequate time allotment for PE subjects and work overload.

The findings particularly indicated that among the challenges that they encountered, the *Lack of Facilities and Equipment* considered as the main factor that affected their implementation. There was a general outcry from the informants regarding the unresolved shortage of PE resources even the countless times they have expressed it to their respective superiors. In fact, the transcripts and direct observations revealed how the subject received minimum budget for the purchase of materials and how it is undermined in the district due to the nonexistence of gymnasiums in all schools. A clear indication how PE is seen only at the secondary importance in the academe.

Informant 1: *“We don't have enough space to do the games and PE activities because our open area in school is used as parking lot and oftentimes, there were already other teachers who utilized the area for their lesson.”*

Informant 6: *“Due to lack of space, I taught only the theory and the basic skills for only few students. Sometimes, I asked the students to bring their own sport materials or speakers for dance”*

Informant 10: *“We used the barangay gym for our PE lesson...I usually ask permission from the barangay captain to use their gym because we don't have it in our school.”*

According to Wilbanks (2012), contextual factors must be considered because they can affect teaching-learning process. Aside from human factor, Kassaye (2014) and Brunelle, et al (1998) believed that the contextual factor and school environment are to be considered in the success or failure of the implementation of any program. In this study, teachers are struggling because of the lack of facilities and equipment for PE subject. These problems have adversely affected their instruction and their students' learning. Moreover, another factor that affected the implementation of the teachers is the *Concern of Students' Safety* where it ranked second from the responses of the informants. Informant 3 quoted that *“The safety of the students during school sports or movement activities is one of the issues of PE subjects. PE teachers cannot get away from this risk in their job.”* In fact, majority of the informants' responses revolve around the two LCs such as the Learning Competency number 3: “engage in moderate to vigorous physical activities for at least 60 minutes a day in and out of school” and Learning Competency number 7: “express a sense of purpose and belongingness by participating in physical activity-related community services and programs.”

Informant 2: *“nakasuway nako nga nahulog jud akong studyante sa among clase sa cheerdance, ako jud to’ng responsibility. Dili nako ganahan mausab to ug balik. Worse is I don’t know how to treat the child at that moment because I don’t have any first aid background.”* (I experienced that my student fell during our class in cheer dance. It was my responsibility. I don’t want that to happen again. Worse is that I don’t know how to treat the child at that moment because I don’t have any first aid background.)

Informant 5: *“samot nang dili ko mubuhay kay mo-adto na gud ug community. Dili ta makatag an unsay mahitabo nila ngadto.”* (Much more that I don’t like to implement it because students will have to go to the community. We cannot predict what will happen to them there (at the community))

Calderhead (1987), Sheehan and Chapman (2009), Sawińska (2015) emphasized that PE teacher should have background knowledge in sport sciences, first aid and in the human movement sports studies of PE in order to ensure safety in the instruction. However, in the Philippines setting, Pazzibugan (2013), Samillano (2015), Combalicer (2016), Calot (2015) revealed the saddening status of teachers in terms of professional training which badly implicated the attitude of the teachers and the quality of their instructions. The findings of this study reflects the slow resolution of the said issue.

*Untouched Concept of Learning Competency.* Untouched Concept of Learning Competency ranked third from the responses of the informants. The data from the interview revealed the general consensus of their concern regarding the seemingly vague concept of LCs in the curriculum which resulted to confusion and misunderstanding among the teachers with regard to the desired outcome.

Informant 2: *“The mass training for MAPEH teachers emphasized only on the teaching strategies and assessments to effectively implement the lessons in the learner’s material.”*

Informant 4: *“Ang gitudlo kay mga lesson raman to sa MAPEH ug nagwalk through sad mi sa sulod sa learning material.”* (The training was all about the lessons in MAPEH and we just walked through the contents of the learner’s material.)

The problem with regard to the untouched concept of learning competency boils down to the lack of adequate seminars and training of the teachers. According to Badugela (2012), inadequate training of teachers and the lack of resources make it complicated for teachers to learn what is expected from them. One informant stated that the seminar was not enough because there were no follow up seminars after the Grade 10 Mass Training for MAPEH teachers held last 2015. Most of them are still confused about the essence of the LCs and how they should implement them effectively in the class.

The lacks of trainings of the teachers have marred the implementation of the K to 12 curriculums. Calot (2015) recommended that teachers should attend more trainings and seminars after her study revealed that the English Learning Competencies were “moderately attained” by the teachers during their instruction. Fullan (1991) and agreed that some teacher trainings do not provide the actuality of the classroom scenarios. Mamosa (2010) expressed that the teachers need to acquire appropriate and enough knowledge and skills in order to effectively and efficiently implement the new curriculum. Nunall (2012) found out in his study that teacher training and support has an important part in the curriculum implementation as well as the teacher’s capacity and knowledge and their everyday routine in the classroom.

*Inadequate Time Allotment for PE subjects.* Insufficient time for PE subjects has been third in the rank from the informants’ responses. Specifically, seven of the informants indicated that PE subject in the school is recited only once a week and an hour of PE a day is not enough for the discussion of concepts and the application of skills. They expressed that it is quite impossible to achieve the PE lesson objectives in less than an hour.

Informant 2: *There should have enough time allotted for PE. It is almost impossible for us to cover all the lessons in the subject if we meet only once a week.*

Informant 7: *We did not immediately do practical physical activity test without discussing the theory first. By considering this, PE needs ample time for the discussion of theory and for application. What’s happening now is that the teachers are cramming to make use of the short time for discussion and practical.*

According to UNESCO (2013) on benchmarking the Quality PE, the recommended weekly allocation of PE curriculum is 180 minutes. Also, WHO (2017) recommended that 5–17 years old should achieve at least 60 minutes of MVPA daily. In Scotland, the 2014 Commonwealth Games Legacy Plans is created to achieve quality PE in the country. However, the Philippine curriculum still fell short in attaining this global policy and standard. Time allocation of PE in the country is still not enough to achieve the 180 minutes weekly recommendation of UNESCO and 60 minutes daily physical activity for the youth as recommended by WHO. The findings of the study will support the claims.

*Work Overload.* The finding indicated that the informant excessive paperwork, documentation and other ancillary works have caused them to hastily finish their lessons. This makes *Work Overload* shared in the 3rd rank of this study. During the interview, additional paper works like SMEA or School Monitoring Evaluation and Adjustment, RPMS or Results- based Performance Management System, Monthly Accomplishment Reports and the Daily Lesson Log have cost so much of their time that studying the new lessons and preparing the materials for teaching instruction have been compromised. Informant 1 pointed out that considering all the documentations and paper work that teacher has to accomplish in a day it is “clearly not enough to achieve all the demands.”

Informant 1: *There were several times that I gave seatworks to my students because I still needed to choreograph dance presentation for the upcoming school event.*

Informant 2: “Magkara-kara nalang ko unsay unahon. Mudagan ko sa gym kay naay atimanon nga mga bata nga nagpractice sa ilang sports , mudagan nasad ko sa faculty para humanon ang DLL ug magrecord sa mga output sa studyante, mudagan nasad ko sa classroom kay klase.”(I get rattled what to prioritize. I run off to the gym to accommodate the students who are practicing their sports, then go back to the faculty room to finish my DLL and record the scores of students’ outputs and I run again to the classroom to teach.)

The results of this study were parallel to the article published by the National Council for Hypnotherapy of London Last November 2015 that teachers are getting ineffective in their teaching due to heavy workloads. All of them strongly advocated good teaching instruction for PE but there multiple roles in school hinders them to achieve it. They said that aside from their advisory classes, they also need attend their other classes and additional non-teaching activities such spearheading monthly school programs, facilitating scheduled barangay and municipal events, and preparing students’ Nutritional Status reports and coaching and choreographing athletic games, cultural events and scouting clubs. The data displayed the pressing status that teachers are suffering. The vicious flip-flopping back and forth of the teachers from their ancillary duties to classroom job, while keeping their paper works updated are perhaps the heart of the problem that cause complex gaps in the policy and practice.

**Conclusion.** Based on the theory, literature review and findings of the study, the implementation experiences and practices of the teachers did not achieve the required content standards and performance standards of Grade 10 Physical Education curriculum. Although the data indicated that teachers successfully implemented the content in book, their lacks of in-depth knowledge about the Learning Competencies have delimited their opportunity to make their instructions more worthwhile for the students.

**Recommendations.** Based from the findings of this study, the following recommendations are proposed:

1. Re-tooling of the teachers in the K to 12 Physical Education curriculum.
2. Inclusion of the PE curriculum in the National and Regional DepEd Assessment to ensure the extent of the implementation of the Learning Competencies per grade level.
3. Revisiting the PE Curriculum Standards and Learning Competencies to meet the needs of the learners.

#### References:

- Badugela T. (2012). PROBLEMS FACING EDUCATORS IN IMPLEMENTING THE NATIONAL CURRICULUM STATEMENT: THE CASE OF TSHIFHENA SECONDARY SCHOOL, VHEMBE DISTRICT, LIMPOPO PROVINCE, SOUTH AFRICA. Retrieved from [http://uir.unisa.ac.za/bitstream/handle/10500/7642/dissertation\\_badugela\\_tm.pdf?sequence=1](http://uir.unisa.ac.za/bitstream/handle/10500/7642/dissertation_badugela_tm.pdf?sequence=1)
- Ballet, K., Kelchtermans, G., & Loughran, J. (2006). Beyond Intensification Towards A Scholarship Of Practice: Analysing Changes In Teachers' Work Lives. *Teachers and Teaching: Theory and Practice*, 12(2), 209-229. Retrived from [https://www.researchgate.net/publication/249002107\\_Beyond\\_intensification\\_towards\\_a\\_scholarship\\_of\\_practic\\_e\\_Analysing\\_changes\\_in\\_teachers\\_work\\_lives](https://www.researchgate.net/publication/249002107_Beyond_intensification_towards_a_scholarship_of_practic_e_Analysing_changes_in_teachers_work_lives) Retrieved on October 05, 2017
- Ballet, K., & Kelchtermans, G. (2009). Struggling with workload: Primary teachers' experience of intensification. *Teaching and Teacher Education: An International Journal of Research and Studies*, 25(8), 1150-1157. doi: 10.1016/j.tate.2009.02.012)
- Brunelle, J., Drouin, P. Godbout, P., & Tousignant, M. (1988). *La supervision de l'intervention en activité physique.* Montréal, Québec: Gaëtan Morin Ed.
- Calot (2016). Implementation of K to 12 Curriculum and the Learning Competencies in English in the Secondary Schools of the Division of Northern Samar. Retrieved from <http://uruae.org/siteadmin/upload/2363UH0516139.pdf> on January 17, 2017.
- Camacho D., Legare J. (2016). Shifting gears in the classroom—movement toward personalized learning and competency-based education. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1002/cbe2.1032/full>.
- Cariaga (2007). *The Physical Education Program of State Universities in Isabela: An Assessment.* Published Thesis, Philippine Normal University

Combalicer (2016). Best Practices And Problems In The Initial Implementation Of The K+12 Curriculum Among Teachers In Infanta, Quezon: Implications To An Effective Implementation Of Senior High School. Retrieved from <http://jesoc.com/wp-content/uploads/2016/08/Edu-4.pdf> on January 14, 2017.

Commonwealth Games legacy plans. (2014). Legacy 2014 Programmes. Retrieved from <http://www.legacy2014.co.uk/what-is-legacy/legacy-programmes/active> on January 26, 2017

Fisher J. (2014). Considering competency-based education? Reconsider how you assess. Retrieved from <https://www.christenseninstitute.org/blog/considering-competency-based-education-reconsider-how-you-assess/>

Fullan M. (2007). The new meaning of educational change (4th ed.). New York, NY: Teachers College Press.

Kahiga (2014). A Comparative Evaluation of the Implementation of the Physical Education Curriculum in Nairobi and Nyeri Pre Schools. Published Research Thesis, University of Nairobi

Legaspi A. (2014). Lack of materials, facilities still hound K to 12 implementation. GMA NEWS. Retrieved from <http://www.gmanetwork.com/news/story/363734/news/specialreports/lack-of-materials-facilities-still-hound-k-to-12-implementation> Retrieved on August 20, 2016.

Kassaye (2014). Impediment of Physical Education Curriculum Implementation: The cases of selected catholic mission schools in Addis Ababa. Retrieved from <http://etd.aau.edu.et/bitstream/123456789/9030/1/Lensa%20Kassaye.pdf>

Mcleod S. (2014). The Interview Method. Retrieved from <http://www.simplypsychology.org/interviews.html> Retrieved on December 30, 2016

Mendenhall R. (2012). What Is Competency-Based Education?. Retrieved from [https://www.huffingtonpost.com/dr-robert-mendenhall/competency-based-learning-\\_b\\_1855374.html](https://www.huffingtonpost.com/dr-robert-mendenhall/competency-based-learning-_b_1855374.html)

NASPE. (2013). *Loopholes Stalling Progress in Physical Education*. Retrieved from <http://www.shapeamerica.org/advocacy/son/upload/shape-of-the-nation-infographic1.pdf> Retrieved on August 20, 2016.

Nkosi, T. P. (2014). Teachers' experiences of the implementation of the Curriculum and Assessment Policy Statement: a case study of three primary schools in KwaZulu-Natal Province. Retrieved from [https://researchspace.ukzn.ac.za/bitstream/handle/10413/12747/Nkosi\\_Thandi\\_Priscillia\\_2014.pdf?sequence=1&isAllowed=y](https://researchspace.ukzn.ac.za/bitstream/handle/10413/12747/Nkosi_Thandi_Priscillia_2014.pdf?sequence=1&isAllowed=y) on January 03, 2017.

Ortilla M. (2015). Problems hounding K-to-12 program (Part 1): Undelivered books. CNN Philippines. Retrieved from <http://cnnphilippines.com/investigative/2015/06/25/Problems-hounding-K-to-12-program-Part-1-Undelivered-books.html> Retrieved on August 20, 2016.

Sawińska E. Bezpieczeństwo w Szkolnym wychowaniu fizycznym (2017) .School Physical Education safety Retrieved from: [sp1.brzeszkujawski.pl/sp1s/Download/publ/Bezp\\_wf.doc](http://sp1.brzeszkujawski.pl/sp1s/Download/publ/Bezp_wf.doc). December 20, 2016

Samillano J. (2015). The competency level among MAPEH teachers in teaching performing arts in selected public secondary schools in north Cotabato. Retrieved from [https://www.academia.edu/11417973/Competency\\_Among\\_MAPEH\\_Teachers\\_in\\_Teaching\\_Performing\\_Arts\\_in\\_Selected\\_Public\\_Secondary\\_Schools\\_in\\_North\\_Cotabato](https://www.academia.edu/11417973/Competency_Among_MAPEH_Teachers_in_Teaching_Performing_Arts_in_Selected_Public_Secondary_Schools_in_North_Cotabato) on January 04, 2017

Shape of the Nation. (2016). *SHAPE OF THE NATION: Status of Physical Education in the USA*. Retrieved from [http://www.shapeamerica.org/advocacy/son/2016/upload/Shape-of-the-Nation-2016\\_web.pdf](http://www.shapeamerica.org/advocacy/son/2016/upload/Shape-of-the-Nation-2016_web.pdf) .Retrieved on August 19, 2016.

Stanec A. (2013). PE lesson 1: Physical Literacy is Not Physical Activity. Retrieved from <http://www.movelivelearn.com/discover-the-multi-faceted-elements-of-physical-literacy-to-best-enable-the-sum-of-its-parts/> on January 03, 2017

United Nations Educational, Scientific and Cultural Organization (UNESCO). (2013). *World-wide Survey of School Physical Education: Final Report 2013*. Retrieved from <http://unesdoc.unesco.org/images/0022/002293/229335e.pdf> Retrieved on August 21, 2016

World Health Organization (2013). *Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013-2020*. Geneva, Switzerland.

WHO. (2007). An up-date on the status of Physical Education in schools worldwide: Technical Report for WHO. Geneva: World Health Organization.

WHO (2017). Physical Activity. Fact Sheet. Retrieved from <http://www.who.int/mediacentre/factsheets/fs385/en/> Retrieved on December 29, 2016

WHO (2017). Physical activity and young people. Retrived from [http://www.who.int/dietphysicalactivity/factsheet\\_young\\_people/en/](http://www.who.int/dietphysicalactivity/factsheet_young_people/en/) on January 20, 2017

Wilbanks A. (2012). Contextual Factors. Retrieved from <https://w.taskstream.com/ts/wilbanks7/hopewilbanks.html/k2cxce00kpc0cwc1crcvcvt>

## **A Comparative Study of Sports Injuries among Rural & Urban Female Long Distance Runners**

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### **Abstract:**

Sports injuries are injuries that occur in athletic activities or exercising. When injured the two main systems affected are the nervous and vascular systems. Long term injuries are a dark time for players. Prevention helps reduce potential sports injuries. 20 rural & 20 urban long distance female were selected as a subject. The subject was ranging from 18-25 years. While comparing a data of percentage of sports injuries, it was observed that percentage of sports injuries of rural players is higher than urban players. Percentage of Sciatica injury is higher than other injuries in Urban players this is located at the back of feet and Shin Splint injury is higher than other injuries in Rural players, this is located at the shinbone, the large bone in the lower leg. In the light of finding it is concluded that main reason of sports injuries is wear improper gear and Malnutrition. In the rural area most of the long distance runners are not wearing shoes during practice or tournament so that this is suffering from Shin Splint injury as well as players were taken a proper diet so that they suffering from Injuries. Keyword : Sports injuries, long distance female players, rural & urban players.

### **Introduction**

The same experience can bring people to dark place as well. Sports injuries are injuries that occur in athletic activities or exercising. When injured the two main systems affected are the nervous and vascular systems. Long term injuries are examples of those dark times, often affecting an athlete more mentally than physically. Sports injuries are mostly commonly caused by poor training method, structural abnormalities weakness in muscles, tendons, ligaments and unsafe equipment like shoes etc. prevention helps reduce potential sport injuries. It is important to establish participation in warm ups, stretching and exercise that focus on main muscles groups commonly used in the sport of interest. Also creating an injury prevention program as a team. Which includes education on rehydration, nutrition, monitoring team members "at risk" monitoring behavior, skills and techniques. Nearly two million people every year suffer sports related injuries & receive treatment in emergency department. Sports injuries affect an athlete physically as well as mentally. psychological mentality of injured and uninjured performers have consistently found injured athletes as having a lower psychological affect than uninjured athletes as well as lower self-esteem, higher levels of depression and more incidences of negative thoughts.

### **Objectives**

To find out the percentage of Sports Injuries among Rural and Urban female long distance runners.

To find out the percentage of Reasons of sports Injuries among Rural and Urban female long distance runners.

### **Hypothesis**

There might be significant differences between the percentage of Sports Injuries among Rural and Urban female Long distance runners.

### **Methodology**

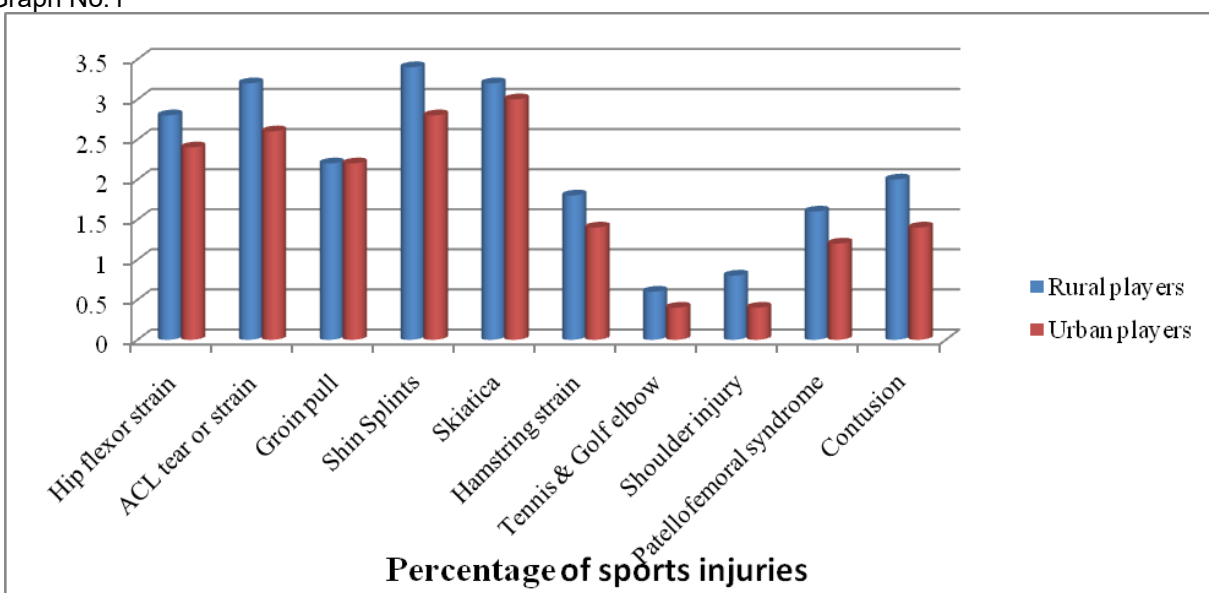
For this study 20 Rural and 20 Urban Long distance female runners were selected from Nandurbar zone & Dhule zone respectively. The subject age ranging 18-25 years old. Self-made questionnaire was applied for collection of data.

## Result

Table no – 1 Percentage of Sports Injuries

Sports injuries	Rural players	Urban players
Hip flexor strain	2.8	2.4
ACL tear or strain	3.2	2.6
Groin pull	2.2	2.2
Shin Splints	3.4	2.8
Sciatica	3.2	3
Hamstring strain	1.8	1.4
Tennis & Golf elbow	0.6	0.4
Shoulder injury	0.8	0.4
Patellofemoral syndrome	1.6	1.2
Contusion	2	1.4
Percentage	2.16	1.78

Graph No.1

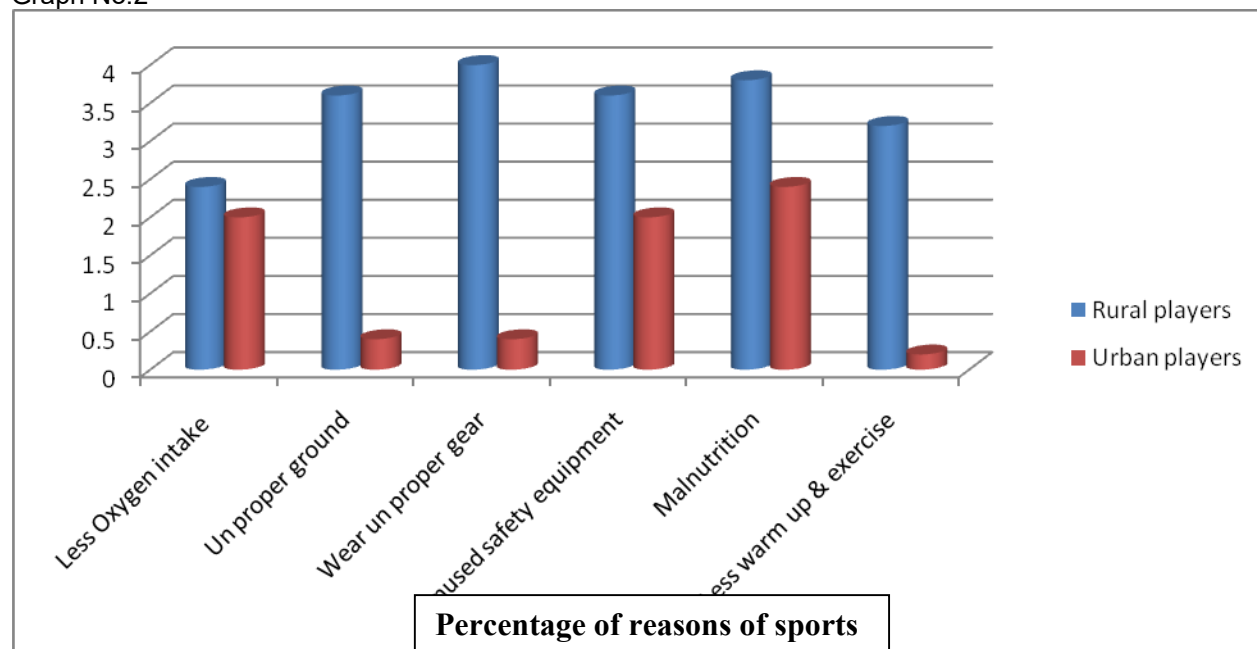


This table shown that the percentages of Sports Injuries of Rural female Long distance runners are higher than urban female long distance runners. In this table Percentage of Sciatica injury is higher than other injuries in Urban players and Shin Splint injury is higher than other injuries in Rural players.

Table no – 2 Percentage of Reasons of Sports Injuries

Reasons	Rural players	Urban players
Less Oxygen intake	2.4	2
Improper ground	3.6	0.4
Wear improper gear	4	0.4
Unused safety equipment	3.6	2
Malnutrition	3.8	2.4
Less warm up & exercise	3.2	0.2
Percentage	1.24	0.44

Graph No.2



This table shown that the main reason of sports injuries is Malnutrition and Wear improper gear. This is a main reason of weakness of muscles strength.

### Conclusion

In the light of finding of this study it is concluded that percentage of sports injuries of rural female long distance runners are higher than urban female long distance runners. Percentage of Sciatica injury is higher than other injuries in Urban players this is located that back of feet and Shin Splint injury is higher than other injuries in Rural players, this is located that shinbone, the large bone in the lower leg. Table no.2 is shown that main reason of sports injuries is malnutrition and wears improper gear. Many players don't take a proper diet so that muscular strength was not properly developed. It is a main reason of sports injuries. In the rural area most of the long distance runners are not wearing shoes during practice or tournament so that this is suffering from Shin Splint injury.

### References

- Smith, A.D., Andrish, J.T., Micheli, L.J. Current comment: The prevention of sport injuries of children and adolescents. American College of Sports Medicine, ; August, 1993
- Goldstein, J.D., Berger, P.E., Windler, G.E. et al, Spine injuries in gymnasts and swimmers. An epidemiologic investigation. Am J Sports Med. 1991;19:463–468
- Hergenroeder, A.C. Prevention of sports injuries. Pediatrics. 1998;101:1057–1063
- Muscari, M. Preventing sports injuries. Am J of Nurs. 1998;7:58–60.



## **Analysis Of Muscular Endurance Between Rural And Urban Junior College Boys In Different Age Categories**

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### **Abstract**

The purpose of the present study was to analysis of muscular endurance between rural and urban junior college boys in different age categories. To achieve this purpose of the study three hundred junior college boys of rural and urban areas from Kadapa District, Andhra Pradesh, India were randomly selected as subjects. Among them one hundred and fifty junior boys (seventy five rural boys with age between 15 to 16 years and seventy five rural boys with age between 16 to 17 years) and one hundred and fifty junior boys (seventy five urban boys with age between 15 to 16 years and seventy five urban boys with age between 16 to 17 years). The muscular endurance was selected as criterion variable. The following group's namely rural junior boys with age category between 15 to 16 years and 16 to 17 years, urban junior boys with age category between 15 to 16 years and 16 to 17 years were selected as independent variables. The data were collected from rural and urban junior boys with different age categories on muscular endurance were assessed by using standardized test items namely pull ups, and were statistically analyzed by using 2 x 2 factorial ANOVA. Whenever, the obtained 'F' ratio value for interaction effect was found to be significant, the simple effect test was applied as follow up test.

**Key words:** Muscular Endurance, 2x2 factorial ANOVA, Urban Junior college boys, Rural Junior college boys, Age category

### **INTRODUCTION**

Human settlements are categorized as rural or urban areas on the basis of the density of population and human formed structures in a particular area. Urban areas consist of towns and cities while rural areas contain villages and hamlets. Rural areas may develop randomly on the foundation of natural vegetation and fauna available in a region, whereas urban settlements are proper, suitable and planned settlements developed according to a process called urbanization. Several times, rural areas are given special attention by governments and development agencies to turn them into urban areas. Urban areas are defined by their advanced public services, better facilities for education, sports, transport, business, health, social interface and overall improved standards of living. Socio-cultural information is usually based on urban residents. Whereas rural areas depends more on natural assets and events, the urban inhabitants gets the benefits of man's advancements in the fields of science and technology and for their everyday functioning, they do not need to depend upon nature. Residing in places distinguished by size of population can be linked with variations in eating attitudes, availability of sports facilities, accessibility of health services and opportunities for physical fitness activities (Tsimeas et al., 2005).

According to Bucher (1985) Physical fitness is “the ability of an individual to live a full and balanced life. It involves physical, mental, emotional, social and spiritual factors and the capacity for their wholesome expression”. Physical fitness refers to practical performance of exercise that calls for the number of experiences, they are the feeling of happiness in the process of correct performance of movement, feeling of “confidence, self satisfaction, surprise and unhappy in the process of confusion and disappointment etc. It is a positive quality, extending on a scale from death to “abundant life”.

All living individuals have some degree of physical fitness which varies 10 considerably in different people and in the same person at different times. It is not as broad in its meaning as ‘total fitness’. It include, adequate degree of health, posture, physique, proper functioning of vital organs, nutrition, and good health habits along with an adequate amount of endurance, strength, stamina and flexibility (Clark and David ,1978) .

### Materials And Tools

#### Collection of Data

TO ACHIEVE THIS PURPOSE OF THE STUDY THREE HUNDRED JUNIOR COLLEGE BOYS OF RURAL AND URBAN AREAS FROM KADAPA DISTRICT, ANDHRA PRADESH, INDIA WERE RANDOMLY SELECTED AS SUBJECTS. AMONG THEM ONE HUNDRED AND FIFTY JUNIOR BOYS (SEVENTY FIVE RURAL BOYS WITH AGE BETWEEN 15 TO 16 YEARS AND SEVENTY FIVE RURAL BOYS WITH AGE BETWEEN 16 TO 17 YEARS) AND ONE HUNDRED AND FIFTY JUNIOR BOYS (SEVENTY FIVE URBAN BOYS WITH AGE BETWEEN 15 TO 16 YEARS AND SEVENTY FIVE URBAN BOYS WITH AGE BETWEEN 16 TO 17 YEARS)

table I

the mean and standard deviation on Muscular endurance of rural and urban junior boys with different age categories

Gender / Area of Games			Age 15 to 16 Years	Age 16 to 17 Years
Rural Boys	Junior	Mean	13.73	17.64
		SD	1.64	1.38
Urban Boys	Junior	Mean	15.37	17.59
		SD	2.54	1.30

### Results on muscular endurance

Table I shows that the mean values on muscular endurance of rural boys with age between 15 to 16 years and rural boys with age between 16 to 17 years, urban boys with age between 15 to 16 years and urban boys with age between 16 to 17 years were 13.73, 17.64, 15.37 and 17.59 respectively.

The two way factorial ANOVA on muscular endurance of rural and urban junior boys with different age categories have been presented in Table I-a

Table I-a

Source of Variance	Sum of Squares	df	Mean Squares	Obtained “F” Ratio
A factor (Areas)	47.2	1	47.20	14.65*
B factor (Age)	702.3	1	702.27	217.97*
AB factor (interaction) (Gender x Area of Games)	53.8	1	53.76	16.69*
Within or Error	953.7	296	3.22	

(The table value required for significance at .05 level of confidence with df 1 and 296 was 3.871).

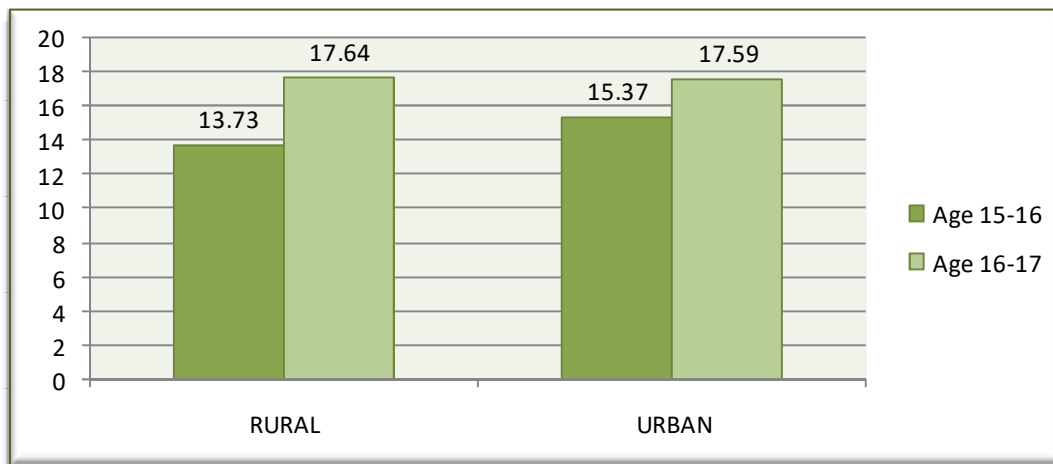
Table I-a shows that the obtained 'F' ratio value on muscular endurance was 14.65 for factor-A (Areas – Rural and Urban) irrespective of their age categories which was greater than the table value of 3.871 with df 1 and 296 required for significance at .05 level of confidence. The results of the study indicated that there was a significant difference between rural and urban area junior boys irrespective of their age categories on muscular endurance.

The obtained 'F' ratio value on muscular endurance was 217.97 for factor-B (Age – Age between 15 to 16 years and Age between 16 to 17 years) irrespective of their gender which was greater than the table value of 3.871 with df 1 and 296 required for significance at .05 level of confidence. The results of the study indicated that there was a significant difference between 15 to 16 years and 16 to 17 years junior boys irrespective of their areas (rural and urban) on muscular endurance.

The obtained 'F' ratio value on muscular endurance was 16.69 for interaction [AB factor - (Areas × Age)] which was greater than the table value of 3.871 with df 1 and 296 required for significance at .05 level of confidence. The results of the study showed that there was a significant difference between rural and urban junior boys with different age categories on muscular endurance.

The mean values of between rural and urban junior boys with different age categories muscular endurance are graphically represented in Figure I.

**FIGURE-I THE MEAN VALUES OF RURAL AND URBAN JUNIOR BOYS WITH DIFFERENT AGE CATEGORIES ON MUSCULAR ENDURANCE**



### Conclusion

There was a significant difference between rural and urban area junior boys irrespective of their age categories on muscular endurance. There was a significant difference between 15 to 16 years and 16 to 17 years junior boys irrespective of their areas (rural and urban) on muscular endurance.

There was a significant difference between rural and urban junior boys with different age categories on muscular endurance. The urban junior college boys had the ability of muscular endurance than the rural junior college boys at 15-16 years age category. The rural junior college boys had better ability of muscular endurance than the urban junior college boys at 16-17 years age category.

### References:

- Tsimeas, P.D., Tsiokanos, A.L., Koutedakis, Y., Tsigilis, N. and Kellis, S. (2005).** Does living in urban or rural settings affect aspects of physical fitness in children? An algometric approach British Journal of Sports Medicine, 39(9):671-674.
- Bucher Charles A. and William E. Prentice,** Fitness for college and Life (Toronto: C.V. Mosby company, 1985), p.7, 16, 37
- Clark Harrison Clark H. and David H. Clarke,** Developmental and Adapted Physical Education (2nd ed.) Englewood Cliffs, N.J: Prentice – Hall, Inc., 1978) p.p. 31

## **A Study On Emotional intelligence And Adjustment Of Sports Personality**

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### **Abstract:**

Man is a societal Animal, yet it isn't precisely the same as different creatures by judiciousness of its Intelligence. Along these lines, since the conditions, man has started insights about himself; the likelihood of "Understanding" has been at the middle stage, It is sometimes said that high learning may guarantee the individual the best position, at any rate; it may not make him the best individual. This is significant for all circles of life including sports. There are curios and old structure that recommend that the Chinese occupied with wearing exercises as ahead of schedule as 4000 B.C. Aerobatic seems to have been a prevalent game in China's old past. Landmarks to the Pharaohs show that various games, including swimming and angling, to ascertain the huge contrast of development among the college level high and low performing soccer players. There may not be a huge distinction with respect to enthusiastic knowledge among the college level high and low performing soccer players, Similar study can also be conducted considering same other variables such as attitude, motivation etc. Adjustment and emotional intelligence have greater impact on individual. Well-adjusted and emotionally intelligent sports personality can better perform in their social, psychological, emotional

### **INTRODUCTION:**

There are endless cases of exceptionally fruitful individuals on the planet, whose IQ levels were close to normal, however attributable to their extraordinary Emotional Intelligence they have succeeded and exceeded expectations throughout everyday life; Bill Gates is one remarkable illustration, who disregarding being a school dropout established and created 'Microsoft' as the main organization on the planet. Today, the control of the work environment is quickly changing and another measuring stick is being utilized to judge individuals. This isn't only regarding how brilliant a man is or what his scholarly capability is yet in addition by how well he can deal with himself as well as other people.

### **BRANCHES OF EMOTIONAL INTELLIGENCE:**

The four branches of passionate knowledge as characterized by Mayer and Salvoes. These four branches are:

1. The capacity to see precisely, assess, and express feelings; recognizing feelings in oneself as well as other people.
2. The capacity to get to and/or create sentiments when they encourage thought; utilizing feeling in thinking and critical thinking.

### **THE COMPONENTS OF EMOTIONAL INTELLIGENCE:**

Self-mindfulness alludes to the capacity to perceive and distinguish your emotions. The EI specialists stress that it's essential to have the capacity to perceive feelings, for example, outrage or love keeping in mind the end Tavarageri Govt First Grade College, I to act suitably. Spooks, for instance, generally,

### **PASSIONATE INTELLIGENCE CONSEQUENCES FOR THE GAMES WORLD:**

While passionate insight is absolutely not a cure-just for the ills that exist on the planet, it is an imperative factor in numerous worldwide and individual issues. Street wrath, tyke and spousal mishandle, and school

### **COACHING EMOTIONALLY SENSITIVE INDIVIDUALS:**

Ability and may have just been depicted as a "virtuoso". The capable individual may have piano, violin or cello aptitudes and be making a beeline for an orchestra alliance.

### **Enable the person to continue at their own pace.**

A few instructors, mentors, guides and advocates may see an expansion in candidly touchy People. It is theorized that we at present are experiencing a companion of people that may have experienced childhood in a solitary parent home or a home wherein the two guardians worked

**Proclamation of the problem** The reason for the investigation was to think about passionate knowledge level among the college level high and low performing soccer players

### **TARGETS OF THE STUDY**

1 To notice the huge contrast of enthusiastic insight among the college level high and low performing soccer players.

2 To ascertain the huge contrast of development among the college level high and low performing soccer players

### **DELIMITATIONS**

1 The investigation was delimited to the male college-level soccer players

**IMPEDIMENTS** In this way, it would wind up troublesome for the scientist to decide the reactions given legit and wholehearted or not. Certain components like eating regimen, rest, rest and so forth were outside the ability to control of the agent and were considered as restrictions of the investigation

### **SUPPOSITIONS**

1. There may not be a huge distinction with respect to enthusiastic knowledge among the college level high and low performing soccer players.

2. There may not be a huge distinction with respect to development among the college level high and low performing soccer players.

### **PROCEDURE/ CHOICE OF SUBJECTS**

The motivation behind the investigation was to think about the enthusiastic insight level among the college level high and low performing soccer players. For this reason, Two Hundred Forty (N = 240) male college level soccer players matured between 18-25 A long time were chosen for this investigation. The purposive examining procedure was utilized to accomplish the targets of the examination. Every one of the subjects, in the wake of having been educated about the Tavarageri Govt First Grade College, I and the convention of the investigation, gave they agree and volunteered to Take an interest in this examination. They were additionally isolated into two gatherings N = 120 each (i.e., N1=120; High Performance and N2=120; Low Performance).

### **DISCOVERIES**

Discoveries of this investigation were made in the arrangement of the considerable number of factors in particular Maturity, Compassion, Morality, Sociability and Calm Disposition. For every one of the picked variable, the outcomes relating to a huge distinction, assuming any, among the college level high and low performing soccer players is exhibited in following tables: 110

Low Enactment Group(LEG)

**Table-3. Mean Values ( $\pm$ SD), Standard Error of the Mean and Test Statistic *t* of Maturity in High- Enactment Group (N = 120) and Low-Enactment Group (N = 120)**

High- Enactment Group (HEG)		
Size of the Sample (N)	120	120
Arithmetic Mean	68.2001	64.7249
95% CI for the mean	66.8152 to 69.5846	62.0000 to 67.4498
Difference	58.6823	227.2598
Std. deviation	7.6603	15.0750
Std. error of the mean	0.6992	1.3761
Mean variance		3.4749
Std. deviation		16.2753
CI at 95%		6.4168 to 0.5330
Test indicator “ <i>t</i> ”		2.338*
Degrees of Freedom (DF)		118
Two-tailed probability		P= 0.0209

## **FINDINGS, CONCLUSIONS AND ECOMMENDATIONS**

### **Real findings:**

1. There is no noteworthy contrast in the methods scores of enthusiastic insight of games identity amongst Govt.colleges in Koppal District of Karnataka State locale at 0.01 and 0.05 level of essentialness.

### **SUGGESTIONS FOR FURTHER STUDY:**

- 1) Similar study can also be conducted considering same other variables such as attitude, motivation etc.
- 2) Similar study can also be conducted at larger scale as an educational project.

### **CONCLUSIONS:**

Adjustment and emotional intelligence have greater impact on individual. Well-adjusted and emotionally intelligent sports personality can better perform in their social, psychological, emotional, sports facets of lives. This study describes the nature of their variables and their correlations, with special reference to the gender and type of school (government or private), where they are studying

## **A Comparative Study On Body Mass Index And Physical Fitness Variables Between Female Physical Education And Non Physical Education Students Of Mangalore University.**

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### **Abstract**

The study was taken by researcher to measure the body mass index and physical fitness of the Physical education students and Nonphysical education students to researcher was selected the Physical education students and Nonphysical education students. Total 30 Physical education students and 30 non physical education students were administrated body mass index Oregon motor fitness ability test and find out the motor fitness ability also find out the difference means Physical education students and Nonphysical education students and standard deviation Physical education students and Nonphysical education students. And also t-test has done statistical analysis. The data analysis of body mass index and physical fitness performance shows that physical education students have good physical fitness ability speed, coordination, explosive power flexibility and endurance compare to the Nonphysical education students. Keywords: physical fitness, Body mass Index, physical education students and non-physical education students.

### **Introduction**

All living beings are naturally active, they move and they live, they live because they move. Life is characterized by movement. Even the plants which seem obviously inherent also move. All functions of organism depend upon movement. Movement is the cosmic principle of matter and mind. The inherent energy is the matter generates movement, in turns, generates and sustains life. Each atom of the universe and each cell of organism are blessed with vital energy which causes them 'move'. Movement is an inform quality of the organism when movement erases life causes to exist. Physical movements are a biological necessity; physical education has devised organized games and sports in a systematic way within the educational institutions. A student learns a lot when he takes part in any sports events.

Promoting the health and safety of adolescents is of prime importance to the future of any Nation. Adolescence represents a distinctive period in the life cycle. Adolescents make important choices about their health and build up attitudes and health practices that affect their present safety and well-being as well as influence their threat for future serious chronic disease. Healthy choices and pro-social behaviors reflect true qualities of adolescents that will continue to adulthood. Taking care of adolescent health and wellbeing of present, we get in turn the workforce, parents, and leaders of future.

#### **Need and importance on physical fitness**

Every individual must know the importance of Physical fitness. In other words, one must have a fundamental knowledge of anatomy and physiology. This fundamental knowledge enables person to understand physical fitness. Physical fitness is the capacity of a person to function steadily and smoothly when a situation.

Physical fitness makes you feel mentally sharper, physically comfortable and more with your body better able to cope with the demands that everyday life makes upon you.

#### Motor Fitness

Motor fitness is the organic soundness and proper nutrition undergirds the entire physical structure. A motor unit is made up of a single motor neuron as well as all of the muscle fibers that neuron activity. When they receive signals from the brain to contract the muscle.

Motor fitness is an individual quality that differs from person to person. It is influenced by age, sex, heredity, personal habits and eating habits, attitude towards life, anxiety, tension and stress values of physical fitness.

#### Purpose of the study

The purpose of the study is to compare Body mass index and Physical Fitness Variables between Female Physical Education students and Nonphysical students of Mangalore University.

#### SIGNIFICANCE OF STUDY

It is hoped that the data generated and interpreted in the study will help the health related institutions; the information collected can be used for monitoring the students who are not regularly in involved in physical fitness activities. The author also assumes that this study will help the students who are more concentrated in academics than physical activities because to improve their health condition.

#### Methodology

The sample for the present study was 60 female students, 30 students from Physical Education and 30 students from Non Physical Education of Mangalore University.

#### Variables

Body mass index, standing broad Jump Test, 50 yards dash, Sit and Reach

Cooper 12-minute Run and Walk test, Shuttle Run,

Statistical Procedure for analysis's' test was applied to compare the mean scores of the two groups. correlation study involving the investigation of the possible relationship of Body Mass Index and fitness variables between female Physical Education students and Non Physical Education students of Mangalore University co-efficient of correlation 'r' was computed to find out the relationship of independent variable to dependent variable.

#### Result and Discussion:

Components	Group	Mean	S.D.	t
Standing broad jump	Physical education students	2.17	0.50	8.82
	Non physical education students	8.33	0.19	
Body Mass Index	Physical education students	21.42	3.92	2.75
	Non physical education students	19.19	2.6	
Cooper 12 minute run	Physical education students	2464	162.21	9.85
	Non physical education students	1827	330.62	
50 yard dash	Physical education students	5.42	0.10	-7.85
	Non physical education students	6.06	0.46	
Sit and reach	Physical education students	22.55	5.07	8.38
	Non physical education students	11.06	5.38	
Shuttle run	Physical education students	17.41	0.60	-1.54
	Non physical education students	19.67	2.38	

Significance 0.05 levels.

There is significant difference found between the means of selected physical fitness variables (Shuttle run), Explosive strength of legs (standing broad jump), speed of lower extremities and explosive strength (50yard dash), The Standard Deviation Of Standing Broad Jump Test Of Physical Education And Non Physical Education Students Is 0.50 And 0.19 Respectively . The calculated t-value is 8.82. This is greater than tabulated t-value (1.96) at 0.05 levels. Hence hypothesis is rejected. So, it indicates that there is insignificant difference on Standing Broad Jump Test performance among Physical Education and Non Physical Education Students. The Standard Deviation Of Body Mass Index Test Of Physical Education And Non Physical Education Students Is 3.92 And 2.6 Respectively. The calculated t-value is 2.75.



This is greater than tabulated t-value (1.96) at 0.05 levels. Hence hypothesis is rejected. So, it indicates that there is insignificant difference on body mass index Test among Physical Education and Non Physical Education Students. The Standard Deviation Of Cooper 12 Minute Run Test Of Physical Education And Non Physical Education Students Is 330.62 And 162.21 Respectively. The calculated t-value is 9.85. This is greater than tabulated t-value (1.96) at 0.05 levels. Hence hypothesis is rejected. So, it indicates that there is insignificant difference on Cooper 12 Minute Run Test among Physical Education and Non Physical Education Students. The Mean Value Of 50 Yard Dash Test Of Physical Education And Non Physical Education Students Is 5.42 And 6.06 Respectively .The Standard Deviation Of 50 Yard Dash Test Of Physical Education And Non Physical Education Students Is 0.1 And 0.46 Respectively . The Mean Value Of Sit And Reach Of Physical Education And Non Physical Education Students Is 22.55 And 11.06 Respectively The Standard Deviation Of Sit And Reach Test Of Physical Education And Non Physical Education Students Is 5.7 And 5.38 Respectively. The Mean Value Of Shuttle Of Physical Education And Non Physical Education Students Is 17.41 And 19.67 Respectively .The Standard Deviation Of Shuttle Run Test Of Physical Education And Non Physical Education Students Is 0.6 And 2.38 Respectively . The calculated t-value is -5.14. This is less than tabulated t-value (1.96) at 0.05 levels. Although, the performance of the physical education students were more.

### **Conclusion**

Body mass index and physical fitness test are analyzed and discussed here it was considered that through the Physical education students and Nonphysical education students showed superior performance in many motor fitness and body composition they still needed regular practice hard work and professionals determination and devotion to improve strength, speed, coordination, explosive power flexibility and endurance in order to attain the perfect level.

### **References:**

American college of sports medicine, Guidelines for exercise testing and prescription (6<sup>th</sup> ) EDITION Philadelphia, PA: Lea and Fibiger .2000  
 Diwakar, L.A., 2003, Anthropometrical And Motor Fitness Study Of Nepalese National Under 19 Kho-Kho Team .Kathmandu Publication  
 Nadgir, A. (1986). Morphological Differences Between Young Male Gymnasts, Young Non-Gymnasts, And Adult Elite Gymnasts. Eugene, OR: Microform Publication

## Effect Of Exercise On Human Body

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### Abstract

Today there is a growing emphasis on looking good, feeling good, and living longer. Increasingly, scientific evidence tells us that one of the keys to achieving these ideals is fitness and exercises. Getting moving is a challenge because today physical activity is less a part of our daily lives. There are fewer jobs that require physical exertion. We have become a mechanically mobile society, relying on machines rather than on muscles to get around. In addition, we have become a nation of observers with more people spending their leisure time pursuing just that – leisure. Consequently statistics show that obesity and overweight, the problems that come with high blood pressure, diabetes, cardiac arrest, etc. are on the rise. But statistics also show that preventive medicine pays off, so one should not wait until his/her doctor gives an ultimatum. Everyone must take the initiative to get active now. The decision to carry out physical fitness programme cannot be taken lightly. It requires a lifelong commitment of time and effort. Exercise must become one of those things that you do without question, like bathing and brushing your teeth. Unless you are convinced of the benefits of fitness and the risks of unfitness, you will not succeed. It has been realized that fitness adds not only years to one's life, but life to one's years.

Key words: Effect, Exercise, Human Body.

### Introduction

Living a healthier life can not only extend your life, it can also improve the quality. Feeling physically better and having control over your own life can greatly increase your mental health as well. Although there are some aspects of physical and mental health that are beyond an individual's control, there are many things that people can do to improve their quality of life. The decision to carry out a physical fitness program cannot be taken lightly. It requires a lifelong commitment of time and efforts. Exercise must become one of those things that you do without question like bathing and brushing your teeth. Unless you are convinced of the benefits of fitness and the risks of unfitness, you will not succeed. You can't regain physical fitness in a few days or weeks what you have lost in years of sedentary living, but you can get it back if you persevere.

Fitness is an increased enjoy Today, there is a growing emphasis on looking good, feeling good and living longer. Getting moving is a challenge because today physical activity is less a part of our daily lives. Wellness is much more than merely physical health, exercise or nutrition. It is the full integration of states of physical, mental, and spiritual well-being. The model used by our campus includes social, emotional, spiritual, environmental, occupational, intellectual and physical wellness. Each of these seven dimensions act and interact in a way that contributes to our own quality of life. Sports were one of human disciplines which had social function, and also it played a significant role in the formation and full development of personality. It develops the human bodies and culture by a steady pursuit of perfection which appears to enlarge progressively the range of human intellects and sensibilities.

"Exercise is physical activity that is planned, structured, and repetitive for the purpose of conditioning any part of the body. Exercise is used to improve health, maintain fitness and is as important as a means of physical rehabilitation."

### Types of exercise (Components of Physical Fitness)

**Endurance:** The ability to deliver oxygen and nutrients to tissues, and remove wastes, over sustained periods of time. Ex; can be measure Long runs, swims and cycling.

**Strength:** The ability of a muscle to exert force for a brief period of time. Ex; can be measure by various weight-lifting exercises.

**Speed:** Speed is the quickness of movement of limb, whether this is the legs of a runner or the arm of the shot putter.

**Flexibility:** The ability to achieve an extended range of motion without being impeded by excess tissue.

Ex; can be measure some stretching exercises.

**Agility:** To execute a sequence of movements smoothly and accurately.

**Factors Influencing Physical Fitness:** Age 2. Sex 3. Diet 4. Climate 5. Clothing

### When to exercise

The best popular time to work out is early morning. You should not exercise strenuously during extreme hot, humid weather, or within the two hours after eating. The late afternoon workout provides a welcome change of pace at the end of the workday and helps the dissolve the day's worries and tension.

### **The benefits of exercise for the human body systems**

**Improve health:** Everyone knows that physical fitness and exercise are good for human health. It helps lose or maintain body weight. It generally keeps you fit and healthier.

**Stronger muscles:** The volume of blood flow to muscle tissues increases during exercise. The immediate effects of exercise on your muscular system include more frequent muscle contraction, improved circulation of blood to your muscles and an increase in your muscle temperature. Over time, with regular training, adaptations occur both in your muscular system and your skeletal system,

**Better Flexibility:** By doing exercise flexibility of the body will improve.

**Improved Posture:** Exercise helps you achieve or maintain a healthy posture.

**Improved Heart and lung system:** As mentioned, your heart rate increases with physical activity to supply more oxygenated blood to your muscles. The fitter you are, the more efficiently your heart can do this, allowing you to work out longer and harder. As your muscles call for more oxygen your breathing rate increases.

**A better appetite:** Regular exercise, coupled with a healthy diet, is an important way to prevent and manage type diabetes. You feel more relaxed: Introducing a moderate amount of exercise into your daily life, you can significantly improve your overall health, well-being and quality of life.

**A better social life:** As a state in which the individual's capacities for participation in the social system are optimal. **Reduced risk of disease and ill health:** Exercise is good for preventing heart disease, diabetes, managing weight and stress to maintaining fitness. **Sleep Well:** A good night's sleep helps maintain your physical and mental health. Moderate exercise at least three hours before bed time can help you relax and sleep better at night.

### **Conclusion**

Today there is a growing emphasis on looking good, feeling good, and living longer. Increasingly, scientific evidence tells us that one of the keys to achieving these ideals is fitness and exercises. Getting moving is a challenge because today physical activity is less a part of our daily lives. There are fewer jobs that require physical exertion. We have become a mechanically mobile society, relying on machines rather than on muscles to get around. In addition, we have become a nation of observers with more people spending their leisure time pursuing just that – leisure. Consequently statistics show that obesity and overweight, the problems that come with high blood pressure, diabetes, cardiac arrest, etc. are on the rise. But statistics also show that preventive medicine pays off, so one should not wait until his/her doctor gives an ultimatum. Everyone must take the initiative to get active now. The decision to carry out physical fitness programme cannot be taken lightly. It requires a lifelong commitment of time and effort. Exercise must become one of those things that you do without question, like bathing and brushing your teeth. Unless you are convinced of the benefits of fitness and the risks of unfitness, you will not succeed. It has been realized that fitness adds not only tears to one's life, but life to ones years.

### **References:**

Dick, Frank W. (1980) Sports training principles: London.

Fox, Edward L (1984) Sports physiology Halt: CBS College publishing.

International Fitness Association Web at <http://www.lfafitness.com>

Hardyal Singh (1991) Science of Sports Training, New Delhi: DVS Publication.

Wilmore, J.H. and Costell, D.L. (1999) Physiology of sports and Exercise. Champion. IL: Human Kinetics.

Bucher Charles A. Foundations of Physical Education. The C.V. Mosby Company, St. Louise, Missouri. 1979.

## About The Cycling Coaching Knowledge And Skills For Better Performances

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### Introduction:-

Cycling is a poor man's transport, hobby of rich man and medical activity for the old. In most of the cases, a child life starts with a cycle, two wheeled & tri-wheeled irrespective of his/her status of being from a rich, middle or poor family, hence, it may be mentioned that the cycling activity starts in the beginning of childhood and it becomes a sports at 10-12 years of age. Cycling as a sport was introduced in India with the efforts of Sh. Janki Das in mid thirties. The world's most famous cycling race, The Tour de France, began in 1903. It was a 2,500 Km. race taking place across 19 days, in six stages with riders expected to ride day and night. American, Lance Armstrong, has won the Tour de France seven years in row.

Cycling Federation of India organizes the national road championship once in year for all age groups but to have better talents to improve further, separate national championship for Elite, junior, sub-junior and youth category. Cyclists have opportunity to participate separate in road national championship which were being held regular every year.

**Cycling Coaching:-** Coaching can be very rewarding, but successful coaches do not develop overnight. They acquire knowledge an ongoing process of learning and personal development, and are always keen to learn more about their sports or coaching. Fundamental information required to be an effective cycling coach is covered in this sub-section. This gives you a starting point from which you can assess your current levels of knowledge, skills and then decide what you need to know more of in order to improve your coaching. To be an effective cycling coach you need to know about.

**Cycling :-** As a coach, you need to understand the structure and organization of cycling sports in your country or national level, including the various cycling disciplines as like road, track and MTB. Knowledge about local opportunities, competitions, leagues, clubs, funding and contacts can also be useful. This will ensure you can provide accurate and up to date information to potential riders and parents, and help you to access information and support structures to enhance your own and your riders' development. It is particularly important that you have a comprehensive knowledge of the basic and intermediate cycling techniques, the sequence in which they should be taught and the coaching methods that are best suited to these. You should be able to analyse cycling techniques and use this information to help your riders develop and improve their performance. You also need to be capable of imparting this information to the riders using appropriate language, pitched at the right level and at the right time. It is important you can understand how and when to use different techniques and skills and more importantly, teach the riders how to choose and perform the correct skills in a variety of situations. As riders progress, you must be able to provide them with a broader range of experiences, and technical support, in order to develop their skills and knowledge further.

**The Riders :-** As a coach, you will need to gather clear and detailed information of your riders. This will ensure you can plan and deliver training sessions and programmes that are appropriate to, and meet the need of, the rider or group, especially those with special needs. It will also contribute to enhancing the riders' motivation and enjoyment of the session, and help them to improve their performance. Necessary information will include details on: (1) The riders – including individual personalities, needs, expectations, age, ability, motivation for involvement. (2) How riders learn, think and interact. (3) Physical and psychological development – particularly the differences between youth and adult riders.

**Factors Affecting Performance :-** Understanding the demands of cycling and the factors affecting riders performance will ensure you can plan and deliver appropriate training sessions and programmes. This will help riders to improve their performance and fulfil their potential. Underpinning knowledge that will ensure you understand factors affecting performance and how these may impact on your coaching session includes : (1) How the mind and body works during exercise. (2) Coaching methods and how to teach new techniques. (3) Age and stage physical development. (4) Ability and disability.

**Factors Affecting Coaching :-** There are many potential that can affect your coaching in terms of planning, delivering and reviewing training sessions and programmes. These can be influenced by individual difference and situations. Fundamental knowledge to help you coach effectively includes : (1) Planning delivery and evaluation of training sessions and programmes. (2) Analysing techniques. (3) Observation and assessment of performance. (4) Communication. (5) Organisation and administration. (6) Safety and first aid. (7) Coaching and learning styles.

**Communication:-** One of the most crucial skills for coaches is communication. If you are able to communicate well with your riders, they will be able to benefit from all knowledge and skills you have offer. While some coaches will naturally have more flair for communication than others, it is a skill that can be improved. Communication is explained in further detail offers many tips to help you convey your thoughts effectively to your riders.

**Leadership and Motivation:-** Coaching inevitably involves leadership and motivation. You are the person in charge of the session and your riders will look to you to take control. Try to identify why your riders are involved in cycling. This will be help you to inspire them and include activities appropriate for their needs. You need to create an environment that is safe and fun and session that focus on improving performance. This will promote self-motivation and development of the riders.

**Teaching or Coaching;-** Coaching involves a certain amount of teaching, as the riders will need to learn new techniques, skills and underpinning knowledge. To get the best from your riders, you need to choose teaching method that is appropriate to the activity and to the riders' level of ability and preferred learning style. You also need decide what to teach, in what order and when.

**Observation and Analysis :-** Observation skills provide valuable information about performance. They will help you to analyse direct appropriate actions to improve performance. Comparing what the rider has done to what they should have done. Based on this analysis, you can identify how to technique can be improved. If more than one problem area is identified, you need to assess weather they are related, which one should take priority and weather improving one area will correct another. Observation and analysis skills will improve with time and experience.

**Organisation and Administration :-** To be an effective coach, you have to be organized. This will help you session to run smoothly and be safe, on time, productive and fun. Good organization will always require administration, such as a booking venues and equipment, arranging for payments and banking of session fees, maintaining equipment usages logs or keeping up-to- date information on your riders. where possible identify other people who can assist with administrative tasks, such as a parents or clubs officials, When involving others in your programme, be sure identify clearly standards you expect. Never assume, never leave thing until the last minute and do not take anything for granted. Knowing how to organize your session both prior to and on the day will undoubtedly improve your coaching. Knowing how to manage the delivery and evaluation of your training session is also an important part of being an organized coach.

**Conclusion:-** In conclusion, Cycling being a highly technical and equipment based sport, is getting very popular among the gen next. A proper coaching and skills is bound to bring good and instant result in a high performance effort. Adequate and up-to-date knowledge of these key areas will ensure you ken effectively prepare, deliver and review coaching sessions and most importantly, coach riders to improve their performance.

#### **References :-**

Patel, Bharat, (2017), "A comparative study on team performance of national road cycling championship", International Journal of health, physical education and computer science in sports. Vol. 28, No.1, P.P. 140-142.

Patel, Bharat, (2018), "About the Mountain Bike Cycling Regulations and Training for betar performances", International Journal of health, physical education and computer science in sports., Volume – 29 No. 1, P.P. 75-77.

-www. Cycling federation of India.

## **A Study of Sprinter's Stride Length, Knee Movement And Body Line During 100m Of Maintenance Period**

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### **Abstract**

The maintenance phase in the sprint event is an essential aspect of short distance running, and to maintain accelerated speed, extension and flexion of knee movement, stride length, body line are the essential components. To find out their role during the maintenance phase of the sprint a study was conducted on 20 sprinter who took part in All India Inter University Athletic Meet at Coimbatore. All the heats were recorded of H.D. Video camera on 20 top sprinters. The recorded data were analysed with the help of Tracker video motion analysis software, during their last segment of 10 meter distance. After analysing the data significant difference was found among the sprinters on knee flexion and extension, stride length, the angle of the body lining towards the center of gravity during the last 10 meter distance, while comparing with place holder.

**Keywords : Sprinter, stride length, knee movement, body line**

### **Introduction**

Biomechanics is a tool to understand human movement that can be applied to enhance athletic performance and prevent injury. As an old Chinese saying: A workman must first sharpen his tools to do a good work (551—479 DC, Confucius). Watts et al. (2012) defined sprinting as relative intensity of effort in running. The three phases of 100m as classified by Arbuckle (2010) are block start, progressing in driving / transition phase and lastly speed maintenance phase. Speed maintenance require stride length, knee range of motion and head position towards centre of gravity. Sports biomechanics has been studied by many researchers such as Winter (1990) Shiang (2009), Li. L. (2012), McBain et al. (2012) but in India work related to use of biomechanics in sports performance are scanty. Naturally in India the work related to biomechanical analysis of maintenance phase in 100m is almost non-existent. Hence the present study was planned to assess stride length, knee range of motion and head position of place holder in maintenance phase of 100m sprint.

### **Objective**

The objective of the present study was to analyse selected biomechanical parameters of 100 meter sprint with reference to speed maintenance phase.

### **Hypothesis**

It was hypothesized that medal winners sprinters in maintenance phase of 100 meter event will be biomechanically more sound as compared to other place holder.

### **Methodology :-**

The following methodological steps were taken to conduct the study :

Sample :20 sprinters who took part in 100 meter sprint event of All India Interuniversity athletic meet held in Coimbatore 2016-17 were selected as sample.

Tools:

To record sprint stride, knee range of motion and head position, motion analysis was done with the help of HD video camera and tracker motion analysis software.

**Procedure:**

20 sprinters who took part in 100 meter sprint during the all India Interuniversity athletic meet held in Coimbatore in the academic year 2016-17 were selected as sample. Movements during maintenance phase of each of the sprinter during 100m event were recorded via HD camera. The recorded movement patterns were analyzed by Tracker motion analysis software. Analysis and measurements as observed through this software were tabulated for each group.

Results are shown in table 1.

**RESULT****Table 1: Biomechanical Analysis of Medallist and Non-medallist Sprinters in 100m Event**

	Groups				t'
	Medallist (N=03)		Non-medallist (N=17)		
	M	S.D.	M	S.D.	
Stride Length (cm)	251.48	7.37	230.83	16.94	2.04*
Head Position (°)	18.53	7.08	6.87	3.55	2.35*
Knee Range of Motion (°)	120.33	10.10	122.86	11.36	0.36(NS)

\* Significant at .05 level

Statistical entries shown in table 1 gives following facts:

- Stride length of medal list sprinters was found to be significantly longer (M=251.48) as compared to that of non-medalist sprinters (M=230.83) at .05 level of statistical significance. [t=2.04, p<.05]
- Head position of medalist sprinter (M=18.53) was found to be significantly more ideal in terms of inclination towards centre of gravity as compared to non-medalist sprinters (M=6.87). [t=2.35, p<.05]
- No significant difference was observed in knee range of motion of medalist and non-medalist sprinters.

Results are not surprising because stride length is an important aspect of short distance running. It shows that sprinter is able to complete the race without fatigue and over-stretching. The head position is equally important in sprinting because of centre of gravity issues. The knee range of motion in maintenance phase is less in medallist that shows that their sprint technique is correct. Hence the results are not surprising at all.

**Conclusion**

On the basis of results and associated discussion it can be concluded that biomechanical aspects in the form of stride strength, head position and knee range of motion are ideal in 100 meter medallist sprinters during maintenance phase as compared to non-medallist sprinters.

**References :**

- Arbuckle, D. (2010) What are the three stages of sprinting?, Demand Media. Accessed through <<http://healthyliving.azcentral.com/three-stages-sprinting-1945.html>>
- Li. L. (2012). How Can Sport Biomechanics Contribute to the Advance of World Record and Best Athletic Performance?, Measurement in Physical Education and Exercise Science, 16:3, 194-202.
- McBain K, Shrier I, Matheson G, et al. (2012). Prevention of sports injury I: a systematic review of applied biomechanics and physiology outcomes research. British Journal Of Sports Medicine, 46(3):169-173.
- Shiang, T.Y. (2009). The trend of sport biomechanics, Chinese Journal of Sport Biomechanics, 1, 52-55.
- Watts, A.S.; Coleman, I. and Nevill, A. (2012). The changing shape characteristics associated with success in world-class sprinters. Journal of Sports Sciences, Vol. 30, Issue 11.
- Winter, D.A. (1990). Biomechanics and motor control of human movement (2nd ed). Canada: John Wiley & Sons, Inc.

## **“Effect of Yogasanas on Selected Health Related Physical Fitness, Physiological and Hematological Variables of High School Kho-Kho Players”**

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### **Introduction**

Yoga is India's unique contribution to Physical Education activities. Yoga is a scientific and systematic discipline of the internal human body with a view to cosmic reality of God. It is the ancient traditional Psycho-Physical culture that creates to the health of a human – being.

### **MEANING OF YOGA**

The word yoga means 'unity' or 'oneness' and is derived from the Sanskrit word 'yujir' and 'yuj' which means 'to join'. This type of effort is possible only through the control over sense organs and through continued practice. "The withdrawal of the sense organs from the worldly objects and their control of yoga". "Yoga is a timeless practice since thousands of years dealing with physical, mental and spiritual wellbeing or human society as whole".

### **OBJECTIVES OF THE STUDY**

In view of the yoga practice in present day life style the present study was carried out with the following objectives. The objectives of the present study was to find out the Health Related Physical Fitness Physiological and Hematological responses to various packages of Yogasanas among high school Kho – Kho Players. The objective of the study was to determine the influence of Yogasanas on selected physical physiological and Hematological variables of Kho – Kho Players.

### **Statement Of The Problem**

The purpose of the study was to find out where there is any significant improvement on the efficiency of the Health Related Physical, Physiological and Hematological variables through selected Yogasanas among high school Kho-Kho players.

### **HYPOTHESIS**

The hypothesis formulated in the present study is as follows.

It was hypothesized that the experimental group would have significant difference than the control group in the selected health related physical fitness variables respond to yogasanas among high school Kho-Kho players. It was hypothesized that the experimental group would have significant difference than the control group in the selected physiological variables responds to yogasanas among high school Kho-Kho players. It was hypothesized that the experimental group would have significant difference than the control group in the selected hematological variables responds to yogasanas among high school Kho-Kho players.



#### Delimitations

The subjects were selected randomly from Govt. High School, Atmakur, Nellore District, Andhra Pradesh. The study was delimited to the age group of the boys students were ranged between 13 to 15 years. The study was conducted on thirty Kho-Kho players only each group was restricted 15 Subjects. The Yogasanas programme was restricted to period of 12 weeks. The following Health Related Physical Fitness, Physiological and Hematological Variables only were Selected.

#### PHYSICAL FITNESS VARIABLES

Muscular Endurance, Cardio Respiratory Endurance, Flexibility

#### PHYSIOLOGICAL VARIABLES

Blood Pressure, Systolic blood Pressure, Diastolic blood Pressure, Resting Pulse Rate, Resting Respiratory Rate

#### HEMATOLOGICAL VARIABLES

Hemoglobin count, Red blood Corpuscles Count and White blood Corpuscles Count

### Methodology

The purpose of this study was to find out effect of 12 weeks Yogasanas on selected health related physical fitness physiological and the hematological variables of high school Kho – Kho players. To achieve these purpose 30 students were selected of random from Govt High School, Atmakur, Nellore District of A.P. They were in the age group of 13 to 15 Years. Each subject was oriented in the procedure to the administration of test. They participated in their research voluntarily and cheerfully without any compulsion.

#### SELECTION OF VARIABLES

The subjects were formed as random group design consisting of experimental group and the control group of fifteen (15) each. The control group was not permitted to Participate in the Experimental Training Programme. The Experimental group 15 was allowed to take part in the regular programme. The subjects were informed about the purpose of this study in order to secure their full Co-Operation. All the Subjects were tested for experimentations of muscular endurance, cardio respiratory endurance, Flexibility, Systolic blood Pressure, Diastolic blood Pressure, Resting Plus rate, Resting Respiratory rate, Hemoglobin count, Red Blood Corpuscles Count and White Blood Corpuscles Count.

#### STATISTICAL TECHNIQUE

The following statistical technique was adapted. The analysis of covariance was applied in order to list the difference in mean gains for significances. In the analysis of covariance, the final means were adjusted for difference in initial means and the adjusted means were tested for significance. Analysis of variance was first computed to find the differences between initial means where 'F'-ratio was used. The data collected from the two groups on the selected variables were statistically examined to find out whether there was any significant difference or not between the adjusted means by analysis of covariance method. The level of significance was set at 0.05 level of confidence.

## **Conclusions**

Within the limitations improved by the experimental conditions, the following conclusions were drawn.

It was concluded from the results of the study that the yogic practices group showed significant improvement on Muscular endurance among high school Kho-Kho players compared to the control group.

It was concluded that 12 weeks of yogic practices group had greater improvement on cardio respiratory endurance among high school Kho-Kho players compared to the control group.

It was concluded that 12 weeks of yogic practices group showed tremendous improvement on flexibility among high school Kho-Kho players compared to the control group.

It was concluded from the results of the study that the yogic practices group showed no significant difference on systolic blood pressure among high school Kho-Kho players compared to the control group.

It was concluded from the results of the study that the yogic practices group showed no significant difference on diastolic blood pressure among high school Kho-Kho players compared to the control group.

It was concluded that 12 weeks of yogic practices group showed significant effect on resting pulse rate among high school Kho-Kho players compared to the control group.

It was concluded that 12 weeks of yogic practices group showed significant improvement on resting respiratory rate among high school Kho-Kho players compared to the control group.

It was concluded that 12 weeks of yogic practices group showed better improvement on hemoglobin count among high school Kho-Kho players compared to the control group.

It was concluded that 12 weeks of yogic practices group showed significantly greater improvement on red blood corpuscles count among high school Kho-Kho players compared to the control group.

It was concluded that 12 weeks of yogic practices group showed significantly improvement on white blood corpuscles count among high school Kho-Kho players compared to the control group.

## **Impact Of Extramural Competitions On Anxiety Aggression And Achievement Motivation Among Hockey, Volley Ball And Kabaddi College Men Players**

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### **Introduction**

Psychology is the study of human behavior and human relationship. Sports psychology means applying psychological theories and concepts in coaching and teaching sports psychology is concerned with analyzing human behavior in various types of sports setting. It is individual behavior acting individually and acting in a group. The sports psychologist uses psychological assessment techniques and intervention strategies in an effort to help individual to achieve their optimal performance. Sports psychology is an applied psychology involving three educational and research activities. Sports psychology is the application of psychological principles to sport and physical activity at all levels skill development.

### **EXTRAMURAL**

Extramural competitions are inter-institutional competitions. They give the representative members of the teams of the various institutions and opportunity to exhibit their talents and bring honor to their institutions.

Through extramural the team players can aim for competitive spirit and achieve their best.

### **Objectives Of The Study**

The study would assess the psychological variables such as Anxiety, Aggression and Achievement Motivation among the college Hockey, Volleyball and Kabaddi players.

The study was aimed to compare the psychological variables such as Anxiety, Aggression, Achievement Motivation among the Hockey, Volleyball and Kabaddi players.

The study was aimed to analyze the differences, if any in each psychological variable for college men Hockey, Volleyball and Kabaddi players.

### **HYPOTHESIS**

It was hypothesized that there would be significant difference in Anxiety among the college men Hockey, Volleyball and Kabaddi players.

It was hypothesized that there would be significant difference in Aggression among the college men Hockey, Volley ball and Kabaddi players.

It was hypothesized that there would be significant difference in Achievement Motivation among the college men Hockey, Volleyball and Kabaddi players

### **STATEMENT OF THE PROBLEM**

The purpose of this study was to find out whether participation in extramurals has any influence on anxiety, aggression achievement motivation. The selected group was taken from Hockey, Volleyball and Kabaddi men players from colleges.

### **Significance Of The Study**

This study would help players improve their physical and all round ability.

The results of this investigation would contribute to the profession in particular, and to regular hockey, Volleyball and Kabaddi college men Players in general.

The results of the study will help the physical educators, coaches and experts in identifying which of the psychological factors are to be focused upon for achieving higher proficiency.

The study would also contribute to the body of knowledge in the Specialized area of identification of Hockey, Volley ball and Kabaddi college men players.

### **DELIMITATIONS**

This study was conducted on ninety intercollegiate men players studying in various Colleges in Anantapur District. The age group of the subjects was between 18 to 22 years. The psychological variables selected for this study, were Anxiety, Aggression and Achievement Motivation. This study was conducted on Hockey, Volleyball and Kabaddi in college men players. Only standardized questionnaire was used to measure the psychological variables.

SCAT questionnaire for Anxiety.

SMITH's questionnaire for Aggression.

M.L. Kamalesh questionnaire for Achievement Motivation.

The above standardized questionnaire were employed to find out the level of selected psychological variables.

### **LIMITATIONS**

The study was limited by the following aspects and these limitations would be taken into consideration in the interpretation of the results.

Certain factors like habits, life style, daily routine, diet and other factors which may have an effect on the results of the study will not be taken into consideration.

The response obtained to a questionnaire that was obtained from the subjects would depend upon various factors such as their understanding of the statements, seriousness and sincerity. Hence the accuracy to the questionnaire could not be assessed, and this will be considered a limitation.

The differences that might exist among the subject due to varied social, cultural, economical and religious were not considered. The possible variations such as air, temperature atmospheric pressure, relative humidity etceteras during the testing periods were not considered.

The general mood and environmental factors that might influence the response of the subject to the questionnaire were not taken into consideration.

### **METHODOLOGY**

#### **SELECTION OF SUBJECTS**

To achieve the purpose of the study, ninety college men players were selected as subjects at randomly the age between 18 to 22 years studying in the following colleges, Government Degree College (Men) Anantapur, S.S.B.N. Aided Degree College Anantapur, S.K.P. Government Degree College Guntakal, K.T.S. Government Degree College Rayadurg, and Government Degree College Dharmavaram. The subjects selected for the study were normal and healthy.

#### **SELECTION OF VARIABLES**

In any sport, a player's success or failure results from a combination of physical and mental abilities. Training of an athlete is incomplete without psychological training of the player. At present the psychological aspects have been emphasized and become increasingly vital in the study of psychological characteristics that limit the performance of an individual in a game situation at high level of competition.

**DEPENDENT VARIABLES**

1. Anxiety
2. Aggression
- Achievement Motivation

**INDEPENDENT VARIABLES**

Hockey  
Volley Ball  
Kabaddi

**STATISTICAL PROCEDURE EMPLOYED**

The data obtained were analyzed by applying the statistical technique of Analysis of covariance for finding significant difference amongst groups. For the purpose of testing the validity of three groups and to test the significance of the difference between the means of the three groups. For the purpose of testing the validity of three groups and to test the significance of the difference between the means of the three groups after the experiment, the 'F' ratio was calculated by analysis of covariance. Analysis of covariance may be computed for any number of experimental groups. The final means were adjusted for differences in the means and the adjusted means were tested for significance.

**CONCLUSIONS**

The following conclusions were drawn from the study.  
Extramural competitions among college men did not have any impact on Anxiety, Aggression and Achievement Motivation  
The Anxiety, Aggression and Achievement Motivation levels of college men players may be normal.  
The extramural competitions among College men players were not of a high Standard to have any impact.  
The study also indicates that participation in competitions among College men players did not have any impact on Anxiety, Aggression and Achievement Motivation among them.

**RECOMMENDATIONS**

The following recommendations may be made on the basis of this study.  
A similar study may be conducted with large samples of college women players in extramural competitions to see the impact on various psychological factors.  
The study on psychological variables may be extended to compare the levels among inter-university and inter- state players.  
Other games like Football, Basketball and Kho-Kho etcetera could also be analysed by these technique.  
A study may also be conducted for girls at the High School levels and with different age groups.'  
Similar studies may be conducted for other state and national level players and athletes.  
It is recommended that similar studies may be conducted separately for women of different age groups.

## Prevalence of Osteoarthritis in Chhattisgarh

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### Abstract

The present study was conducted to assess prevalence of osteoarthritis in geriatric population of Chhattisgarh. In all 300 records of subjects ranging from age of 60 to 70 years were screened. On the basis of radiological reports it was observed that 44% of the screened subjects were suffering from various types of osteoarthritis while 22% reported to have developed osteophytes. It was concluded that prevalence of osteoarthritis in geriatric population of Chhattisgarh is 44% which is at par with national statistics. Keywords : Osteoarthritis, geriatric population, Chhattisgarh

### Introduction

In plain terms osteoarthritis is a disease of the joints. The abbreviated form of osteoarthritis is OA and is also called as degenerative joint disease. According to Kelsey et al. (1988), osteoarthritis is the most common form of arthritis. The most common symptoms of osteoarthritis are stiffness, particularly first thing in the morning or after resting, and pain. Affected joints may get swollen after extended activity. Osteoarthritis has no specific cause. Several factors lead to the development of OA including excess weight, injury or overuse and genes, among others. Osteoarthritis may affect any joint but it is more common in knees, hips, neck and small joints of the fingers. It renders person to a complete disability. If medication or other alternative therapies are unable to reduce pain, a person becomes bedridden. Osteoarthritis is more common in females than males because they have relatively lower muscular strength and weaker bones. The most common cause of osteoarthritis of the knee is age. Almost everyone will eventually develop some degree of osteoarthritis. However, several factors increase the risk of developing significant arthritis at an earlier age. The epidemiology of osteoarthritis is bit unclear but studies suggest that its prevalence is around 22% to 39% in India as most commonly occurring joint and rheumatological disease (Chopra, 2001). A study conducted by Sharma (2007) reported the prevalence rate of 17 to 60% in India. Prevalence of osteoarthritis in rural India has been reported to be 5.78% (Lone, 2011). According to reports of Planning Commission (2011), around 50% geriatric population in India is suffering from osteoarthritis. A statistics published in Times of India, 2010 also reported 40% of geriatric Indian population in the age group of 70 years and above are suffering from osteoarthritis. Since India is a diverse country with varied socio economic status, it is worthwhile to assess prevalence rate of osteoarthritis in geriatric population in states like Chhattisgarh so that affective measures can be taken to manage osteoarthritis in geriatric population of Chhattisgarh.

### OBJECTIVE

The objective of the present study was to determine the prevalence of osteoarthritis in geriatric population of Chhattisgarh.

### HYPOTHESIS

It was hypothesized that prevalence of osteoarthritis in geriatric population of Chhattisgarh will be at par with national statistics.

**Methodology:-**

The following methodological steps were taken to conduct the study:

**Sample:**

300 subjects of both the sexes ( $\geq 60$  years) were selected from various physiotherapy centres at Raipur undergoing treatment for knee discomfort.

Tools:

**Radiological Findings**

Radiological reports of these identified subjects were used to assess prevalence of osteoarthritis. The opinion of physiotherapist has also been taken while classifying the cases into various stages of osteoarthritis.

**Procedure:**

- 300 patients between age ranges of 60 to 75 years were selected purposively from various physiotherapy centers taking treatment for knee discomfort.
- Radiological report in the form of x-ray and physiotherapist opinion forms the basis of identifying osteoarthritis in selected geriatric patients.
- Radiological findings was tabulated in case of each subject.
- Afterwards subjects with knee discomfort were classified into normal /osteoarthritis category. Results are shown in table 1.

**Result**

Table – 1:Prevalence of Osteoarthritis of Knee in Geriatric Population of Chhattisgarh (N=300)

	Radiological Findings on Knee Osteoarthritis		
	Normal N (%)	Osteophytes N(%)	Osteoarthritis N(%)
Geriatric Subjects	102 (34%)	66 (22%)	132 (44%)

The results shown in table 1 indicate out of the selected patients with knee discomfort enrolled in various physiotherapy centres of Raipur Chhattisgarh, 44% had osteoarthritis, 22% showing signs of osteophytes while 34% had knee discomfort due to some other reasons.

**Conclusion**

The prevalence of osteoarthritis in geriatric population of Chhattisgarh was found to be 44% which is at par with national statistics. So an awareness program should be conducted regarding the benefits of daily exercise, proper positioning of knee joints while movement and maintaining proper body weight. Hence it may be concluded that physical educationist may be involved in this drive of preventing physical disability arising from this incurable disease by the way of educating masses about benefits of regular physical exercises.

**References :**

- Chopra A, Patil J, Bilampelly V, et al.( 2001). Prevalence of rheumatic disease in rural population in Western India: A WHO-ILARCORD study. J Assoc Physicians India; 49:240-6.
- Lone AH, Ahmad T, M, Naiyar AH. 2011. Clinical evaluation of leech therapy in the management of knee osteoarthritis: A pilot study. J Clin Rheumatol Ayurveda.
- Planning Commission. 2011. Report of the Working Group on Disease Burden (Communicable and noncommunicable diseases) for the formulation of the Twelfth Five Year Plan (2012-2017).Planning Commission, Government of India, Yojana Bhavan, Sansad Marg. New Delhi.
- Sharma MK, Swami HM, Bhatia V, Verma A, Bhatia SP, Kaur G. (2007). An Epidemiological Study of Correlates of Osteo-Arthritis in Geriatric Population of UT Chandigarh. Indian J Community Med;32:77-8.

## Evaluations of changes in physical fitness with respect to the onset of menarche in girls - A pilot study

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### Introduction

Some other motor components viz. agility, speed, flexibility and balance were included in physical fitness. Experts like Clarke and Clarke (1987) and AAHPERD (1980, 1988) call such fitness tests which include the measurement of percentage body fat as health related fitness component. The health related fitness is concerned with better living. The maintenance of an adequate level of health related fitness i.e. cardiovascular endurance, muscular strength and endurance, body composition and flexibility can help to reduce the risk of heart disease, hypertension, non insulin dependent diabetes, osteoporosis, obesity and some other mental health problems such as depression. Motor performance fitness is related to the skill performance and performing better and with efficient way. Generally, the physical fitness and health related fitness are closely related with each other. A recent viewpoint is that the physical fitness has two dimensions viz. health related fitness and motor fitness (Dinucci *et al.*, 1990; Malina, 1994 and Malina *et al.*, 1995). The AAHPER (1976) test battery was developed in 1958 and includes six-test items designed to give a measure of physical fitness for boys and girls aged 10-17 years. The pull ups test (flexed arm hang for girls) for testing the arm and shoulder girdle strength, flexed leg sit ups for testing the efficiency of abdominal and hip flexor muscles; shuttle run for speed and direction changes; standing broad jump for testing the explosive muscle power of leg extensors; 50 dash for speed and 600 m run/walk for cardiovascular endurance. The present study "Physique, body composition and physical fitness of girls with reference to their biological maturity" has been conducted to correlate all these parameters with biological maturity in girls, aged 11-15 years.

### Material and Method

The data of 327 menarcheal girls ranging in age from 11 to 15 years was collected from twenty schools of Patiala and its surrounding areas. Only menarcheal girls were selected for the study. The age at menarche was recorded by recall method and duration from the onset of menarche was calculated and five groups comprised viz. 0.000-0.500, 0.501-1.000...>2.000 years. The five physical fitness tests were performed by each subject according to the American Alliance for Health, Physical Education and Recreation (AAHPER, 1976) test battery viz, Flexed arm hang (sec.), shuttle run 10X4 yards (sec.), Standing broad jump (cm), 50m Dash (sec.), 600m run/ walk (sec.) . Statistical tools were used to interpret the results i.e. mean, SD, S.E.M, t-test and ANOVA.

### Results

It was indicated (Table 1 & Fig. 1, 2 & 3) that the mean values of flexed arm hang decreased from 10.66 to 7.85sec, shuttle run 10x4 yards from 20.50 to 19.86, 50m dash 15.7 to 13.50sec on the other hand mean values increased in standing broad jump from 151.7 to 161.2cm, 600m run/walk from 357.9 to 361.8. The performance in all the physical fitness parameters improved (shuttle run 10x4 yards, standing broad jump, 50m dash) except flexed arm hang and 600m run/walk test as the gap increased from the onset of menarche. No significant differences have been noticed by table 1.1 between inter group comparison for shuttle run; standing broad jump and flexed arm hang variables. Significantly high ( $p < 0.05$ ) performance in 600m run/walk has been noticed only between 6 months duration and 1<sup>1/2</sup> years duration group. Similarly most of the differences were non-significant for 50m dash variables of physical fitness with all the groups (1.1).



**Table 1. Physical fitness components in 0.000 to > 2.000 years elapsed after the onset of menarche.**

Physical fitness Parameters	0.000 – 0.500		0.501 – 1.000		1.001 – 1.500		1.501 – 2.000		> 2.000	
	X $\pm$ SD	S E M	X $\pm$ SD	S E M	X $\pm$ SD	S E M	X $\pm$ SD	S E M	X $\pm$ SD	S E M
Flexed arm hang (Sec)	10.66 $\pm$ 11.16	1.04	9.14 $\pm$ 7.37	0.97	9.73 $\pm$ 9.89	1.12	7.04 $\pm$ 9.15	1.73	7.85 $\pm$ 9.87	1.42
Shuttle run 10x4yard (Sec)	20.50 $\pm$ 3.66	0.34	20.69 $\pm$ 3.60	0.47	20.96 $\pm$ 3.67	0.42	21.25 $\pm$ 4.03	0.76	19.85 $\pm$ 3.08	0.44
Standing Broad Jump	151.7 $\pm$ 51.6	4.81	157.6 $\pm$ 60.7	7.97	157.3 $\pm$ 51.0	5.78	165.7 $\pm$ 62.7	11.9	161.2 $\pm$ 56.7	8.19
50m dash (Sec)	15.07 $\pm$ 4.75	0.44	13.78 $\pm$ 4.41	0.58	16.01 $\pm$ 5.17	0.59	13.79 $\pm$ 4.15	0.78	13.50 $\pm$ 3.76	0.54
600m run/walk (Sec)	357.9 $\pm$ 46.5	4.33	367.3 $\pm$ 63.7	8.37	381.2 $\pm$ 55.2	6.32	371.0 $\pm$ 53.6	10.1	361.8 $\pm$ 77.6	11.2

**Table 1.1. Statistical comparison between all groups**

Measurements	Group I t-values				Group II t-values			Group III t-values		Group IV t-values
	I vs II	I vs III	I vs IV	I vs V	II vs III	II vs IV	II vs V	III vs IV	III vs V	IV vs V
Flexed arm hang (Sec)	0.94	0.60	1.59	1.51	0.38	1.14	0.77	1.26	1.04	0.36
Shuttle run 10x4yard (Sec)	0.32	0.85	0.95	1.08	0.43	0.65	1.27	0.35	1.75	1.70
Standing Broad jump (cm)	0.67	0.75	1.23	1.04	0.03	0.57	0.31	0.70	0.40	0.32
50m dash (Sec)	1.73	1.31	1.31	2.04*	2.65**	0.01	0.34	2.05*	2.92*	0.31
600m run/walk (Sec)	1.13	3.15*	1.30	0.40	1.33	0.25	0.41	0.83	1.63	0.55
Flexed arm hang (Sec)	0.94	0.60	1.59	1.51	0.38	1.14	0.77	1.26	1.04	0.36

\* p< 0.05, \*\* p< 0.01

The analysis of variance indicated the significant differences (p<0.05) only between 50m dash. It has exhibited that physical fitness improved except cardiovascular endurance as the duration increase after the onset of menarche .

**Table 2. Analysis of variance (ANOVA) of physical fitness parameters in further divided mature group on the basis of 0.000 to  $\geq$  2.000 years elapsed after the onset of menarche.**

Measurements	Between group df 4		Within group df 322		F-ratio	P
	SS	MS	SS	MS		
Flexed arm hang (sec.)	465.85	116.463	6685	20.760	1.18	0.317
Shuttle run 10x4m (sec.)	50.17	12.544	31655	98.307	0.96	0.427
Standing broad jump (cm)	6220.94	1555.234	4187	13.004	0.52	0.724
50m Dash (sec.)	292.0	73.000	971986	3018.590	3.42*	0.009
600m run/walk (sec.)	27002.67	6750.668	6869	21.333	2.02	0.091

\* p < 0.05

## Discussion

Almost studies showed the differences in pre and post menarcheal girls. No literature has found which evaluate the changes after the increasing gape from the onset of menarche. This is the most rare effort has done which shown the improvement in physical fitness with the increasing gape after the onset of menarche in 11-15 years girls. Przeweda and Dobasz (2003) observed improvement in performance in 50m dash, standing broad jump and hand grip in Polish children with the advancement in age. Continuous improvement was observed in power ability in 8 to 20 years girls. Maximum increase in leg strength was seen between 11, 12, 14 and 15 years. The leg strength improved with maximum increase during pubescence. The physical fitness index increased during pubescence and the variations were noticed in the physical fitness scores with the increase in age, height and weight (Bhatia, 2002). The greater increase in muscular strength of the back and leg region between 14 to 17 years of age was observed with greater improvement in jumping forward than the vertical jumping ability in the study by Verma *et al.* (2002). Increase with the advancement of age also found in girls for physical fitness by Barabas (1989). The comparison between 11-15 years pre and post menarcheal girls was done by Navdeep et al. (2007) and found that the post menarcheal girls are significantly heavier and taller at almost all the sites.

## Conclusion

The post menarcheal girls are significantly more physically fit than their counterparts. They performed better in all the physical fitness tests except flexed arm hang than their pre menarcheal peers at all the ages.

## References

- AAHPER (1976) AAHPER Youth Fitness Test Manual, Hunsicker, P., Reiff, G.G. (Eds.). Washington, D.C
- American Alliance for Health, Physical Education and Recreation (1980) Health-Related physical Fitness Test Manual. AAHPERD, Reston, VA, U.S.A.
- American Alliance for Health, Physical Education, Recreation and Dance (1988) Physical Test : The American Alliance Physical Fitness Education and Assessment Program. AAHPERD, Reston, VA, U.S.A.
- Barabas, A. (1989) Motor performance of Hungarian school children. In : S. Oseid and K. Carlsten (Eds.) : Children and Exercise XIII. pp. 29-37. Human Kinetics Publishers, Champaign, Ill.
- Bhatia, B. (2002) Physical growth, development and performance of Jat Sikh girls from 8 to 20 years. Ph.D. thesis (Unpublished), Punjabi University, Patiala.
- Clarke, H.H., and Clarke, D.H. (1987) Application of measurements to Physical Education. Prentice-Hall Inc., Englewood Cliffs, New Jersey, U.S.A.
- Dinucci, J., McCune, D. and Shows, D. (1990) Reliability of a modification of the health related physical fitness test for use with physical education majors. *Res. Quarterly for Exer. & Sport*, 61 (1) : 20-25.
- Kuppuswamy, B. (1981) Manual of Socioeconomic status (Urban), Manasayan, Delhi.
- Malina, R.M. (1994) Anthropometry, Strength and motor fitness. In : S.J. Ulijaszek and C.N.G. Maxie – Taylor (eds.) : Anthropometry : the individual and the population. Pp. 160-177. Cambridge University Press, Cambridge.
- Malina, R.M., Beunen, G.P., Claessens, A.L., Lefevre, J., Eynde, B.V., Renson, R., Vanreusel, B. and Simons, J. (1995) Fatness and physical fitness of girls 7 to 17 year. *Obesity Res.*, 3 (3) : 221-231.
- Mishra, D. and Singh, H.P. (2003) Kuppuswamy's socioeconomic status scale- A revision. *Ind. J. Pediatr.*, 70 : 273-274.
- Navdeep kaur, (2010) Age changes in height, weight and physical fitness of girls with their menarcheal status during 11 to 15 years. *J. Punjab Academy of Sci. Pbi. Uni. Patiala* 1(2); 19-30.
- Navdeep kaur, Mokha, R., Singh, S.P. And Verma, S.K. (2007) Physical fitness and growth performance of menstruating girls belonging to upper and lower socioeconomic status. *J. Exerc. Sci. and Physiotherapy*, 3(2): 149-152.
- Przeweda, R. and Dobosz, J. (2003) Growth and physical fitness of polish youths in two successive decades. *Sports Med. Phys. Fitness*, 43 : 465-474.
- Verma, S.K., Kaur, N. and Kumar, A. (2002) Age changes in some health related components of fitness among Jat Sikh female of Punjab. *Ind. J. Sports Sci. Phys. Ed.*, 11 (1 & 2) : 39-52.

## Comparison Of Mental Toughness Between National Level and State Level Male Boxing Players

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### Abstract

The purpose of the study was to compare the mental toughness between National level and State level Boxing Players of Punjab and Haryana State. A sample of fifty Male players (N=50) age ranging 18 to 25 years including twenty five National level players (N1=25) and twenty five State Level players (N2=25). The Data was collected by using mental toughness questionnaire developed by Goldberg (1998). The t-test was applied to assess the differences between National level and State Level Male Boxing Players. The level of significance was set at 0.05. Study revealed that there were significant differences between National level and State Level Male Boxing Players with regard to Rebound Ability, Ability to Handle Pressure, Confidence and Overall Mental Toughness and insignificant differences with regard to Concentration and Motivation. **Keywords:** Mental toughness, Boxing Players .

### INTRODUCTION

Psychological characteristics are now commonly accepted as being major contributors to success within the area of sporting performance – in particular, motivational factors, self-confidence levels, and the ability to cope with and interpret anxiety-related symptoms as facilitative under pressure (cf. Hanton *et al.*, 2008; Hardy *et al.*, 1996; Mellalieu *et al.*, 2006). In 1974, Alderman suggested that top-level sport was a ruthless, cold and hard business, and no place for the tender-spirited, with successful athletes being not only physically tough, but mentally tough as well. Luszki (1982) viewed mental toughness as an important factor to successful performance and one of the four principles required to win at the highest levels of competition. Luszki also suggested that, when the best athletes are competing, these four factors (i.e. physical well-being, skill, experience and mental toughness) were working together. Importantly, mental toughness was proposed as being ultimately responsible for the acquisition of the other three principles. Similarly, Tunney (1987) identified four factors that winning teams were built on: self-discipline, self-sacrifice, mental toughness and team work, and proposed that the individuals who were mentally tough possessed the self-control and focus to limit their efforts were the effective ones. Jim Loehr has written extensively on the subject of mental toughness, and in his three books (1982, 1986, 1995), suggested that the world's greatest athletes give testimony to the existence of mental toughness each time they perform. Mental toughness, according to Loehr, separates the few who achieve ultimate accomplishment from the thousands who are unsuccessful in sport, proposing that mentally tough performers consistently responded to problems, pressure, making mistakes and competition with the right attitude. In a similar manner, Goldberg suggested that most coaches readily believe mental toughness is necessary for success and that "the ability to handle competitive pressures is a cornerstone skill of mental toughness" (1992: 60). Loehr (1982) claimed that mentally tough individuals can consistently sustain their ideal performance state during the heat of competitive battle and increase their flow of positive energy in crisis and adversity. Jones *et al.* (2002), the researchers suggested that further work was needed to finalize a working definition of mental toughness. Jones *et al.* defined Mental Toughness as the natural or developed psychological edge that enables you to generally cope better than your opponents with the many demands that sport places on a performer. The psychological characteristics of Olympic champions identified that mental toughness as a significant contributor to sports performance enhancement (Gould *et al.*, 2002).

According to recent findings the psychology of each individual player in such stiff competition played a significant role to perform at top level (Babian, 1990; Cox, 2002; Kureger, 1984; Loehr, 1982). Sport psychologists (researchers and practitioners), coaches, sports commentators, sports fans, and athletes acknowledge the importance of mental toughness in sporting performance (Goldberg, 1998; Hodge, 1994; Tunney, 1987; Williams, 1988). As far as mental toughness for Boxing Players are concerned, while reviewing the related literature, we could not find any rigorous analysis report. Therefore, we decided to take this work forward by considering Boxing as our domain of study. This study is an attempt to explore the possibility of, could be significant group differences in the distribution of mental toughness between National level and State level male Boxing Players.

## Methods And Materials

### Subjects:

A sample of fifty (N=50), which includes twenty five each, National level (N1=25) and inter-college (N2=25) Male Boxing players of age ranging from 18 to 25 years. All the participants were informed about the aim and methodology of the study and they volunteered to participate in this study. The purposive sampling technique was used to select the subjects.

### Methodology:

Questionnaire method was used to collect the data. Mental toughness was measured by applying mental toughness questionnaire developed by Goldberg (1998). Mental toughness questionnaire consists of 30 items measuring the mental toughness in five areas, i.e. rebound ability, ability to handle pressure, concentration, confidence and motivation. There were only yes/no options to answer the questions and subjects have to tick only one option. Before filling up the questionnaire necessary instructions were given and questions were explained to the subjects. T-test was employed for data analysis. *The level of significance was set at 0.05.*

## RESULTS

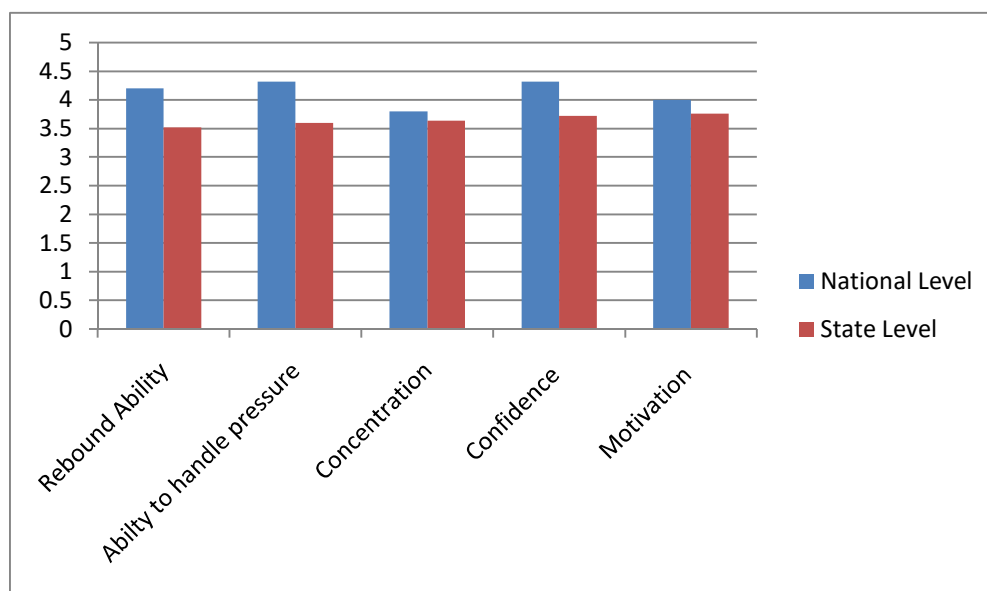
**Table – 1 Comparison of mean scores of National level and state level Male Boxing Players**

VARIABLES	National level (N=25)		State Level (N=25)		Mean Difference	t-value	Sig.
	Mean	SD	Mean	SD			
Rebound Ability	4.20	0.65	3.52	1.16	0.68	2.563	0.014*
Ability To Handle Pressure	4.32	0.90	3.60	0.87	0.72	2.882	0.006*
Concentration	3.80	1.08	3.64	1.11	0.16	0.516	0.608
Confidence	4.32	0.99	3.72	0.98	0.60	2.156	0.036*
Motivation	4.00	1.04	3.76	0.92	0.24	0.862	0.393
Mental Toughness (Total)	20.64	1.35	18.68	2.05	1.96	3.984	0.000

*\*Significant at .05 level*

*t' .05 (48) =2.011*

**Fig 1: Graphical representation of Mean score of National level and State level Boxing players in relation to their mental toughness .**



It is depicted from the above table that the significant difference was found in National level and State level male Boxing players on Rebound Ability, Ability to Handle Pressure, Confidence and Overall Mental Toughness since the value obtained were 0.014, 0.006, 0.036 and 0.000 respectively. The calculated 't' value in case of national level and State Level male Boxing players on Concentration and Motivation was not found to be statistically significant as the value obtained was 0.608 and 0.393 respectively whereas, the tabulated value was 2.011 which 48 degree of freedom at .05 level of significance.

### Discussion

Results of the present study showed that National level Male Boxing Players have exhibited statistically significant differ with regard to rebound ability, ability to handle pressure, confidence and mental toughness (total), when compared to State Level Male Boxing Players. Present research findings are in line with the study of Singh, J. et al. (2012), they concluded that there were significant differences between foreigner professional footballers and Indian professional footballers on the account of rebound ability, ability to handle pressure and mental toughness (Total). R. C. Yadav (2014) also revealed in his study that mental toughness of national Male volleyball players is higher than the national Male kabaddi players. Rajender Singh and Rajesh Kumar (2011) concluded in their study that All India intervarsity soccer players exhibited significantly differed in mental toughness than their counterpart; intercollegiate soccer players.

### Conclusion

It is concluded that significant differences were found between National level and State Level Boxing Players with regard Rebound Ability, Ability to Handle Pressure, Confidence and Overall Mental Toughness but insignificant differences were found with regard to Concentration and Motivation. The results show that National level Boxing Players had significantly greater Rebound Ability, Ability to Handle Pressure, Confidence and Overall Mental Toughness than State Level Boxing Players. However, Concentration and Motivation of both groups found almost same.

## References

- Babian, A. (1990). Psychological Characteristics and Problems in Modern Sports. *Nis Scientific Journal*, v.13, p.16-18, 1990.
- Bell, K.F. (1983). *Champion Thinking*. Prentice Hall, Englewood Cliffs, N.J.
- Bull, S.J., Shambrook, C. J., James, W., Brooks, J.E.(2005). Towards An Understanding of Mental Toughness in Elite English Cricketers. *Journal of Applied Sports Psychology*, v.17, p.209-227.
- Clough, P. J., Earle, K.,& Sewell, D. (2002). Mental toughness: the concept and its measurement. In: Cockerill I, editor. *Solution in sports psychology*. London: Thomson. P. 32-43.
- Cratty, B.J. (1984). *Psychological Preparation and Athletic Excellence*. Movement Publications, Ithica, New York.
- Cox, R.H. (2002). *Sport Psychology: Concepts and Applications*. McGraw-Hill Companies, New York, v.5.
- Fourie, S. & Potgieter, J. R. (2001). The nature of mental toughness in sport. *South African Journal for Research in Sport, Physical Education and Recreation*, 23, 63-72.
- Goldberg, A.S. (1998). Sports slump busting: 10 steps to mental toughness and peak performance. Champaign, IL: Human Kinetics.
- Gould, D., Hodge, K., Peterson, K., & Petlichkoff, L. (1987). Psychological foundations of coaching: Similarities and differences among intercollegiate wrestling coaches. *The Sport Psychologist*, 1, 293–308.
- Hodge, K. (1994). Mental toughness in sport: Lessons for life. The pursuit of personal excellence. *Journal of Physical Education New Zealand*, 27, 12-16.
- Jaspal, S., Gaurav, D. & Sukhbir, S. (2012). A Cross Sectional Analysis of Mental Toughness and Will to Win Among Elite Football Players. *Brazilian Journal of Biomotricity*, v. 6, n. 4, p. 285-296.
- Jones, G., Hanton, S., & Connaughton, D. (2002). What is this thing called mental toughness? An investigation of elite sport performers. *Journal of Applied Sport Psychology*, 14, 205–218.
- Kureger, K.A.(1984). Practical Sports Psychology. SNIPES Journal, v.7, p.63-66, 1984.
- Loehr, J.E. (1982). *Athletic excellence: Mental toughness training for sports*. Forum Publishing Company.
- Loehr, J. E. (1986). *Mental toughness training for sports: Achieving athletic excellence*. Lexington, MA: Stephen Greene Press.
- Middleton, S. C., Marsh, H. W., Martin, A. J., Richards, G. E. & Perry, C. (2004). Discovering mental toughness: a qualitative study of mental toughness in elite athletes. *Self-Concept, Motivation and Identity, Where To From Here? : Proceedings of the Third International Biennial SELF Research Conference*. Sydney, N.S.W: University of Western Sydney.
- Rajender, S. & Rajesh, K. (2011). An Effect of Mental Toughness on Different Level of Participation in Soccer Players. *International Journal of Physical Education & Sports Sciences*, Vol. 6, p.01-05.
- Ramesh, C. Y., (2012) Comparative Study of Mental Toughness between National Male Volleyball and Kabaddi Players. *Journal of Education and Practice*, Vol.5, No.14, p. 66-68.

## Thirumoolar's Siva Yoga And Vedathri Maharishi's Sky Yoga- A Comparative Review

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### Abstract

The present study is a comparative analysis of Thirumoolar's Thirumanthiram and Vethathiri's SLY yoga. Besides, the study employs the components of SKY yoga to comprehend, if there any considerable variances in the responses given by the respondents practicing SKY yoga. Poor health influences the mind and the psyche. It is for this cause that all the three namely, body, psyche and soul should be sustained in good health and synchronization. This could be accomplished by means of the practice of SKY yoga. It is probable to quit bad practices and eliminate all unfair things from the mind. The quality of high merit has to be comprehended and adept through knowledge and a disciplined life. The results emphasized strong relationship and differences between the components of SKY yoga and Siva yoga.

*Keywords: SKY Yoga, Vedathri Maharishi, Thirumoolar thirumandiram, Siva Yoga, Kayakalpa*

### Introduction

Siva as Sakti (Goddess) is the inherent pure realization or energy in its vibrant feature of survival. She is the strength and base of all structure. It is Sakti who eventually strengthens the spheres of invention at every level. Thus, invention in its obvious form seems as a sequence of classified devolutions of the pure strength, till it turns out to be the gross outer developing physical sphere. Besides, it is Siva who carries out the role of creation, protection, and extinction of forms. From this significant harmony which is Siva/Sakti, turned the originator of Yoga, the emperor of yogis, recognized simply as Siva. From him and a continuous series of Master Yogis who have ensued, have appears the rich yoga background of India. So rich, in actual fact, that great spiritual works with hundreds of pages of explanations upon those pages have been passed down to the current period. Besides, certain customs were approved only by word of mouth from instructor (guru) to learner (chela).

Its fruit is the fusion with the integrated force that is defined as spiritual experience and understanding of the self. It is important to be aware of the mind, its potency, and its feebleness, through meticulous efforts and the practice of SKY technique. The practice of SKY Yoga supports decontaminate the mind and reinforce it. The human mind has to overcome itself, which could be accomplished through attentive efforts. Once the mind understands its roots, it changes into the realization, at which point a person lasts on a par with the spiritual. This is the conception of SKY Yoga. The quality of serenity based on the point to which the psyche is consistent with the body and the spirit, for troubles of the mind could negatively influence the body and psyche, simply as troubles with the flow of the life energy have an effect on the individual physically and as well psychologically (Ragava and Yasmeen 2014).

Sky yoga is a blend of raja yoga and kundalini yoga and it is a united system comprising four major elements for example kayakalpa, simplified physical exercises and soul-observation. Of these, kayakalpa and simplified physical exercises facilitate to increase the quality of inner self and endorse good physical wellbeing. Meditation practice will be of great assistance in enriching the mind of the professional and eventually, introspection help a person to explore his/her emotions that eventually results in divine development by means of personality change (Krishnan's, 2006). The first element of SKY yoga instructed to the professionals is simplified physical exercises since physical body performs as an essential base for physical and psychological health. To accomplish divine progression, the professionals have to be healthy and should be liberated from physical pain or psychological pressure to the greatest extent possible (Raghavan and Yasmeen 2014).

### **Literature review**

Baskaran, (2015) studied the effects of SKY yoga on prison inmates. And the training was given to the selected people; the SKY yoga training including simplified exercises and Kayakalpa yoga, was instructed to all the chosen subjects. After the 15 days of training, an opinion in terms of the effectiveness of the program has been gathered from all the subjects. Qualitative techniques of content study have been employed to assess the feedback. The findings exhibited that all respondents have issues with mental, cognitive, physical and pessimistic approach towards life before receiving SKY yoga practice. Vijayalakshmi and Jothilakshmi (2013) stated that currently life has become an immeasurable battle time, technology and goals, this creates stress. People are inclined to a number of diseases depend on their standard of living and professional habits. There is a critical demand to find a remedy for their problem. In this way Vethathiri Maharishi (1911-2006) proposed SKY yoga on the strength of his own medicinal experience using much practice. It controls the functioning of individuals' inner organs around the abdomen and harmonizing the circulation of inner self. It assists to avoid heart trouble, by controlling practice and as well intensify the nervous system.

As stated by Aathava and Jothilakshmi (2012), the human being is a blend of the physical body, psychological element and inner self. To obtain and keep up peace and harmony, self-knowledge and spiritual practices are extremely important. The whole system, namely "SKY", established by Maharishi include following aspects. Looking into origin and intention of live, the self-educated theorist reached the summit of SKY Yoga, a harmless and extremely positive system of meditation and yoga practices. Understanding the significance of right exercise, and meditation, Vethathiri Maharishi has created and simplified the former ones and offered to the humans.

Babu, (n.d) investigated the philosophical reflections of Vethathiri Maharishi. Vethathiri Maharishi's contemplations are based upon perpetual study of long-established Tamil Siddha Philosophy, meditation on the self and his interest for mankind. For this, he has classified an art of living through Kaya Kalpa Yoga, SKY Yoga, meditation, introspection, and self-actualization and truth, peace and harmony. Though Vethathiri's comprehension of human life, psyche and world appears to be general, his technique of analysis their survival and objective are entirely deep-seated and practical. Maharishi, by his philosophy and implication, has effectively brought religion within the reach of every individual and this alone is enough to get him a reputable place in the history of mankind.



### Comparison between SKY yoga and Siva yoga

SKY Yoga	SIVA Yoga	Similarities	Author	Year	Differences	Author	Year
Practicing SKY yoga enriched the physical, mental and cognitive wellbeing of person.	Shivayoga brings insubstantial changes in the life of an individual by increasingly establishing his faculties, purifying his psyche and broadening his perspective.	Both yoga practices will enrich life of an individual.	Baskaran	2015	The Siva yoga is described based on god Siva and Sakthi while SKY yoga ultimately emphasize the individual's wellbeing in terms of psychological and physical wellbeing.	Sivanantha	1994
Kundalini yoga treats the six different centers of spiritual energy	Thirumoolar emphasizes the same thing and proposed Siva yoga for good spiritual health	Both these practices lay emphasis on spiritual health but might be in different way. He further adds that If the physical body is not looked after appropriately, the life-force elements will not continue in the body for a longer period of	Babu	n.d	Wellbeing is largely accentuated in SKY yoga whereas lot of attention is given to spirituality in Siva yoga.	Rajam	2017

		time and one cannot think of spiritualism by any means.					
Vethathiri Maharishi formulated this after four decades of long research and it introduced ages before.	Shivayoga subsisted as a subject of self-culture from chalcolithic period.	These two yogic practices has emphasized the benefits that it yielded to common man and those benefits are boundless. It might be regarded as schisms establishing from a leadership dispute.	Healy	2010	Siva yoga is systematic in the sense which it is completely based upon the regulations of light and power, whereas SKY yoga is based on the nine-center meditation practice.	Kumar	2015
SKY yoga yield lot of benefits to both body and mind. Besides it promotes the functions of endocrine glands.	Thirumoolar highlighted that human body is the temple and it is essential for one to protect the body as carefully he/she can.	Both Vethathiri and Thirumoolar tried to emphasize one thing, i.e. much attention has to given to human body in order to attain spirituality.	Karthik eyan	2014	Thiruman diram defines both, spiritual and also sophisticated concepts in nine tantirams whereas SKY yoga is simplified and based on nine centered meditation techniques.	Anand	2018

## Discussion

Thirumandiram is an important spiritual system which founded by Siddhar Thirumoolar, soon after extended into Saiva Siddhantam and it has an important role in the history and enrichment of Tamil traditions in South India. Social practices have contributed a major role in individuals' health. Since time immemorial, the importance of yoga has been emphasized even in sangam literature such as Thirumanthiram. Thus the study deals with the viewpoint of Thirumoolar in terms of SKY yoga. Yoga is the compilation of a number of mind-body methods from the very old Eastern cultural practices with the most important subject of unification. Though Yoga experts broadly practice Pranayama methods, the practices of Thirumoolar have not yet been explored for their biological effects in biomarkers. Between these two conceptions connecting them together is the world of consciousness of which the instinctive reality of things is the foundation. There is a variation between intuitional thought and intellectual conception. Intellectual conception not just inclines towards form but defines itself in the method of the idea and once defined, differentiates itself penetratingly from all other conceptions. All the saints have understood the objective of life by means of the practice of Shivayoga which is also termed as Lingangasamarasya. Thus, creation in its obvious form seems as a series of classified devolutions of the real spirit, until it turns out to be the gross outer materializing physical sphere. Yoga is ultimately considered to be as Siva since it takes the responsibility of creation and protection of human mind and soul.

## Conclusion

The SKY Yoga is a ten phase technique that brings about precision of mind and understanding of self. This method of practice makes sure peace within persons, peace amongst society and eventual peace amongst across the world. Maharishi has introduced a supernatural method termed as introspection, which is also a part of SKY yoga. This is an instruction offered to the mind to stay balanced and not become sensitive at states that simply aggravate human to be unable to find harmony between body, soul, feelings and relationships. With such an established perception a person is capable of rise to situations in their life instead of responding which might cause difficulties and troublesome harmony in their life. With these characters one is capable of live with happiness and peace. The utmost objective of yoga is the accomplishment of jiva with the ultimate self. The individual soul is being combined with the absolute. Thirumoolar emphasizes that once that position is accomplished no one could have the nerve to intimidate him afterward.

## References

- Aathava, K.K., Jothilakshmi, M, (2012). Vethanthamum Vethathiria Yogamum. Imperial Journal of Interdisciplinary Research (IJIR), 2(11), 182-185.
- Anand, G, (2018). Tamil Siddha Yoga Philosophy on Conception Garba Kriya from Thirumoolar's Thirumandiram. Journal of Yoga and Physiotherapy, 4(1), 1-3.
- Babu, B.S., (n.d). Philosophical Reflections of Vethahiri Maharishi A Study. Retrieved on 11th May 2018 from <http://hdl.handle.net/10603/185293>
- Baskaran, U, (2015). Psycho Physiological Effect of Vethathiri Maharishi's Simplified Kundalini Yoga (SKY) Among Prison Inmates. International Journal of Education and Psychological Research (IJEPR), 4(2), 23-27.
- Eswar, K.M., (2015). Simplified Kundalini Yoga: Life After Death and Before Death. Retrieved on 10th May 2018 from <http://simplifiedkundaliniyoga.com/LifeAfterDeathLifeBeforeBirth.pdf>
- Healy, J.P., (2010). Schisms of Swami Muktananda's Siddha Yoga. Marburg Journal of Religion, volume 15, pp. 1-10.
- Karthikeyan, R, (2014). Influence of different combinations of yogic techniques on selected physiological psychological and hematological variables among residential school boys. Retrieved on 11th May 2018 from <http://hdl.handle.net/10603/135453>
- Kumarswamiji, M.S., (2016). Technique of Opening the Third Eye (Shivayoga). Tapovan Publication.
- Ragava, N, Yasmeen, H, (2014). Components of Simplified Kundalini Yoga in Relation to Demographic Characteristics. International Journal of Yoga and Allied Sciences, 3(1), 54-61.
- Rajam, A, et al (2017). Influence of Asana and Simplified Kundalini Yoga on Flexibility on College Woman Students. International Journal of Yoga and Allied Sciences, 6(2), 114-122.
- Sivanantha, S, (2014). Kundalini Yoga. A Divine Life Society Publication.
- Vijayalakshmi, C, Jothilakshmi, M, (2013). Acupressure Exercise for Health Promotion and Prevention from Disease. International Journal of Advancements in Research & Technology, 2(5), 345-348.

## **Whole Body Vibration Training for Body Fat Management and Musculoskeletal Function: A Thematic Review**

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### **Abstract**

A direct contact with vibratory surfaces have an effect on local and whole animal or human body. Nowadays whole body vibrations are very basic and optional activities designed to shape and support physical rehabilitation and neuromuscular activity and specifically athletic performance which is common in gyms, sports shops, hotels and fitness rooms. But, it's not a well-known modality for active, inactive people, and patients in Ethiopia. Indeed, availability of unsupervised vibration training and commercial provision of vibratory gym materials may led to trainees functional and structural body changes. Thus, this article aimed to reviews relevant publications reporting the body respond to vibration and delineate evidence-based implications to current knowledge of the effects of whole body vibration on body composition and musculoskeletal performance. A systematic literature search was performed in databases of Science Direct Scopus, and Google Scholar from 2003 to 2018. This review summarizes that the whole-body vibration has found a positive effect on body fat percentage, muscle, and bone function. However body composition can mostly have referenced with whole body vibration induced lean mass increment. A supervised vibration training given to healthy individuals and patients with reference to its contra-indications should have ample importance than free direct exposure. Thus, these findings could serve as a model for fitness trainers, club coaches, health care practitioners to implement whole body vibration as an exercise-based management intervention. Nevertheless, attention must be paid to different vibration load effects (i.e. frequency, exposure time, amplitude, and acceleration). In addition, whole body vibration training with additional low-risk and specific training are more advantageous. Key words: Body Composition, Musculoskeletal Function, Patient, Whole body vibration training

### **Introduction**

Vibration, to just bring into its notion, is an oscillatory waver causing machine-driven inducement (Marco Cardinale, 2003). It has been done to being an effect on local and whole animal or human body as a result of direct contact with vibratory surfaces. The very special and let-out circumstance to body vibration is its existence in people's day to day occupational and routine life. This condition occurs, particularly, when occupational machinery workers, such as construction, forestry, transportation, furniture making, walking, running, or the impact of ball and bat and etc... come into regular and frequent exposure with some sort of vibration and problematic equipment. Sports men's, similarly, have revealed to some vibration sources while they are in contact with impact related events like downhill skiing, mountain biking, horse riding, and inline skating. However, to be beneficial from such tissue vibration might depend on its load parameters (frequency, amplitude, acceleration, and duration) and types (Cochrane, 2010). Thus, static or dynamic exercise can be executed on vertically waving or horizontally tilting oscillatory machines (Lorenzen, Maschette, Koh, & Wilson, 2009).

Many scholars, nowadays, claim that whole body vibrations are very basic and optional activities designed to shape and support physical rehabilitation (Li Zhang, 2014), neuromuscular activity (Lienhard, Vienneau, Nigg, Friesenbichler, & Nigg, 2017) and athletic performance which is common in gyms, sports shops, hotels and fitness rooms. But, it's not a well-known modality for active, inactive people, and patients in Ethiopia. Indeed, availability of unsupervised vibration training and commercial provision of vibratory gym materials may lead to trainees functional and structural body changes. Thus, the purpose of this review is to update the possible mechanisms by which tissues of the body respond to vibration and delineate evidence-based implications to current knowledge of the effects of vibration on body composition and musculoskeletal performance.

## Method

A systematic literature search on WBV effect on body composition and musculoskeletal function were investigated in databases of Science Direct Scopus, and Google Scholar from 2003 to 2018. A total of 94 articles and books were found and 66 articles were excluded. At the time of review, article's method, the material used and their results were targeted.

## Discussion

### 3.1. Whole Body Vibration Training and Body Fat Management

As it is noted by Sutton (2012), body composition can increase when there is a probability of inactivity, with greater declines evident in more highly-trained athletes and a greater reduction in training load associated with faster detraining. Age is also an influential factor, with a faster decline in training cessation expected in older persons, particularly post-menopausal women are the main factors affecting the muscle atrophy. For many purposes, at this time, numerous inactive population are undertaking gym and field training. But people are under serious challenges of taking some effort and commitment in doing exercises for long period and failed to meet their goals. The best modality for doing training for a short period of time and without extraneous movement for health promotion is whole body vibration (as cited (Connolly et al., 2014)). Determining body composition, as much of researchers focused on musculoskeletal and other issues, is another rationale for doing WBV training in different settings.

In a study developed by González-Agüero, Matute-Llorente, Gómez-Cabello, Casajús, and Vicente-Rodríguez (2013), it was found that 20 weeks of 20min whole body vibration training (progressively administered  $f_{max}=30$  Hz,  $A=2$ mm, VV) showed a higher reduction in body fat at the upper limbs ( $p < 0.05$ ), and a tendency toward higher percent increase in whole-body lean body mass. Supporting with this result after 16 weeks of 15min WBV training (progressively administered  $f_{max}=27$  Hz,  $A_{max}=4$ mm, VV) with exercises (static squats, dynamic squats and pelvic floor muscle loading) on 17 participants, fat percentage was lowered ( $p = 0.03$ ) by  $1.7\% \pm 2.4\%$  from  $37.5\% \pm 6.9\%$  to  $35.8\% \pm 6.2\%$  (Connolly et al., 2014).

Body composition can also exhibit changes when it is given with additional exercise training. According to (Fjeldstad, Palmer, Bembien, & Bembien, 2009), 21 postmenopausal women were subjected to both 8-month vibration (progressively administered  $f_{max}=40$  Hz,  $A_{max}=3$ mm, VV) plus resistance (3 sets 10 repetitions 80% strength) training. The authors suggested that WBV training improves bone-free lean tissue mass for the total body, arm and trunk regions from the pre-to-post ( $p < 0.05$ ) with no significant change ( $p > 0.05$ ) after the training period for any group (post-test body weights in that population. However, a positive WVB induced lean mass increment without weighing change is the common indication of a reduction of this aspect of physiological function (Fjeldstad et al., 2009).

### 3.2. Vibration and Musculoskeletal System

Currently, WBV is advocated as an operative way of muscle strength and bone mass development, besides its physiological benefits, by many companies. While some scientific evidence supports these claims (e.g., accretion of bone mass), it should take with caution and with its recommended standard since an accepted single standard have not been established and confirmed for any segment of the population (Prisby, Lafage-Proust, Malaval, Belli, & Vico, 2008).

Recent musculoskeletal researchers have been given high concern to the application of Whole-body vibration (WBV). One of the main advantages of vibration stimulus is replacing the unsuitable resistance training conditions via potentiating muscle activity. Theoretically, a short period exposure to numerous grand force of high frequency (30–40 cycles per second) and low amplitude displacement (2–5mm) vibration training on a platform have an osteogenic effect (Fjeldstad et al., 2009).

#### 3.2.1. Does WBV Training Have an Effect on Muscular Function/ Strength?

During the last decade, whole-body vibration (WBV) exercise has gained popularity and this form of exercise has been promoted mainly based on its efficiency to rapidly improve muscular performance after acute exposure (Colson, Roffino, Mutin-Carnino, Carnino, & Petit, 2016).

Here, muscle's power and force can be improved or it have excited when it is overloaded or externally stimulated. muscle spindle's degree of excitatory to vibration, involving the spinal reflex mechanism and response of muscle tuning for stimuli damping are the main input muscle activation mechanisms during WBV (Cochrane, 2010).

As it is noted in the study of Christophe Delecluse (2005), muscle spindles have become more activated when the length of the muscle increases because of WBV, producing the 'tonic vibration reflex'. Indeed, less motor unit recruitment is required for muscle activation than voluntary contraction. This can result to use reflex pathways, i.e. monosynaptic and polysynaptic, efficiently through the further formation of more rapid activation and motoneuron excitability.

These basic findings resulted in many studies to focused on the potential of acute (D J Cochrane, 2005) or chronic WBV training for muscular function.

According to Despina et al. (2014) pre-post- measurements of acute explosive muscle strength on Eleven elite rhythmic gymnasts after a 75 s WBV training ( $f=30$  Hz,  $A=2$ mm), a significant 9.52% mean increment was recorded. Even Kang, Lu, and Xu (2016) attempt to review WBV training effect on the knee extension muscle strength. They found that knee extensor muscles were significantly improved after organized WBV interventions. In addition, Marín et al. (2012) postulated that WBV training (acceleration of  $40\text{ms}^{-2}$  (30 Hz High, 2.5mm or 46 Hz Low, 1.1 mm)) for fourteen healthy older adults increases both lower (medial gastrocnemius, vastus lateralis) and upper body muscle (biceps brachii) activity. This idea is also supported by Lienhard et al. (2017) work done on young vs Older adults population's lower limb muscle strength. They reported as both groups exhibit a WBV-induced significant change for tibialis anterior, gastrocnemius medialis, soleus, vastus lateralis, vastus medialis, and biceps femoris. However, the increases in surface electro-Myography (sEMG) activity was significantly higher in the older than the youngsters for all muscles. In contrast to this view, short-term WBVT program had no effect on strength profile of on knee extensor (Karatrantou, Gerodimos, Dipla, & Zafeiridis, 2013).

Other authors claim that WBV training is more advantageous if it is delivered with other exercise modality for patients with neuromuscular or functional abnormalities, muscle weakness, and limited exercise options. For example, adding whole body vibration training to strengthening training may provide better treatment effects for patients with knee osteoarthritis (Bokaeian, Bakhtiary, Mirmohammadkhani, & Moghimi, 2016). They observed that mean value of quadriceps and hamstring muscles power were changed after the intervention of both WBV and Strength training. In addition, in a 12-week WBV single-blind randomized controlled trial on 180 Knee osteoarthritis (KOA) patients, muscle strength test of the knee and ankle significantly improved (Lai, Wang, Lee, Hou, & Wang, 2017).

But it depends on positions of the subject on the platform and acceleration (transmitted by the vibratory platform) since it is a stimulus intensity (Rittweger, 2010). With respect to muscular performance, the effectiveness of WBV training largely depends on the capability to elicit or intensify muscle activation (Friesenbichler, Lienhard, Vienneau, & Nigg, 2014).

### 3.2.2. Does WBV Affect Bone Function?

Bone is a sensitive tissue that can adapt structural changes resulted from mechanical loading. Its quantity and structure can be maintained by means of a load-bearing anabolic agent such as exercise or physical activity. Substantial evidence over the past decade has suggested that bone growth comes through application of extremely low-magnitude mechanical signals with high frequency (20–100 Hz) exercises. These signals are delivered to the load-bearing skeleton by means of whole-body vibration (WBV) (Jing et al., 2018).

As referenced by Rhonda D. Prisby (2008), appendicular and axial skeleton has been increased in mass as direct mechanical acceleration is applied through new WBV training model. This method of therapy has been recognized to treat mobility impaired and weakened muscle strength individuals (i.e., the elderly or diseased individuals) with a low-frequency vibration. He also argued that WBV looks advantageous for preserving and developing skeletal mass of individual such as the elderly, postmenopausal women, and adolescents through bone mechanical stimulation. Therefore, this may be an effective and alternative strategy by which mobility-restricted individuals can receive therapeutic treatment without intensive exercise associated risks (Prisby et al., 2008).

Today, WBV training can be organized in such a way that exercise-induced injuries are treated with special safety guideline (Narcís Gusi, 2006). He reported that femora's neck bone mineral density was increased by 4.3% ( $P = 0.011$ ) as a result of guided WBV training.

However, the duration of mechanical loading exposure matters the structural change of bone. The results of Gomez and his colleague's study supports this idea. A total of 49 non-institutionalized elderly were administered for 11-week vibration exposure. At the end of the intervention, none of the bone mineral content and bone mineral density parameters measured. A short-term whole-body vibration therapy is not enough to cause any changes in bone mineral content or bone mineral density (Gómez-Cabello et al., 2014). Moreover, a six-month whole-body vibration (WBV) training of adolescent swimmers shows no bone mineral density, bone mineral content and even lean mass (Gómez-Bruton et al., 2017).

#### Conclusion

In summary, whole body vibration training has found a positive effect on body fat percentage, muscle, and bone function although body composition can mostly have referenced with WBV induced lean mass increment. Thus, these findings could serve as a model for fitness trainers, club coaches, health care practitioners to implement WBV as an exercise-based management intervention. Nevertheless, attention must be paid to different vibration load effects (i.e. frequency, exposure time, amplitude, and acceleration). A supervised vibration training given to healthy individuals and patients with reference to its contra-indications should have ample importance than free direct exposure. In addition, WBV training with additional low-risk and specific training are more advantageous.

#### References

- Aboody, M. (2010). *Whole Body Vibration and Your Health: Move to Live*.
- Alev, A., Mihriban, A., Bilge, E., Ayça, E., Merve, K., Şeyma, C., . . . Mahmut, G. S. (2017). Effects of whole-body vibration therapy in pain, function, and depression of the patients with fibromyalgia. *Complementary Therapies in Clinical Practice*, 28(Supplement C), 200-203. doi:https://doi.org/10.1016/j.ctcp.2017.06.008
- Avelar, N. C. P., Ribeiro, V. G. C., Mezêncio, B., Fonseca, S. F., Tossige-Gomes, R., da Costa, S. J., . . . Lacerda, A. C. R. (2013). Influence of the knee flexion on muscle activation and transmissibility during whole body vibration. *Journal of Electromyography and Kinesiology*, 23(4), 844-850. doi:https://doi.org/10.1016/j.jelekin.2013.03.014
- Bokaeian, H. R., Bakhtiary, A. H., Mirmohammadkhani, M., & Moghimi, J. (2016). The effect of adding whole body vibration training to strengthening training in the treatment of knee osteoarthritis: A randomized clinical trial. *Journal of Bodywork and Movement Therapies*, 20(2), 334-340. doi:https://doi.org/10.1016/j.jbmt.2015.08.005
- Buchner, H. H. F., Zimmer, L., Haase, L., Perrier, J., & Peham, C. (2017). Effects of Whole Body Vibration on the Horse: Actual Vibration, Muscle Activity, and Warm-up Effect. *Journal of Equine Veterinary Science*, 51(Supplement C), 54-60. doi:https://doi.org/10.1016/j.jevs.2016.12.005
- Christophe Delecluse, M. R., Rudi Diels, Erwin Koninckx, Sabine Verschueren. (2005). Effects of Whole Body Vibration Training on Muscle Strength and Sprint Performance in Sprint-trained Athletes. *Int J Sports Med*, 26(8), 662-668.
- Cochrane, D. J. (2010). *The Effect of Vibration Exercise on Aspects of Muscle Physiology and Muscular Performance*. New Zealand.
- Colson, S. S., Roffino, S., Mutin-Carnino, M., Carnino, A., & Petit, P. D. (2016). The effect of dynamic whole-body vibration warm-up on lower extremity performance. *Science & Sports*, 31(1), 19-26. doi:https://doi.org/10.1016/j.scispo.2015.11.002
- Connolly, L. J., Scott, S., Mohr, M., Ermidis, G., Julian, R., Bangsbo, J., . . . Fulford, J. (2014). Effects of small-volume soccer and vibration training on body composition, aerobic fitness, and muscular PCr kinetics for inactive women aged 20–45. *Journal of Sport and Health Science*, 3(4), 284-292. doi:https://doi.org/10.1016/j.jshs.2014.07.003
- D J Cochrane, S. R. S. (2005). Acute whole body vibration training increases vertical jump and flexibility performance in elite female field hockey players. *Br J Sports Med*, 39, 860–865.
- Despina, T., George, D., George, T., Sotiris, P., Alessandra, D. C., George, K., . . . Stavros, K. (2014). Short-term effect of whole-body vibration training on balance, flexibility and lower limb explosive strength in elite rhythmic gymnasts. *Human Movement Science*, 33(Supplement C), 149-158. doi:https://doi.org/10.1016/j.humov.2013.07.023

Fjeldstad, C., Palmer, I. J., Bembien, M. G., & Bembien, D. A. (2009). Whole-body vibration augments resistance training effects on body composition in postmenopausal women. *Maturitas*, 63(1), 79-83. doi:<https://doi.org/10.1016/j.maturitas.2009.03.013>

Friesenbichler, B., Lienhard, K., Vienneau, J., & Nigg, B. M. (2014). Vibration transmission to lower extremity soft tissues during whole-body vibration. *Journal of Biomechanics*, 47(12), 2858-2862. doi:<https://doi.org/10.1016/j.jbiomech.2014.07.028>

Gómez-Bruton, A., González-Agüero, A., Matute-Llorente, A., Julián, C., Lozano-Berges, G., Gómez-Cabello, A., . . . Vicente-Rodríguez, G. (2017). Do 6 months of whole-body vibration training improve lean mass and bone mass acquisition of adolescent swimmers? *Archives of Osteoporosis*, 12(1). doi:10.1007/s11657-017-0362-z

Gómez-Cabello, A., González-Agüero, A., Morales, S., Ara, I., Casajús, J. A., & Vicente-Rodríguez, G. (2014). Effects of a short-term whole body vibration intervention on bone mass and structure in elderly people. *Journal of Science and Medicine in Sport*, 17(2), 160-164. doi:<https://doi.org/10.1016/j.jsams.2013.04.020>

González-Agüero, A., Matute-Llorente, A., Gómez-Cabello, A., Casajús, J. A., & Vicente-Rodríguez, G. (2013). Effects of whole-body vibration training on body composition in adolescents with Down syndrome. *Research in Developmental Disabilities*, 34(5), 1426-1433. doi:<https://doi.org/10.1016/j.ridd.2013.01.023>

Jing, D., Yan, Z., Cai, J., Tong, S., Li, X., Guo, Z., & Luo, E. (2018). Low-1 level mechanical vibration improves bone microstructure, tissue mechanical properties, and porous titanium implant osseointegration by promoting an anabolic response in type 1 diabetic rabbits. *Bone*, 106(Supplement C), 11-21. doi:<https://doi.org/10.1016/j.bone.2017.10.001>

Kang, H., Lu, J., & Xu, G. (2016). The effects of whole-body vibration on muscle strength and functional mobility in persons with multiple sclerosis: A systematic review and meta-analysis. *Multiple Sclerosis and Related Disorders*, 7(Supplement C), 1-7. doi:<https://doi.org/10.1016/j.msard.2016.02.008>

Karatrantou, K., Gerodimos, V., Dipla, K., & Zafeiridis, A. (2013). Whole-body vibration training improves flexibility, strength profile of knee flexors, and hamstrings-to-quadriceps strength ratio in females. *Journal of Science and Medicine in Sport*, 16(5), 477-481. doi:<https://doi.org/10.1016/j.jsams.2012.11.888>

Lai, Z., Wang, X., Lee, S., Hou, X., & Wang, L. (2017). Effects of whole-body vibration exercise on neuromuscular function for individuals with knee osteoarthritis: Study protocol for a randomized controlled trial. *Trials*, 18(1). doi:10.1186/s13063-017-2170-6

Li Zhang, C. W., Miao Liu, Qihua Wang, Liming Liu and Yao He. (2014). Effect of whole-body vibration exercise on mobility, balance ability and general health status in frail elderly patients: a pilot randomized controlled trial. *Clinical Rehabilitation*, 28(1), 59–68.

Lienhard, K., Vienneau, J., Nigg, S., Friesenbichler, B., & Nigg, B. M. (2017). Older adults show higher increases in lower-limb muscle activity during whole-body vibration exercise. *Journal of Biomechanics*, 52 (Supplement C), 55- 60. doi: <https://doi.org/10.1016/j.jbiomech.2016.12.009>

Lorenzen, C., Maschette, W., Koh, M., & Wilson, C. (2009). Inconsistent use of terminology in whole-body vibration exercise research. *Journal of Science and Medicine in Sport*, 12(6), 676-678. doi:<https://doi.org/10.1016/j.jsams.2008.06.008>

Marco Cardinale, C. B. (2003). the use of vibration as an exercise intervention. *Exerc. Sports Sci. Rev.*, 31(1), 3-7.

Marín, P. J., Santos-Lozano, A., Santin-Medeiros, F., Vicente-Rodríguez, G., Casajús, J. A., Hazell, T. J., & Garatachea, N. (2012). Whole-body vibration increases upper and lower body muscle activity in older adults: Potential use of vibration accessories. *Journal of Electromyography and Kinesiology*, 22(3), 456-462. doi:<https://doi.org/10.1016/j.jelekin.2012.02.003>

Narcís Gusi, A. R., and Alejo Leal. (2006). Low-frequency vibratory exercise reduces the risk of bone fracture more than walking: a randomized controlled trial. *BMC Musculoskeletal Disorders*, 7(92).

Prisby, R. D., Lafage-Proust, M.-H., Malaval, L., Belli, A., & Vico, L. (2008). Effects of whole-body vibration on the skeleton and other organ systems in man and animal models: What we know and what we need to know. *Ageing Research Reviews*, 7(4), 319-329. doi:<https://doi.org/10.1016/j.arr.2008.07.004>

Rhonda D. Prisby, M.-H. I. n. L.-P., Luc Malaval, Alain Belli, Laurence Vico (2008). Effects of whole-body vibration on the skeleton and other organ systems in man and animal models: What we know and what we need to know. *Ageing Research Reviews*, 7, 319–329.

Sutton, A. D. S. L. (2012). *Body Composition in Sport, Exercise, and Health*.



## A Study On Anxiety Among High Medium And Overachievers Of Men Volleyball Players

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### Abstract

The purpose of this study is to analyze on stress among high, medium and over achievers of men volleyball players.. To achieve the purpose of this study, the investigator in consultation with the Guide, the investigator selected the players who competed at national level volleyball competitions were considered as high achievers, players competed at inter university level competitions were considered as medium level achievers and players who competed at inter-national level competitions was considered as over achievers in the game of volleyball. Hence, the investigator selected 30 men volleyball players competed at national level, 30 men volleyball players competed at inter university level and 30 men volleyball players competed at international level. Thus, the research objective was to find out the differences among volleyball players competed at different levels. Since the research is aimed at determining the differences on stress variables of different groups of players, the data collected were subjected to statistical analysis using Analysis of Variance. In all cases 0.05 level was fixed to test the hypothesis. Key Word: Anxiety

### INTRODUCTION

Today, sport and exercise psychologists have begun to research and provide information in the ways that psychological well-being and vigorous physical activity are related. This idea of psychophysiology, monitoring brain activity during exercise has aided in this research. Also, sport psychologists are beginning to consider exercise to be a therapeutic addition to healthy mental adjustment.

#### ANXIETY

In recent years the understanding and implementation of real relationship between the “psycho” and the “soma” in various discipline a new avenue has been opened for physical educationist to devise suitable physical education programmes to prevent and cure those disorders that appears to result from disturbances in the relationship between the “psyche” and “soma” which are usually called psychosomatic disorders. In these disorders ‘anxiety’ appears to be the root cause which may result from any of the several Psychological disorders like hate, envy and conflict. This anxiety is manifested in different forms and in varying degrees of intensity affecting the behavioural patterns of individuals.

In view of the growing importance of anxiety in the diverse fields of human activity, psychiatrists, educationists and physical educationists depend on the method of measuring individual anxiety level in most of their investigations. As accurate diagnosis and prognosis in different psychosomatic disorders depend on the exact measurement of the intensity disorders and the nature of anxiety, an investigation into the various method of measuring anxiety.

Anxiety is both a trait and state. As a trait, anxiety is more or less permanent inborn characteristic of human personality and as a state, it is a universal, environmental phenomenon.

“Anxiety is one of the important psychological factors influencing sports performance. Anxiety, a complex emotional state, may be characterized as a general fear or forbidding usually accompanied by tension. It is related to fear of failure, either real or anticipated”.(Sivaramakrishnan, 1994)

## **STATEMENT OF THE PROBLEM**

The purpose of this research was to make a study on selected as anxiety, among high, medium and over achievers of men volleyball players.

## **DELIMITATIONS**

For the purpose of the study, the players who competed at national level competitions representing their university is considered as high achievers in the respective game. Hence, the investigator selected 30 volleyball players who represented their university at national level.

For the purpose of the study, the players who competed at inter-university level competitions representing their university at inter university level competitions is considered as medium achievers in the respective game. Hence, the investigator selected 30 men volleyball players who represented their university at inter-university level competitions.

For the purpose of the study, the players who competed at inter national level competitions representing their university at inter national level volleyball competitions were considered as over achievers. Hence, the investigator selected 30 men volleyball players who competed at inter national competitions.

Thus the study covered a total of 90 inter university men volleyball players of 30 high achievers, 30 medium achievers and 30 over achievers in the game of volleyball.

The age of the subjects was between 19 and 26 years.

Standardized questionnaires were used to collect data on selected psychological variables.

## **LIMITATIONS**

The subjects selected for the study were from different states in India and their different socio-economic status, study habits, life style, nutritional status, were beyond the control of the investigator which could be the limitation of the study.

Questionnaire research has its limitations. As such any bias that may enter into the subject's response in his account may be considered as a limitation of the study.

The influence of vigorous academic activity of students could have discouraged or motivated the subjects during training and during testing period.

The heterogeneous characters of the subjects in hereditary and environmental factors were recognized as a limitations.

## **DEFINITION AND EXPLANATION OF THE TERMS**

Psychology

**“ Psychology is the science of the activity of an individual in relation to his environment”**  
(Kamlesh, 1983).

### **Questionnaire**

The information that attempt to measure the attitude or belief of an individual is known as questionnaire or attitude scale. Through the use of questions or by getting an individual's reaction to statements, a sample of his opinion is obtained. From this statement or opinion may be inferred or estimated his attitude what he really believes.(Best, 1978)

### **Anxiety**

Anxiety is a state of motional and physical disturbance included in a person by real or imagined threat. In psychology the term refers to disturbance caused by threats that are only apparent to the individual and causing to behave in a way that is not relevant to the true situations (Vealy, R.S. 1986).

## **SELECTION OF SUBJECTS**

The purpose of this study is to analyse selected psychological variables among high, medium and over achievers of men volleyball players.. To achieve the purpose of this study, the investigator in consultation with the Guide, the investigator selected the players who competed at national level volleyball competitions were considered as high achievers, players competed at inter university level competitions were considered as medium level achievers and players who competed at inter-national level competitions was considered as over achievers in the game of volleyball. Hence, the investigator selected 30 men volleyball players competed at national level, 30 men volleyball players competed at inter university level and 30 men volleyball players competed at international level.

Thus the study covered a total of 90 volleyball players. The age of the subjects was between 19 and 26 years.

### SELECTION OF THE VARIABLES:

The study was taken to make a comparative analysis of selected Anxiety among high, medium and over achievers of volleyball players. The investigator reviewed the available scientific literature pertaining to the study, resulting from the review of literature and in consultation with the experts and also considering the feasibility of the study, the following variables were selected keeping in mind the availability of the equipments etcetera.

#### Dependent Variables

Anxiety

#### Independent Variables

1. 30 men volleyball players competed at national level
2. 30 men volleyball players competed at inter university level
3. 30 men volleyball players competed at international level

#### RESEARCH DESIGN:

The objective of undertaking this research was to assess the psychological variables of high, medium and over achievers of inter men volleyball players and to find out the differences. Thus, the research objective was to find out the differences among volleyball players competed at different levels. Since the research is aimed at determining the differences on selected psychological variables of different groups of players, the data collected were subjected to statistical analysis using Analysis of Variance. In all cases 0.05 level was fixed to test the hypothesis.

**Table I**

#### Intra-class Correlation Coefficients obtained on Anthropometric Variables

S.No	Name of Variables	Obtained Correlation Coefficient
1	Anxiety	0.78*

\* Significant at 0.01 level.

#### ANXIETY

Anxiety was measured through the anxiety questionnaire. The anxiety questionnaire was designed to measure the degree of anxiety experience prior to the competition.

It was developed by Spielberger.(1979). Spielbergers Trait Anxiety questionnaire was given to all subjects. Twenty items were adopted from Spielbergers Trait Anxiety questionnaire for this investigation. The complete questionnaire is scores as follows:

S.No	Response	Score of Positive statements	Score of Negative statements
1	Not at all	1	4
2	Some what	2	3
3	Moderately so	3	2
4	Very much	4	1

<u>Positive Statements</u>	1,2,5,8,10,11,15,16,19,20
<u>Negative Statements</u>	3,4,6,7,9,12,13,14,17,18

#### RESULTS ON ANXIETY

The results comparing psychological variable Anxiety among the high, medium and overachievers of men volleyball players is presented in Table

**Table 2** SHOWING THE ANALYSIS OF VARIANCE ON THE MEANS OBTAINED FROM HIGH, MEDIUM AND OVERACHIEVERS OF VOLLEYBALL PLAYERS ON ANXIETY

	Means Values of Volleyball players of			Source of Variance	Sum of Squares	df	Mean Squares	F
	High	Medium	Over achievers					
Means	55.60	54.76	52.32	Between	145.15	2	72.57	4.87*
				Within	1074.00	72	14.92	

Table F-ratio at 0.05 level of confidence for 2 and 72(df) =3.12 .

\* Significant at 0.05 level

Table shows that the mean values on psychological variable, Anxiety for high achievers of volleyball players was 55.60 medium achievers of volleyball players was 54.76 and over achievers of volleyball players was 52.32. The differences were subjected to statistical analysis and it was found that the obtained F value 4.87 was greater than the required F value of 3.12 to be significant at 0.05 level. Hence, it was found that there were significant differences between the groups tested.

Since significant differences were obtained the data were further subjected to statistical treatment using Scheffe's confidence interval and the results are presented in Table 4.2

Table 3Scheffe's Confidence Interval Test Scores on Anxiety

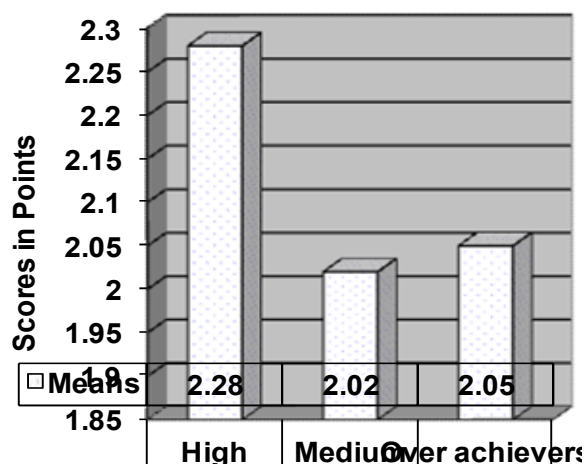
MEANS				Required . C I
High achievers	Medium achievers	Over achievers	Mean Difference	
55.60	54.76		0.84	2.73
55.60		52.32	3.28*	2.73
	54.76	52.32	2.44	2.73

\* Significant

The results presented in Table showed that the mean difference between high and medium achievers of volleyball players was 0.84. The difference between high and over achievers of volleyball players was 3.28. The difference between medium and over achievers of volleyball players was 2.44. The required mean difference to be significant at 0.05 level was 2.73. The mean differences high and over achievers (3.28) was greater than the required value of 2.73, hence it was found significant at 0.05 level.

The mean values presented in Table 4.1 were presented through a bar diagram in Figure I for better understanding of the results

**Figure I: Bar Diagram Showing the Mean Values in Anxiety Among High, Medium and Over Achievers of volleyball players**



## CONCLUSIONS

Within the limitations and delimitations of the study, the following conclusions were drawn.

It was concluded that there were significant differences on psychological variable anxiety among high, medium and overachievers of men volleyball players as the obtained F value was significant at 0.05 level.. The post hoc analysis further proved that overachievers have significantly lesser anxiety than high achievers.

## REFERENCES

- Brayant J. Crathy, (1989) Psychology in contemporary Sport 3<sup>rd</sup> Ed; Englewood Cliffs, N.J: Prentice Hall, Inc.
- Carron, Brawley, and Widmeyer, (1985), Cohesion: Conceptual and Measurement Issues, New York: Sage Publications.
- Charles A. Bucher and Deborah A. Dvest, (1982) Foundations of Physical Education and Sports, Englewood Cliffs, N.J: Prentice Hall, Inc., P. 188
- Duda, J.L. & Treasure, D.C. (2006). Motivational processes and the facilitation of performance, persistence, and well-being in sport. In J.M. Williams (Ed.), Applied Sport Psychology: Personal Growth to Peak Performance New York: McGraw-Hill.
- Linsen Zen Robert, (1951) The Art of Life, London:- The English University Press Ltd.PP.51-78.
- Mohan,J. N. K. Chanda and Sultan Akkthar, (2005) Psychology of sports Indian Perspectivem, New Delhi: M.S. Friends Publications, 2005, P.: 42
- Snyder, C. R.; Lopez, Shane J. (2009-01-01). Oxford Handbook of Positive Psychology. Oxford University Press.
- Speilberger, C.D. (1976) State Trait Anxiety Inventory, Paloattocalis: Consulony Psychologist Press Inc, PP.6-18.
- Thirumalaisamy, A (1998), Statistics in Physical Education, Karaikudi, Senthil Publilshers. P.18.

## **Construction of Selected Health Related Physical Fitness Norms for High School Boys in Bangalore City**

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### **Introduction**

Ability to perform usually while not undue fatigue allows to fancy leisure activities while not weakening physical stress. The Human Organism was designed to move anthropologists indicate that require to move is related to the "Flight or Fight" response. In search of food, primitive folks generally had a fight with different predators or that they had fled for safety.

### **NORMS**

A norm may be a normal purpose conference that can offer a basis for judgment. Norm's area unit accustomed interpret relative standing to match scores or teams and either to mix or average the scores. Norm may be a scale that allows conversion from a raw score to a capable of comparison and interpretation. If a check is in the midst of norms, its utility is increased. Its characteristic of average and range area unit famed.

### **CONSTRUCTION OF NORMS**

The norm scales to be accepted as valid and sensible criteria for evaluating the individual condition tests should be in the course of the norms. Once the norm scales square measure being made one should take into account the subsequent principles of sensible and education.

Sampling techniques, Equivalency, Progressiveness, Sensitiveness

### **OBJECTIVE OF THE STUDY**

To help girls move in skilful and effective manner in all the selected activities in which they engage in the physical education programmes. To develop an understanding and appreciation of movement in girls and you're so that their lives will become more meaningful, purposive and productive. To develop an understanding and appreciation of certain principles concerned with movements. To develop better interpersonal relationship through the of games of sports. To develop various organic system of the body so that they will respond in a healthful way.

### **STATEMENT OF THE PROBLEM**

The purpose of the study was to construct norms to measure the health related physical fitness of the high school boys of age twelve to fifteen years in Bangalore city.

### **SIGNIFICANCE OF THE STUDY**

This study will help to prepare the health related physical fitness norms which will serve as a ready reference service and also as instant information for the needy one.

It may help to physical education teacher to know health standard of students.

To find out the relationship between the healths related physical fitness and father's occupation.

### **DELIMITATIONS**

This study was conducted for the high school boys in Bangalore City. The study was further delimited to measure AAHPERD, health related Fitness test. The study was conducted only to the boys of age ranging from twelve to fifteen years.

### **LIMITATION**

This study was limited to certain factors like habits, diet, temperature, height; routine activities were not taken into considerations while interpreting the results.

All subjects were taken from the same atmosphere of living.

Subject's academic standard and their economic status were not into consideration.

## **Methodology**

### **SELECTION OF SUBJECTS**

This study was designed to construct norms for the health- related physical fitness of high school boys of age group of twelve to fifteen years in Bangalore City. To achieve the above purpose, two thousand boys from above city were selected at random. The subjects were selected from the following schools.

This study was designed to construct norms for the health- connected fitness of high school boys aged cluster of twelve to fifteen years in Bangalore town. To realize the on top of purpose, 2 thousand boys from on top of town were selected haphazardly. The topics were selected from the subsequent colleges.

### **SELECTION OF VARIABLES**

The research scholar reviewed the available scientific literature pertaining to the health related physical fitness from books, journals, periodicals, magazines and research papers. Taking in to consideration the following variables were selected from American alliance for health, physical education, recreation and dance, health related physical fitness.

The AAHPERD health related physical fitness<sup>1</sup> test consists of the following four components.

Test I: Nine minute run for cardio respiratory fitness.

Test II: Sit - ups for muscular strength.

Test III: Sun of triceps and sub- scapular skin folds for body composition.

Test IV: Sit and Reach for flexibility.

### **STATISTICAL TECHNIQUE**

The mean and standard deviation associated to construct Rull Scale Norms were used in this study. The obtained data were analyzed by using Hull scale as suggested by Garret.

### **Conclusions**

On the basis of the hull scale constructed for components like nine minute run, muscular strength, body composition and flexibility, the following conclusions were drawn:

In nine minute run as per the qualitative grading for the constructed hull scale values out of 2016 subjects 107 subjects were poor, 172 subjects were fair, 688 subjects were average, 7.57 subjects were good, 203 subjects were very good and 89 subjects were excellent.

In sit-ups as per the qualitative grading for the constructed hull scale values 60 subjects were poor, 241 subjects were fair, 663 subjects were average, 765 subjects were good, 227 subjects were very good and 60 subjects were excellent.

In body composition as per the qualitative grading for the constructed hull scale values 61 subjects were poor, 214 subjects were fair, 881 subjects were average, 599 subjects were good, 164 subjects were very good and 97 subjects were excellent.

In flexibility as per the qualitative grading for the constructed hull scale values 112 subjects were poor, 158 subjects were fair, 554 subjects were average, 950 subjects were good, 169 subjects were very good and 73 subjects were excellent.

### **Recommendations**

On the basis of the findings and conclusions of the investigation, the following recommendations were drawn.

The researcher has constructed norms for youth physical fitness for College women. It is recommended at the time of admission these norms may be used to select the students in the women colleges.

A similar study may be conducted to construct norms for the Arts and Science College women students in other district. A study of similar nature may be conducted to construct norms of the Higher Secondary School Girls

A similar study may be conducted to construct norms for the sports schools girls, in each district.

A similar study may be conducted to construct National norms for women.

A study of similar nature may be conducted to construct national norms in all the Athletic events for women.

A similar study may be conducted to construct norms for the performance variables in each major game for women.

A similar study may be conducted to construct norms for the professional College women students.

## **Sports law And Legal Protection Awareness among Sports Organizer And Coaches**

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### **Introduction**

As mankind exists on earth the law of the land goes with it. The Laws of the land were promulgated to control mankind to its proper de quorum to live harmoniously within the society. Law is the body of collections of various laws peculiar to a nation or people. It is both written and unwritten body of rules largely derived from custom and formal enactment which are recognized as binding among those persons who constitute a community or state, so that they will impose upon and enforce among those persons by appropriate sanctions. According to Thomas Davis (nd), the laws have its classification, public law, private law, enacted law, case law, customary law and conventional law. Public law deals with relationship among members of the community and the states (e.g. constitutional law and criminal law), while private law derived from the relationship of the members of the community (e.g. torts and contracts).

Sports law is a private law, it is for legal protection of those entities that are in the sports industries, including coaches, athletes and sports organizer. This law is not new to the realm of Philippine Sports. There were laws that are promulgated by legislative to legally protect the rights of both coaches, athletes and sports organizer through its proper agency to implement the said laws embodied in Republic Act 6748 known as enactment of Philippine Sports Commission. However, there were some coaches, athletes and sports organizer who might not be aware of their legal rights and liabilities, while some might be aware but just limited to lay man understanding of the law. Furthermore, because of this limited awareness, torts and damages are among the common issues of the cases.

Sports accidents occur during sports or exercise and might affect both professional athletes and people trying to improve their health through physical activity. According to Appenzeller, (1998), there is considerable disagreement regarding litigation in sport and the effect it has on the sport industry. Critics of sport-related litigation condemn the continuous rise in the number of lawsuits filed and the enormous amounts of monetary damages that have become commonplace today. Among of the very common issues of litigation is negligence on the part of the coach and sport organizer while other are gender discrimination, ineligibility of players, recruiting violations and educational institutions.

Negligence is the most common claim that occurs with coaches and sports organizers failure to act as a reasonable and prudent person, resulting to damage to another person. Mohamadinejad, A. ( 2014 ) added that in this regards, the university coaches are in a special situation because the students who participate at university sport vary in age, size, experience, skill, physical conditions and abilities. Such variance, in combination with vigorous physical activity, creates inherently unstable situations in which mishaps are more likely to occur. Hence, the study was conceived.

### **Statement of the Problem**

The study aimed to significantly answer the following questions: 1. What is the profile of the respondents?; 2. What is the level of sports law awareness and legal protection of the respondents?; 3. Is there a significant relationship between profile and sports law?; 4. Is there a significant relationship between profile and legal protection? 5. Levels of Awareness on Sports Law and Legal Protection Program?.



## **Methodology**

The research study utilized both quantitative and qualitative method. In quantitative research it employed descriptive survey and correlation research design. While qualitative research utilized verbal description and explanation in search to what the population personal experience in relation to the study.

The study was conducted at Iligan City during the City Division Meet S.Y. 2016-2017 held at Iligan City National High Schools. The respondents of the study were 108 sports organizers and 88 coaches of the different participating schools.

The study employed questionnaires by AzadehMohamadinejad (2014) was adapted and modified and pilot tested for its validity. Actual interview was also conducted through focus group discussions. All Data were statistically treated with the use of frequency distribution, standard deviation, Pearson r, chi-square and thematic analysis.

## **Results and Discussion**

The study revealed that majority of sports organizers were at their middle ages, from 36-40 and mostly were males. It was said that sport is the men's world. This statement is supported by Singer, Murphy and Tennant (2010) that sport has generally been a dominion of male. It was also revealed that majority of them finished education courses, BSED and BEED and majority of them were only 5 years from the sports organizer assignment and were assigned to officiating officials.

It also revealed that overall mean of 2.67 or with standard deviation of 0.14 was interpreted with high awareness. As a result majority of the sports organizer have agreed that they are aware of sports law. However, the level of legal protection awareness revealed that 879 or 54.26% or majority of the respondents out of 108 respondents' strongly said "NO". This implies that sports organizer were not aware of their legal protection. The sports organizers are always at the brink of any accident occurrence during the conduct of the event, by this they need to be aware of what legal protection they will have to avoid negligence and damages that will result to litigation. A question may rise if waiver or agreement of participation would legally protect sports organizer. An Act to Ordain and Institute The Civil Code of the Philippines Article 6 (4a), "Rights may be waived, unless the waiver is contrary to law, public order, public policy, morals, or good customs, or prejudicial to a third person with a right recognized by law (R.A. No. 386, <http://www.gov.ph>). This means that a waiver can be contested if it is contrary to law. Like the waiver must be made clearly but not necessarily express or comply to formalities only for the protection of the organizer or it does not concur to Art. 6 of the Civil Code. Further obligation imposed by Article 2176 is demandable not only for one's own acts or omissions, but also for those of persons for whom one is responsible (Ingles, I., 2016). The principle of vicarious liability states, "one is not only liable for his own quasi-delictual acts but also for those persons for whom he is responsible under the law," (Pineda, 2004) It is also called "imputed liability." The liability does not only extend to the perpetrator, but also to those responsible for them, as long as the former is performing his or her assigned tasks (Acosta, 2014).

All attained relationship between profile and level of sports law awareness were not significant. The findings denotes that profile variables of age, sex, highest educational attainment, numbers of years in sports organizing and classification as sports organizer did not influence the level of sports law awareness of the sports organizer. This implies that sports organizers awareness to sports law inured with their profile because respondents were aware of their legal liabilities more specifically on tort and damages.

In the case of the coaches, results revealed that 29 or 32.95% were at early and middle adult stage of their ages and 48 or 54.55% were female. Majority or 44 or 50% were graduates of education courses and only 14 or 15.91% were specialized in physical education. This implies that coaches were at their early and middle adult stage at the time of their coaching appointment by their respective schools because they undergo trainings and this age group are mature enough to manage their time that they can still do extra work aside from regular loads or they have the skills in coaching and for them is a lifetime satisfaction. According to Luoma, D. (2013), Life coaching makes a significant difference in one's overall life satisfaction. This is also an implication that female dominated the coaching arena of the different schools. According to Kalin, Jacqui L. and Waldron, Jennifer J. (2015) more women in the coaching scene would eliminate the issue of preferences being affected by male dominant backgrounds and/or homeostasis. However, in our school the male and female coaches were assigned according to gender sports event. Male are not allowed to handle female category. This is because of the sensitivity of our culture.

This implies that majority of the coaches were categorically teachers from their schools who were just assigned to handle the task and not minding about their coaching abilities and experienced, instead what is considered is their leadership skills to handle their players. In the study conducted by Angelo R. Ganaden, EnjeanEjaus and , Marie Fe D. De Guzman (EdD) (2017), among elementary coaches ,they found out that coaches always exhibited a higher leadership style in positive feedback and low on autocratic behaviour. Further, a no significant difference was found on the described and exhibited leadership behaviours' of coaches when attributed to their educational qualification. This means that educational attainment will not be a factor in assigning a coach to a certain sporting event.

The coaches' level of sports law awareness revealed that 2.86 mean and 0.29 standard deviation denotes that respondents have high level of Sports Law awareness. As a result the respondents agreed that they were aware about sports law. This implies that coaches were aware about sports law, however to what extent of the law the coaches understand.

The result also revealed that coaches had a high awareness that negligence and damages is among the common sports law issues in sport. This is an implication that coaches were applying the doctrine of locos parentis and doctrine of reasonable care to their athletes to avoid injury among them, according to Article 218 of the Philippines civil code under the family relation. Under tort principles of negligence, educators owe students a duty to anticipate foreseeable dangers and to take reasonable steps to protect those students from that danger.

A legal standard used in negligence (personal injury) cases. The hypothetical reasonable person behaves in a way that is legally appropriate. The result also revealed that because of their awareness on negligence and damages they were fully aware that they need to avoid legal litigation by having this doctrine. Another result revealed that it is the coach duty to always see to it that athletes are to be trained according to their instruction. It is imperative of them to be always around during trainings to supervise the drills. In other words, the coaches were fully aware of their responsibilities. The doctrine of locos parentis and doctrine of reasonable care is their only way to avoid litigation as they said.

According to Rosca (2010), a sports coach should not just mean to train the athlete in the physical aspect only. It has to be understood that coaches should be educated enough about their liabilities' towards their athletes by being up brisk about their safety and limits. It has to be imperative for coach to be aware of the sports law specifically on torts to lessen further damages to them and to their players. Basically, this statement is supported by Engelhorn, R. (2001), coaches also have important legal and ethical obligations to their schools and their athletes. Legal responsibilities are usually well-defined and are often points of emphasis in coaching certification programs.

The Coaches' legal protection awareness revealed that out of 88 respondents' majority or 825 or 62.50% had no awareness on legal protection or how they will be legally protected along the course of their duties as coach. The result implies that coaches' were not aware of their legal protection against any occurrence of disputes either to their athletes or to the other party along the course of their duties. The majority of the respondents' answered "NO" perhaps, they understand their legal duties to their athletes but somehow not aware of any legal protection for them or may be being a coach for them is just to oversee the actions of their players not minding the unfortunate incident that may occur resulting legal actions. Like the case at bar of the 16-year-old high school student from Bulacan who competed in the boxing match of the Central Luzon Regional Athletic Association in Iba, Zambales who died after being in a state of comatose for two days. According to reports, Garcia's nose began to bleed in the first round but the attending ring physician cleared the young boxer and allowed him to continue fighting (Samaco,2013). The question lies on whom to be blamed of such tragic incident, the coach, sports organizer or Garcia. This case was brought to litigation but until now the case is on trial.

According to Wong as cited by Roberts, G. (2009) traditionally, coaches are expected to exercise a heightened duty of care (i.e., special relationship) to their athletes. There is a presumptive "special relationship" between a more qualified and experienced professional and a less qualified and impressionable student-athlete. Coaches were expected to be prudent in doing their functions to lessen possible injuries. This is supported by Hoch as cited by Mohamadinejad, A. (2014) that most injuries result from the inherent risks of sport; occasionally they are the result of careless or thoughtless behaviour or omission of some responsible persons. In cases there may be putting the liability for the injuries may rest with a coach and event organizer, or facilities.

Aaron(2004) added, that Coaches play the primary role when dealing with athletes and the activities in which the athletes engage. They are the individuals who generally have the most direct control over the participants and are present at the time of injury. According to Labuschagne and Skea, as cited by Mohamadinejad, A. (2014) whenever there is unfortunate occurrence incident on playing fields, the action or inaction of the coach are directly to be blamed and always the defendant in lawsuits brought by participants. Hence, coaches' must be prudent to exert significant effort to reduce possible unfortunate occurrence by equipping themselves with the knowledge of how to manage and handle situation.

The computed Pearson  $r$  is  $-0.038$  with  $p$ - value of  $0.700$  revealed for an inverse negligible correlation. This means that if the one value increases and the other value decreases or vice versa it gives a negative relationship or inverse correlation. The result implied that while Level of Sports Law Awareness increases Legal Protection Program decreases. Hence, the relationship is not significant.

The coaches computed Pearson  $r$  is  $0.182$  with  $p$ - value of  $0.090$  revealed for a very low correlation. This means that the variables are said to have no linear relationship or a very weak linear relationship. This implies that the relationship between the level of awareness on sports law and legal protection linear relationship is very low and that signifies no significant relationship. The result further revealed that level of awareness on sports law did not influenced the legal protection program when both variables are interplayed.

### **Conclusions**

Based on the findings of this study and statistical results made, the following were postulated. The level of sports law awareness of the respondents does not influence the level of awareness of legal protection. This means despite of their sports law awareness, the respondents do not have any idea to what specific law is applicable, in their lay man thinking the word negligence is just as simple as not taking good care of their respective participants, they were not fully aware of the provision of the law pertaining to negligence and liability, their way of thinking would boil to point of no literacy of the law. The respondents' level of awareness of legal protection is basic, they do not have the idea on how they will be legally protected, however, standard due care is what they are applying to their respective participants. The standard due care is one of legal protection for them, this is a defense for negligence but they were not aware of this because they were not fully aware of the provision of the law.

### **Recommendations**

Based on the findings and conclusion of this study, the following recommendations were drawn:

It is imperative that proposed intervention program will be implemented.

Philippine Sports Commission its mandate to look into the amateur in school sports based activities through the DepEd must look into the legal welfare of school sports based sports officials and coaches by incorporating law literacy to them during trainings.

The Department of Education should include sports law as one subject in the curricula under the sports track.

School Administrators must take into account the appointment of coaches and safety and conduciveness of facilities and equipment used during trainings.

Sports Officials must be educated on the provision of law pertaining to legal liabilities and protection.

Coaches must be educate on the provision of law pertaining to legal liabilities and protection and equip with skills in coaching and first aid with proper training program.

### **References**

- Aaron, Thomas (2004) Factors Affecting The Performance Levelsof Risk Management Behaviorsof Florida High School Athletic Directors. <http://diginole.lib.fsu.edu>. Retrieved 2/16/17.
- A.R. Ganaden,, E. Ejaus,& M. Fe D. De Guzman (EdD)(2017).Leadership Behaviors of Sports Coaches in Public Elementary Schools of District 2, San Felipe, Zambales, Philippines. Asia Pacific Journal of Education, Arts and Sciences, Vol. 4 No. 1, January 2017 P-ISSN 2362-8022 | E-ISSN 2362-8030 | [www.apjeas.apjmr.com](http://www.apjeas.apjmr.com)
- Annie Clement,Ph.d.,J.D. (1989). Law ins Sport and PhysicalActivity.USA. Benchmark Press Inc.
- Atty. Persida Acosta (2014).Negligent Persons Who Cause Harm Liable for Damages. Manila Times.DEARPAO <http://www.manilatimes.net>

Mohamadinejad, Azadeh (2014). Assessment of Coaches Knowledge Regarding Their Legal Duties toward Athletes. Budapest. DOI: 10.17624/TF.2014.01

Darcy Luoma, MCC, BCC, MSOD, ORSCC, CPCC, Darcy Luoma: Coaching & Consulting, LLC (2013). Article: The Effectiveness of Life Coaching on Overall Life Satisfaction. The International Coach Federation-Wisconsin <http://icfwisconsin.org>

CBSI Editorial Staff (2001). Civil Code of The Philippines. Manila. Philippines. Central Book Supply Inc.

Greg Roberts (2009). A Coach's Duty In Sports Law. Techniques Magazine. <http://track.coachesdirectory.com/article/a-special.-www.ustfccca.org>

Ignatious Michael Ingles (nd). Philippine Sports Torts: Adopting a Standard of Care for Sports Competitions and Establishing Vicarious Liability for Professional Coach. Marquette Sports Law Review. Volume 27. <http://scholarship.law.marquette.edu>

Jacqui L. Kalin and Jennifer J. Waldron (nd). Preferences Toward Gender of Coach and Perceptions of Roles of Basketball Coaches. International Journal of Exercise Science. <http://www.intjexersci.com>. 317

Maloney L. Samaco (2013) Boxer Jonas Garcia Dies After COMATOSE. <http://philboxing.com>

Mohamadinejad, Azadeh (2014). Assessment of Coaches Knowledge Regarding Their Legal Duties toward Athletes. Budapest. DOI: 10.17624/TF.2014.01

Rich Engelhorn (2001), Legal and Ethical Responsibilities of a Coach. Iowa State University. New York: Teachers College Press <http://www.iahsaa.org>

Singer, R., M. Murphy, and L.K. Tennant (2010). Handbook of Research on Psychology 3rd ed. New York. Macmillan Publishing Company

Thomas Davis (nd) Sports law. <http://scholarship.law.marquette.edu>

Vlad Rosca (2010). The Coach-Athlete Communication Process Towards A Better Human Resources Management In Sport. IDEAS <http://mrp.ase.ro/no23/f4.pdf>

## **Effect of Harness Training and Circuit Training on Selected Skills and Fitness Components of High School Foot ball Players**

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### **Introduction**

Harness training or resistance training is for maintaining the body of a runner in an exceedingly correct sprinting type from begins to end throughout a race. The equipment includes base plate means that tailored for reference to the trunk of the runner, head participating means that for participating the sprinter's head, and connecting means that for coupling the pinnacle participating means that with the bottom plate means that therefore on maintain the pinnacle and neck of the runner in an extended forward position relative to the trunk throughout sprinting.

Circuit training is incredibly special kind of training that concentrates on totally different components of the body and general endurance. Circuit training may be a methodology of physical learning that employs each resistance training and callisthenic training exercises. The strategy was originally introduced by Morgan and Adamson within the late Nineteen Fifties at the University of Leeds, England. The intensity and vigour of circuit training square measure so difficult pleasurable to the performing artist. This method produces positive changes in future in motor performance. General fitness, muscular power, endurance and speed have shown determined improvement still.

### **STATEMENT OF THE PROBLEM**

The purpose of this experimental study was to find out the effects of Harness Training and Circuit Training on selected skills and fitness components of High School football players.

### **OBJECTIVE OF THE STUDY**

The main objective of the study was to find out the effect of Harness Training on selected skills in football and fitness components of high School Football players.

The main objective of the study was to evaluate the training effect of Circuit exercises on selected skills and fitness components of High School Football players.

To find out the effects of Harness training and Circuit training on selected skills and fitness components of High School Football players.

To compare the effects of Harness training and Circuit training with control group and to point out the improvement on selected variables.

### **HYPOTHESIS**

In light of the preceding discussion and for the purpose of the present investigation the following are hypothesized:

There may be significant difference in the way selected fitness variables responded to Harness Training.

There may be significant difference in the way the selected fitness variables responded to circuit Training.

There may be significant difference in the way the selected Football Skill variables respond to Harness Training.

There may be significant variations in the way the selected football skill variables respond to Circuit Training.

There may be significant difference on the response of selected Fitness variables among Harness and circuit Training groups.

There may be significant difference on the responses of selected Foot ball Skill variables among Harness and circuit training groups.

#### **SIGNIFICANCE OF THE STUDY**

The present investigation will contribute significantly to the field of sports and physical education, through improved training methods in the following ways.

The study may be productive to identify the desirable changes in applying harness training and circuit training physical fitness and skill performance variables of high school football players.

The research may be helpful to suggest ways and means of improving the selected fitness variables of the football players through this type of harness training.

The study will be helpful to find out the suitable training needed for the development of selected dependent variables.

The study may be great significance because it would provide an opportunity to the physical educators, coaches and the players, as they would be able to scientifically understand and assess the changes in the physical fitness s and skill variables due to different experimental protocols selected for this study.

#### **DELIMITATION**

Ninety high school male football players were selected randomly as subjects from different schools in Chittoor District.

The age of subjects for the study was between 13 to 15 years and all the subjects were players who represented their schools in inter school and inter district competitions.

All the subjects were gathered in the auditorium for experimental treatments and the experimental period was for 12 weeks.

Pre and post tests on selected physical fitness and skills were conducted in the institution's grounds.

All the subjects were residents in the same area and hence the nutritional status and day to day activities of all the subjects were similar.

To test the hypothesis the following parameters will be analysed.

#### **Physical Fitness Variables**

Speed

Cardio respiratory endurance

Explosive power

#### **Skill Variables**

Passing for accuracy

Dribbling

Kicking for distance.

#### **LIMITATION**

Uncontrollable factors associated with the study were accepted as limitation and the following were considered as limitation of the research study:

Certain factors like rational habits like life style, daily routine, diet and climatic conditions were not taken into account in the study.

The influence of vigorous academic activity of students could have discouraged or motivated the subjects during training and during testing period.

The heterogeneous characters of the subjects in hereditary and environmental factors were recognized as a limitation.

The subject's body type and socio economic status of the players were not taken into consideration.

Uncontrollable changes in climate and whether conditions such as atmosphere, temperature, humidity and other meteorological factors during the training programme were regarded as limitations.

#### **METHODOLOGY**

##### **SELECTION OF SUBJECTS**

To achieve the purpose of the study, the investigator randomly selected 90 high school male football players from different schools in Andhra Pradesh. The age of subjects for the study was between 13 to 15 years. The selected subjects were divided into three groups, two experimental groups and control group consisting of 30 subjects in each group. .

##### **SELECTION OF VARIABLES**

Based on the experience gained by the investigator through review of related studies, journals and books on different training methods on harness training and circuit training, the following variables were selected for this study.

**Dependent Variables****Physical Fitness Components**

1. Speed 2. Cardiorespiratory Endurance 3. Explosive power

**Skills Variables**

Passing ,Dribbling ,Kicking for distance

**Independent Variables**

Harness Training for 12 weeks Circuit resistance training for 12 weeks

**Statistical Analysis**

The selection of subjects, allotment of groups as control and experimental group were done randomly. Data were collected before and after sports loading training on the selected dependent variables. No attempt was made to equate the groups before the commencement of training. Thus, to nullify the differences in the initial means on the post data, analysis of covariance was used. The level of significance was set at 0.05 level. The data obtained were analyzed by analysis of variance (ANOVA) and analysis of covariance (ANCOVA). The analysis of variance was used to assess the significance of difference between the pre-test and post-test, for each of the variables on the circuit resistance training, football skill based drills and training groups separately. When the F ratio was found to be significant, Scheffe's post hoc test was used to find out the paired mean significant difference.

**Conclusions**

Within the limitations and delimitations of the study, the following conclusions were drawn.

It was found those 12 weeks Harness Training and Circuit Training protocols were significantly improved speed of High School Football players compared to Control group. It was also found that Harness Training was significantly better improved then Circuit Training on Speed of High School Foot Ball Players.

It was concluded that 12 weeks Harness Training protocols were significantly improved Cardio Respiratory Endurance of High School Football Players compared to Control group. It was also found that Harness Training was significantly improved then Circuit Training on Cardio respiratory Endurance of High School Foot Ball Players.

It was found that 12 weeks Harness Training protocols were significantly improved Leg Explosive Strength of High School Football Players compared to Control group. It was also found that Harness Training was significantly better improved than Circuit Training and Control group on Leg Explosive Power of High School Football Players.

It was concluded those 12 weeks Harness Training and Circuit Training protocols were significantly improved Dribbling ability of High School Football Players compared to Control group. It was also found that Circuit Training significantly better improved then Horns training on Driveling ability of High School Foot Ball Players.

It was found that 12 weeks Harness Training and Circuit Training protocols were significantly improved Passing for Accuracy ability of High School Football Players compared to Control group. It was also found that Circuit Training significantly better improved then Harness Training on passing for Accuracy ability of High School Foot Ball Players.

It was concluded that 12 weeks Harness Training and Circuit Training protocols were significantly improved Kicking for distance ability of High School Football Players compared to Control group. It was also found that Circuit Training was significantly better than harness training on improving Kicking for distance ability of High School Football Players.

## **Attitude Of Doping Among Ethiopian Professional Middle And Long Distance Runners**

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### **Abstract:**

Doping in sport has become progressively viewed as a wider social problem. Indeed, due to a growing awareness of the recreational use of performance enhancing drugs, a rise in consumption rates, and the perceived associated adverse health effects, performance enhancing drugs have come to be viewed as a serious public health problem. The efficient strategy for prevention of doping use throughout the sport calendar requires improving the level of knowledge and hastening the development of negative attitude and practice towards doping in the athletes society. The aim of the study was to determine the level of attitude Ethiopian professional middle and long distance runners on doping. A quantitative cross-sectional study design was conducted. The study included 775 Ethiopian middle and long distance running athletes. The study participants were selected by using cluster sampling technique. Data were collected using structured and pretested questionnaires and multivariate logistic regression analyses were done to identify factors associated with attitude towards doping. Finally, results were presented with appropriate tables and graph as well as adjusted odd ratio (AOR) and 95% confidence interval. The prevalence of unfavorable attitude was 70.8%. In terms of attitude age, educational status, residence, attending training on anti doping and parental factors was showed statistically significant association. The prevalence of unfavorable attitude towards doping was moderate. Key words: Ethiopia, athlete, doping, attitude

### **Introduction**

Doping in sport has become progressively viewed as a wider social problem(van de Ven and Mulrooney 2014). Indeed, due to a growing awareness of the recreational use of performance enhancing drugs (PEDs), a rise in consumption rates, and the perceived associated adverse health effects, PEDs have come to be viewed as a serious public health problem(Keane 2005; Simon, Striegel et al. 2006; Sagoe, Molde et al. 2014).

The efficient strategy for prevention of doping use throughout the sport calendar requires improving the level of knowledge and hastening the development of negative attitude and practice towards doping in the athletes society.

Ethiopians participate in a lot of sports, a modern sport has a history of over half a century and within this period many types of sports have been introduced, but they are most well-known by athletics around the world. Athletic sports, different from other sports, has been playing a crucial role in introducing the country to the outside world. Athletics, in particular, long distance running has not only brought joy for Ethiopians, but also inspiration and courage to overcome the challenges of poverty(Judah and Girard 2008). But recently we are hearing and reading about some scandals that Ethiopian athletes were using or exposed to doping.



Doping has been a problem in sporting events. Reliable information on the prevalence of doping is necessary to perform policy evaluations (de Hon, Kuipers et al. 2015). Most of the studies on drug abuse in sports had been conducted in different parts of the world like Europe, America, Asia and Africa (Kenya, Nigeria, Uganda and South Africa). But in Ethiopia in investigators' best knowledge there is no any previous study about doping in sport. This study therefore tried to assess the level of attitude on doping among Ethiopian professional middle and long distance athletes.

Methods, procedures and materials

### Methods and materials

A quantitative cross-sectional survey was employed. The study was conducted in Ethiopia. The required sample size was calculated using Epi info statistical software version 7 and the final sample size was 775. For this study Cluster sampling technique was used. The procedure on selection of athletes was as follows. Each athletics clubs were taken as a separate cluster, Out of Fifty five athletics clubs 25 clubs were selected by simple random sampling and included in the study, and All middle and distance runners found in selected clubs were included in the study. To collection of data Structured Questionnaire was used. Data analysis was carried out by using SPSS version 20 statistical software packages to determine association. Frequency and percentage, Chi-square test to check the presence of association and odds ratios with 95% confidence interval was used to measure the significance and strength of associations between outcome variables and certain independent variables. Logistic regression model was used to assess presence of associations as well as to identify and control the confounding variables. For this study statistical significance was defined at probability level of .05. The model fitness was tested by Hosmer and Lemeshow test (0.76 for knowledge, 0.87 for attitude).

Variables of the study: Independent Variables Socio demographic factors (Age, sex, marital status, wealth index, educational status) and Parental factors (parental educational status, parental involvement in sport, presence of high level athlete in the family). Dependent or Outcome Variables was Doping attitude.

Operational definitions

Favorable attitude: those who score less than 50% of attitude question.

Unfavorable attitude: those who score 50% and above of attitude question.

### Results

Socio-demographic and characteristics of the respondents

A total of seven hundred and two Ethiopian middle and long distance running athletes were included in the study, giving a response rate of 90.6%. Nearly three-fifths (59.4%) of the respondents were males. The mean year's age of the respondents was 21.43 (with a S.D of 2.845). Majority of the respondents were Orthodox Christians (85.6%), more than half of respondents were in secondary school grade levels (66.2%) and rural residents (63%). More than third-fourths of the study participants were unmarried (91.7% [Table-1]). The average yearly income of the athletes based on their report was 123,056 birr (S.D +19.363).

Table 1: Socio-demographic characteristics of the study participants (n=702) Ethiopia, 2017

Characteristics	Frequency	Percent
Sex		
Male	417	59.4
Female	285	40.6
Religion		
Orthodox	601	85.6
Muslim	50	7.1
Protestant	39	5.5
Catholics	3	0.4
Others	9	1.28
Ethnicity		
Amhara	278	39.6
Tigrie	109	15.5
Oromo	294	41.9
SNNP	9	1.3
Others	12	1.7
Current marital status		
Unmarried	644	91.7

Married	58	8.3
Education		
Primary education (Grade 1-8)	99	14.1
Secondary school (Grade 9-12)	458	65.2
College and above	145	20.7
Residence		
Urban	260	37
Rural	442	63
Competition level		
National	597	85
International	105	15

#### Parental factors

One of the parental factors for this particular study was parental educational status in which 87.2% of them had no formal education and 68.2% of the respondents had no Parental involvement in sport. The other parental factor for this study was presence of high level athlete in the family in which 86.6% of the study participants didn't have high level athletes in their families [Table-2].

Table 2: Parental characteristics of Ethiopian middle and long distance running athletes (n-702), Ethiopia, 2017

Characteristics	Frequency	Percent
Parental educational status		
No formal education	612	87.2
Formal education	90	12.8
Parental involvement in sport		
Yes	223	31.8
No	479	68.2
Presence of high level athlete in the family		
Yes	94	13.4
No	608	86.6

#### Training on anti-doping

The study participants reported that, majority (63.2%) of them didn't take training on anti-doping drugs [Fig-1].

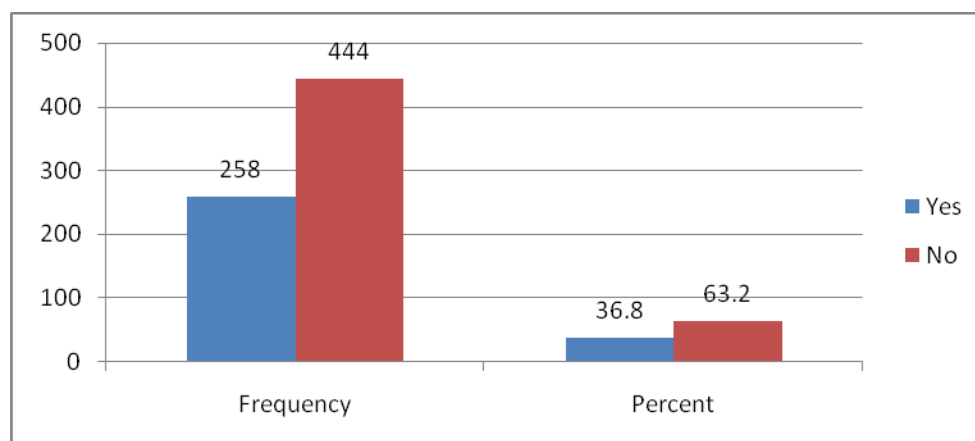
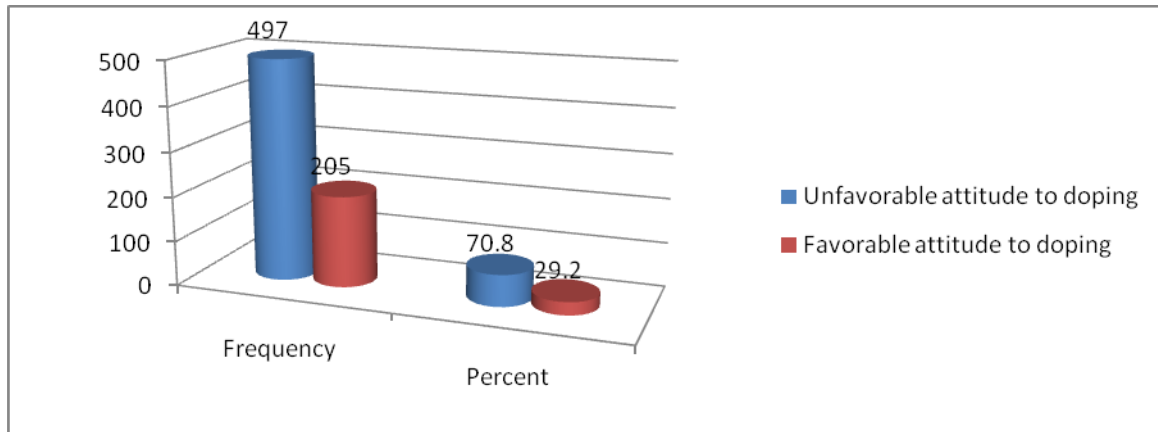


Figure 1: Prevalence of training on anti doping of Ethiopian middle and long distance running athletes (n-702), Ethiopia, 2017

### Prevalence of attitude

After categorization the scores of PEAS, by using 50 as a cut point, the result revealed that the prevalence of unfavorable attitude towards doping was 70.8% [Fig-2].



**Figure 22: Prevalence of attitude about doping of Ethiopian middle and long distance running athletes (n-702), Ethiopia, 2017**

Bivariate and multivariate analyses were computed to identify the confounders and to determine factors associated with level of attitude of study participants respectively. Seven variables showed significant association with attitude level of doping at a 5% level of significant.

After logistic regression has been used to assess factors associated with unfavorable attitude socio demographic characteristics, parental factors and training on doping were showed statistically significant association. An athlete who had a parent with formal education was 2.5 times more likely to have unfavorable attitude to doping as compared to athletes who had a parent with no formal education. Similar to this athletes who had a parent involving in sport were almost 60% more likely to have negative attitude to doping. In contrast to this athletes who had not high level athlete in the family were almost 2 times more likely to have unfavorable attitude towards doping.

The result of the study also revealed that athletes' residence was statistically significant determinant of attitude of doping. From the lower table it is shown that respondents who reside in urban were almost 50% more likely to had unfavorable attitude about doping [Table-3]

**Table 3: Multivariate logistic regression analysis for potential factors associated with unfavorable attitude of Ethiopian middle and long distance running athletes (n-702), Ethiopia, 2017**

Variables	Attitude about doping		Crude OR(95%CI)	Adjusted OR(95%CI)	P-value
	Favorable	Unfavorable			
Age				<b>0.927(0.871-0.986)*</b>	
Educational status					
Primary education	60	39	<b>2.206(1.26-3.861)*</b>	<b>2.801 (1.55-5.056)*</b>	
Secondary school	325	133	1.389(0.897-2.151)	<b>1.67 (1.052 -2.652)*</b>	1
College and above	112	33	1		
Residence					
Urban	172	88	<b>1.421(1.019-1.982)*</b>	<b>1.488(1.046-2.12)*</b>	
Rural	325	117	1	1	
Parental educational status					
No formal education	446	166	1	1	
Formal education	51	39	<b>2.055(1.306-3.233)*</b>	<b>2.585(1.60-4.168)**</b>	
Parental involvement in sport					
Yes					
No	151	72	1.24(0.879-1.751)	<b>1.595(1.068-2.38)*</b>	
	346	133	1	1	
High level athlete in the family					
Yes					
No	73	21	1	1	
	424	184	1.509(0.901-2.525)	<b>2.08(1.146-3.778)*</b>	
Training on anti doping					
Yes	204	54	1	1	
No	293	151	<b>1.947(1.36-2.786)**</b>	<b>2.027(1.393-2.95)**</b>	

Note: 1= Reference \*\*, =p<0.001, \* =p<0.05

### Discussion

A general objective of the current study is to assess the level of knowledge, attitude and practice on doping among Ethiopian professional middle and long distance runners. Considering this, it is crucially essential for athletes to have an unfavorable attitude regarding to doping.

Controlling doping only by tests is not sufficient; a profound change in the attitudes, which should be monitored repeatedly, is needed. Information about doping and prevention are necessary, and should cater to the athletes and associated stakeholders. This will allow us to establish and maintain correct attitudes towards doping(Alaranta A, Alaranta H et al. 2006).

In the present study with regarding to doping, the prevalence of unfavorable attitude towards doping was 70.8%. This result is in line with other several previous studies conducted in different countries (Britain(Mottram, Chester et al. 2008; Bloodworth and McNamee 2010; Bloodworth, Petróczi et al. 2012), Finland(Alaranta A, Alaranta H et al. 2006), France(Peretti-Watel, Guagliardo et al. 2004), Netherlands(De Hon, Eijs et al. 2011), Australia(Dascombe, Karunaratna et al. 2010), Korea(Kim and Kim 2017), Kenya (Chebet 2014), Uganda(Muwonge, Zavuga et al. 2015)) with different methods, population and instruments. Even though the unfavorable attitude towards doping use is high (70.8%) in Ethiopian middle and long distance running athletes, there is still need to progress to its maximum level. Attitudes towards the behavior develops through learning, thus they are results of a slowly evolving process that involves prolonged engagement. Accepting this as a basic premise, one must consider the conceptual challenges around 'doping attitude'.

This study also tried to see the association between different factors and unfavorable attitude towards doping. With this regard, the odds of unfavorable attitude decreases by 7.3% as the age of the athlete increase by a year. The result of this study found that factor negative associated with the required unfavorable attitude was age. In the other hand educational status, residence, parental educational status, parental involvement in sport, high level athlete in the family and training on anti doping were negatively associated with unfavorable attitude.

In case of educational status the result of this study revealed that the unfavorable attitude of athletes was increased as their educational status increases. This finding is supported by a study conducted in British which tried to explore how people's attitudes to a broad range of issues vary according to their level of

education. Findings indicated a clear association between education and attitudes across a range of attitudinal areas and sub-topics. The results suggest that educational level is associated with: interest and involvement in politics; political efficacy; environmental awareness and concern; perceptions of gender roles; attitudes to immigration and immigrants; perceptions of welfare benefits and benefit recipients; national identity and entrepreneurship (Brennan, Chanfreau et al. 2015). A study from Austria revealed that attitudes toward doping consistently supported refusal. Given that the attitudes of parents have been found to influence the attitudes and behavior of their children in other behavioral studies, this result is reassuring, but it is not certain that this transfer of beliefs would hold true for doping (Blank, Leichtfried et al. 2015). Similarly in the present study parental factors such as parental educational status, parental involvement in sport and presence of high level athlete in the family were statistically associated with attitude towards doping.

### **Conclusion and Recommendations**

From the present study Age, educational status, residence, parental educational status, Parental involvement in sport, presence of high level athlete in the family and training on anti doping were found to be the independent predictors of attitude towards doping. Based on the finding of the study we recommend the following recommendations: Information and prevention programs better to be started with athletes at a young age, and involving other stakeholders (e.g. coaches or family), are necessary, better to expand a regularly scheduled awareness creation about doping by conduction anti doping trainings or workshops, it is advisable to consider the educational status while providing training towards doping, and the present study is the first study to assess the attitude of doping and its associated factors among Ethiopian middle and long distance running athletes. Further research is needed with enlarge the study, include other populations, study design and additional independent variables.

### **References**

- Alaranta A, Alaranta H, et al. (2006). "Self-reported attitudes of elite athletes towards doping: differences between type of sport." *Int J Sports Med.* 27(10): 842-846.
- Blank, C., V. Leichtfried, et al. (2015). "Doping in sports: Knowledge and attitudes among parents of Austrian junior athletes." *Scandinavian journal of medicine & science in sports* 25(1): 116-124.
- Bloodworth, A. and M. McNamee (2010). "Clean Olympians? Doping and anti-doping: The views of talented young British athletes." *International journal of drug policy* 21(4): 276-282.
- Bloodworth, A., A. Petróczi, et al. (2012). "Doping and supplementation: the attitudes of talented young athletes." *Scandinavian journal of medicine & science in sports* 22(2): 293-301.
- Brennan, J., J. Chanfreau, et al. (2015). "The effect of higher education on graduates' attitudes: secondary analysis of the British Social Attitudes Survey."
- Chebet, S. (2014). Evaluation of knowledge, attitudes and practices of doping among elite middle and long distance runners in Kenya.
- Dascombe, B., M. Karunaratna, et al. (2010). "Nutritional supplementation habits and perceptions of elite athletes within a state-based sporting institute." *Journal of Science and Medicine in Sport* 13(2): 274-280.
- De Hon, O., I. Eijls, et al. (2011). "Dutch elite athletes and anti-doping policies." *British journal of sports medicine* 45(4): 341-342.
- de Hon, O., H. Kuipers, et al. (2015). "Prevalence of doping use in elite sports: a review of numbers and methods." *Sports Medicine* 45(1): 57-69.
- Judah, T. and R. Girard (2008). *Bikila: Ethiopia's Barefoot Olympian*, Reportage Press London.
- Keane, H. (2005). "Diagnosing the male steroid user: Drug use, body image and disordered masculinity." *Health: 9*(2): 189-208.
- Kim, T. and Y. H. Kim (2017). "Korean national athletes' knowledge, practices, and attitudes of doping: a cross-sectional study." *Substance abuse treatment, prevention, and policy* 12(1): 7.
- Mottram, D., N. Chester, et al. (2008). "Athletes' knowledge and views on OTC medication." *International journal of sports medicine* 29(10): 851-855.
- Muwonge, H., R. Zavuga, et al. (2015). "Doping knowledge, attitudes, and practices of Ugandan athletes': a cross-sectional study." *Substance abuse treatment, prevention, and policy* 10(1): 37.
- Peretti-Watel, P., V. Guagliardo, et al. (2004). "Attitudes toward doping and recreational drug use among French elite student-athletes." *Sociology of Sport Journal* 21(1): 1-17.
- Sagoe, D., H. Molde, et al. (2014). "The global epidemiology of anabolic-androgenic steroid use: a meta-analysis and meta-regression analysis." *Annals of epidemiology* 24(5): 383-398.
- Simon, P., H. Striegel, et al. (2006). "Doping in fitness sports: estimated number of unreported cases and individual probability of doping." *Addiction* 101(11): 1640-1644.
- van de Ven, K. and K. Mulrooney (2014). "Anti-Doping'On Steroids': Bigger, Stronger and Faster."

## **The Prevalence and Practice of Cultural Games for Modern Sport Development: In the case of Amhara Region, Ethiopia**

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### **Abstract**

The intent of this study was to assess the impact of cultural games and sports on the development of physical and social aspects of life. The method of the study was descriptive survey and the researcher focused on four zones of the region and they were selected purposively due to accessibility of empirical data. The cultural games which purposively selected games were “Gena”, “Tigil”, “Korbo”, and “Gebeta”. Samples of zones taken from the region were South Wollo, West Gojjam, East Gojjam and North Shewa. The key respondents (n= 220) were cultural game players, coaches and cultural sport federation committees. The data collection instruments were questionnaire and interview. The results were described as the prevalence status, coverage and practice of cultural games development were less and they were not as expected across each zone in the region in relation to modern sports. These were due to giving less attention towards cultural games across the region, lack of awareness in the society about the role of cultural games and considering cultural games as back warded practices or playing, shortage of trained coaches and expertise in the region, less opportunities of skill transfer for the next generation or lack of mobilization, less media coverage on cultural games and women's participation in the region was being poor in playing cultural games and competition. Then, the researcher concluded that practicing cultural games appreciate the unity in the diversity of cultural games of different zones in the region and participants interaction, develop intimacy and communication skills with other community by strengthening the friendship, promote equality and having the habit of living together regardless of their differences, build up intercultural bondage among the society and get social stability with in the region. Therefore, the youth and sport affairs office and culture & tourism office should give attention and develop strategic plan in order to address the cultural games across the region.

**Key words:** Cultural games, Development, Image reflection and Playing

### **Background of the study**

Culture involves the spiritual, intellectual and emotional features that characterize a society or a social group unique. According to Avedon E.M, 1971 developing culture is more than arts and crafts, traditional meals, dance and songs. But it also focuses on how to embrace a world of people with multitude of differences and rich in diversity. The development of sport and cultural games document are about society's treatment of all individuals with manifestation of certain life style. In early Greek and Roman days, cultural games were used to reflect their beliefs, life style and historical background of their respective society. The development of traditional and cultural games are becoming less prevalent in Ethiopia, because of different reasons and this new generation is not coping-up with historical events related to cultural games and traditional sports.

Even though, it is not as significant as expected and hardly meets its objectives, modern sports in the context of Ethiopia now a days are growing from time to time in many aspects at different levels of institutions, but cultural games are under question of every society in the country.

### Objectives of the study

To assess the feasibility of cultural games existing with respect to their popularity

To identify opportunities to promote cultural games at different occasions

To indicate the barriers to the development of cultural games on the modern sport. To draw key implications so that cultural games can address their role in the development of modern sport

### Research Question

How much the cultural game is feasible in the region?

What are the possible opportunities to promote cultural games in the region?

What are the challenges of cultural games development in the region?

How to develop implications in order to address the access of cultural games and modern sport?

### Research Method

In the effort of this research applied descriptive survey on cultural games to address the objectives, the researcher used sampling techniques and analyses were employed. The subjects were (n=220) and the instrument selected to collect the data were questionnaire and semi-structured interview from concerned bodies as primary source. The researcher prefers to conduct on cultural games which were practiced in the region as purposive selected games like Gena, Tigil, Korbo, and Gebeta. Samples of zones taken from the region were South Wollo, West Gojjam, East Gojjam and North Shewa. These sampling provided more information about the cultural game practice of the region in general. Finally, the data were analysed by narration and descriptive approach in order to interpret qualitatively based on the data gathered accordingly.

### Result and Discussion

The researcher has revealed the following results based on the data acquired from the key informants of the study.

**Table 1. The background of the respondents**

Zone	Respondents	Age category	
		20-30 years	31-40
North Shewa	68	60	8
East Gojjam	57	46	11
West Gojjam	55	55	0
South Wollo	40	31	9
Total	220	192	28

**Table 2. Cultural games experienced in each zones**

Game Practiced	North Shewa	East Gojjam	West Gojjam	South Wollo
Mostly	Gena	Gena	Gena	Gena
Some times	Tigil and Gebeta	Tigil and Korbo	Gebeta and Korbo	Korbo

**Table 3. Number year's participants played cultural games**

Years of Played	North Shewa	East Gojjam	West Gojjam	South Wollo	Total	%
1-2 years	5	40	30	11	86	39.10
3-4 years	11	8	10	7	36	16.36
5 and above	52	9	15	22	98	44.54
Total	68	57	55	40	220	100

Solomon Addis Getahun include but are not limited to (FeresGugis, horse racing), (Dula-miktosh, similar to fencing), (Gibigib, wrestling), (Wana, swimming), (Gena, hockey), (Senterej or Damma, Ethiopian Chess), and (Gebeta, mancala). Except for Senterej and Gebeta which are popular games where one's ability as a tactician and strategist are tested, the rest of games are physically demanding and require a fine skill and ability to partake in them. Senterej and Gebeta have another unique aspect in both were played only among peers that entail the same class, gender and age difference and affiliation which enable to strength their social and mental aspect.

The current status of cultural games development is less and it is not as expected as modern sports. The coverage and practice across each zone in the region is similarly less as usual. This is because of the social attitude and awareness about the role and contribution of cultural games for their physical and social values except the occasional festival events organized by the region as well as zone for the while once a year.

Once upon a time, the development of sports looked like one single path leading from traditional games to modern sport. Just like evolution of society was imagined as a one way transformation from tradition to modernity.

The development would be focused on the socio-cultural values of popular practices, which tended to be met by non-recognition from the side of the national sport office hierarchies as well as from international sport in general. Instead of top-down approach, the projects aimed at bottom-up development. The step was started from sport expert to popular culture and to the empowerment of rural people by Mandara, 2000 (evaluation report)

#### **Impact of cultural games for physical and social aspects**

What is important here is to recognize the games that children are playing and create an environment for fun, participation and learn new skills. Cultural games are about moving, participating and having fun. By integrating cultural games and traditional sports help us to move more, feel better, be energetic and keep us health in both physical and social.

Cultural games enable individuals to get a chance for introducing themselves to other partners who have engaged in the cultural games. In general a person can:

Appreciate the unity in the diversity of cultural games of different zones in the region and participants interaction.

Develop intimacy and communication skills with other community by strengthen the friendship and brotherhood.

Promote equality and having the habit of living together regardless of their differences.

Build up intercultural bondage among the society at large

Get social stability and satisfaction with in the region

#### **Opportunities to cultural games' development in the region**

Making physical activity through cultural games by making more fun and exciting the individuals and children in order to participate whether they are highly skilled or not. Children should be offered a wide variety of activities that support their natural play in a safe and supportive environment. Encouraging children to use imagination to make up fun and interesting games can help them to become more active physically, mentally and socially.

#### **Challenges on the development of cultural games**

Concerned bodies were giving less attention towards cultural games across the region

Lack of awareness in the society about the role of cultural games and considering cultural games as backward practices or playing.

Shortage of trained coaches and expertise in the region

Less opportunities of knowledge and skill transfer for the next generation or lack of mobilization

Less media coverage on cultural games

Women participation is being poor in playing cultural games and competition

#### **Playing occasions of cultural games in the region**

As that of modern sports, cultural games were not experienced and practiced tremendously. But occasionally cultural games were played during:

Religious festivals like Easter, X-mass and Epiphany

Public holydays



Harvesting time of cereals and crops in the village rural area

Closing days of schools by students in local areas

Seasons are other variables that determine the play of cultural games and the time they were organized.

### **Cultural games for the reflection of cultural images of the region**

Culture will represent certain pattern of living style that can distinguish one society from other and also it can be transferred one another. Due to these images of cultural reflection of the society will:

Share and exchange different cultural practices of other society in the region

Know the historical background of the society and the heritage

Promote the cultural manifestations of the region like clothing style, playing system, and dancing art.

Exploring the hidden traditions that are part of cultural games and activities

Maintain good cultural practice for a long period of time which can transfer to the coming generation

### **Possible interventions for the development of cultural games**

In this regard the researcher would like to show the suggested remedies for stated problems by directing the following issues:

Cultural sports federation should give emphases to promote and popularize the games in the society

Coaches should give intensive training for youth, elders and students in the schools The government should produce more coaches and expertise for each type of cultural games in the region Design projects and organize cultural game teams for different competition throughout the year

Fulfilling the equipment, materials and facilitates that are needed for each cultural games.

### **Conclusions**

The prevalence of cultural games in promoting cultural diversity and in protecting cultural identities at local, national and international level was strongly emphasized. The study revealed that practicing cultural games appreciate the unity in the diversity of cultural games of different zones in the region and participants interaction, develop intimacy and communication skills with other community by strengthening the friendship, promote equality and having the habit of living together regardless of their differences, build up intercultural bondage among the society and get social stability with in the region by fostering intercultural sport contacts and having the memory of sport heritage.

### **Recommendations**

The education stakeholders notably need to transmit knowledge, enhance understanding and disseminate the cultural games on regional, national and international as fundamental component that contributed to the development and promotion of traditional sports and games among the young generation. Therefore, the youth and sport affairs office and culture & tourism office should give attention and develop strategic plan in order to address the cultural games across the region.

### **Reference**

Avedom E.M. (1971). The study of Games in Canada

Alison L. Parratt (1983). Indoor games and Activities, A comprehensive guide to the teaching of Games skills to pupils of seven to thirteen years

Djibril D. UN office,(n.d). Sport for peace and development, New York

Ethiopian Cultural Sports Federation (2000). Unpublished document

International Conference paper (2005). Play the Game, Copenhagen

Jay J. Coakly (1998). Sports in Society, Issues and Controversies sixth Edition

Kendall B. (1995). An introduction to the Anthropology of sport, revised edition

M.Ewing, M. Gatz, M. Messner& S. Ball-Rokeach (2002). The role of sports in youth development

Svein E. Harald A. Birhanu T. &Shiferaw B. (2009). Proceedings of the 16<sup>th</sup> International conference of Ethiopian Studies

## Knowledge Of Doping Among Ethiopian Professional Middle And Long Distance Runners

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### Abstract:

The efficient strategy for prevention of doping use throughout the sport calendar requires improving the level of knowledge towards doping in the athletes society. The aim of the study was to determine the level of knowledge on doping among Ethiopian professional middle and long distance runners, 2016/17, Ethiopia. A quantitative cross-sectional study design was conducted in Ethiopia from December 15, 2016 to January 14, 2017. The study included 775 Ethiopian middle and long distance running athletes. The study participants were selected by using cluster sampling technique. Data were collected using structured and pretested questionnaires and multivariate logistic regression analyses were done to identify factors associated with knowledge towards doping. Finally, results were presented with appropriate tables and graph as well as adjusted odd ratio (AOR) and 95% confidence interval. The prevalence of adequate knowledge of doping was 18.5%. Educational status of college and above, married and attending of anti doping training were found to be significantly associated with knowledge of doping. The prevalence of adequate knowledge of doping was quite low. Adequate knowledge of doping was higher among athletes who had higher educational status, were married, and attending training on anti doping. **Key words:** Ethiopia, athlete, doping, knowledge.

### Introduction

When humans are placed in a competitive setting, particularly in the field of sport, they will attempt to gain an advantage over their opponent in order to achieve superiority and win the competition. The earliest records of methods employed by athletes to gain an advantage come from the ancient Games, as early as 668 BC, when athletes studied the effects of special diets on their performance.(Yesalis and Bahrke 2002; Holt, Erotokritou-Mulligan et al. 2009)

There are several reasons why doping is illegal in sports. Doping is threatening to the athlete's health and the different substances uses by athletes are not always tested for and approved in medical use, and therefore it can be very harmful and dangerous for those athletes taking illegal substances to enhance their performance. Another thing is that doping is cheating and wrong in sports and doping also threatens the integrity of sports. Doping does not only affect the professional athletes, but young athletes as well as they are influenced by their role models(Lentillon-Kaestner, Hagger et al. 2012; McNamee 2012).

Doping has been a problem in sporting events. Reliable information on the prevalence of doping is necessary to perform policy evaluations(de Hon, Kuipers et al. 2015). Most of the studies on drug abuse in sports had been conducted in different parts of the world like Europe, America, Asia and Africa (Kenya, Nigeria, Uganda and South Africa). But in Ethiopia there is no any previous study about doping in sport. This study therefore tried to assess the level of knowledge on doping among Ethiopian professional middle and long distance athletes.

## Operational definitions

**Adequate knowledge:** those who answered 60% and above of the score for knowledge questions.

**Inadequate knowledge:** those who answered below 60% of the score for knowledge questions

## Methods and materials

A quantitative cross-sectional survey was employed from December 15, 2016 to January 14, 2017. The study was conducted in Ethiopia. The required sample size was calculated using Epi info statistical software version 7 and the final sample size was 775. For this study Cluster sampling technique was used. The procedure on selection of athletes was as follows. Each athletics clubs were taken as a separate cluster, Out of Fifty five athletics clubs 25 clubs were selected by simple random sampling and included in the study, and All middle and distance runners found in selected clubs were included in the study. To collection of data Structured Questionnaire was used. Data analysis was carried out by using SPSS version 20 statistical software packages to determine association. Frequency and percentage, Chi-square test to check the presence of association and odds ratios with 95% confidence interval was used to measure the significance and strength of associations between outcome variables and certain independent variables. Logistic regression model was used to assess presence of associations as well as to identify and control the confounding variables. For this study statistical significance was defined at probability level of .05. The model fitness was tested by Hosmer and Lemeshow test (0.76 for knowledge, 0.87 for attitude).

## Results

### *Socio-demographic and characteristics of the respondents*

A total of seven hundred and two Ethiopian middle and long distance running athletes were included in the study, giving a response rate of 90.6%. Nearly three-fifths (59.4%) of the respondents were males. The mean year's age of the respondents was 21.43 (with a S.D of 2.845). More than half of respondents were in secondary school grade levels (66.2%) and rural residents (63%). Majority of the study participants were unmarried (91.7% [Table-1]).

**Table 3: Socio-demographic characteristics of the study participants (n-702) Ethiopia, 2017**

Characteristics	Frequency	Percent
Sex		
Male	417	59.4
Female	285	40.6
Current marital status		
Unmarried	644	91.7
Married	58	8.3
Education		
Primary education (Grade 1-8)	99	14.1
Secondary school (Grade 9-12)	458	65.2
College and above	145	20.7
Residence		
Urban	260	37
Rural	442	63
Competition level		
National	597	85
International	105	15

### ***Parental factors***

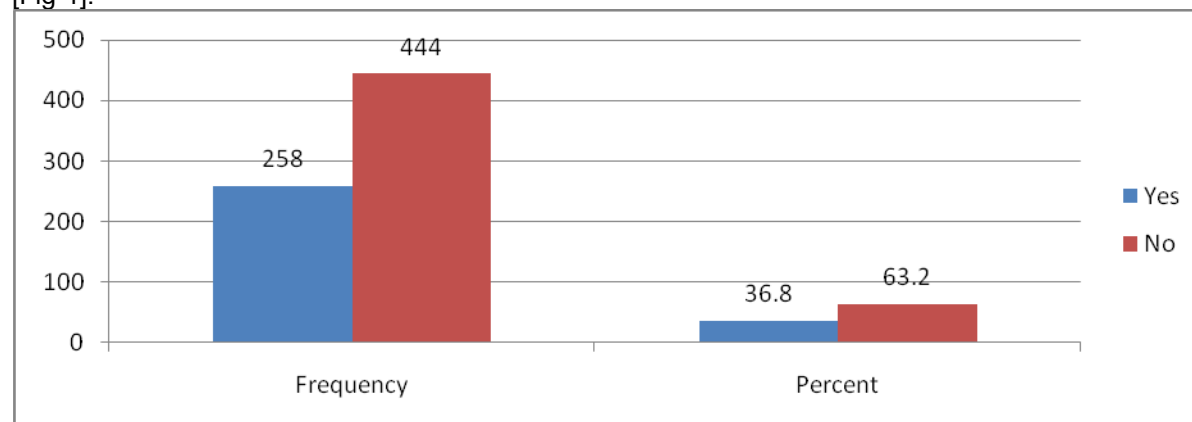
One of the parental factors for this particular study was parental educational status in which 87.2% of them had no formal education and 68.2% of the respondents had no Parental involvement in sport. The other parental factor for this study was presence of high level athlete in the family in which 86.6% of the study participants didn't have high level athletes in their families [Table-2].

**Table 4: Parental characteristics of Ethiopian middle and long distance running athletes (n-702), Ethiopia, 2017**

Characteristics	Frequency	Percent
Parental educational status		
No formal education	612	87.2
Formal education	90	12.8
Parental involvement in sport		
Yes	223	31.8
No	479	68.2
Presence of high level athlete in the family		
Yes	94	13.4
No	608	86.6

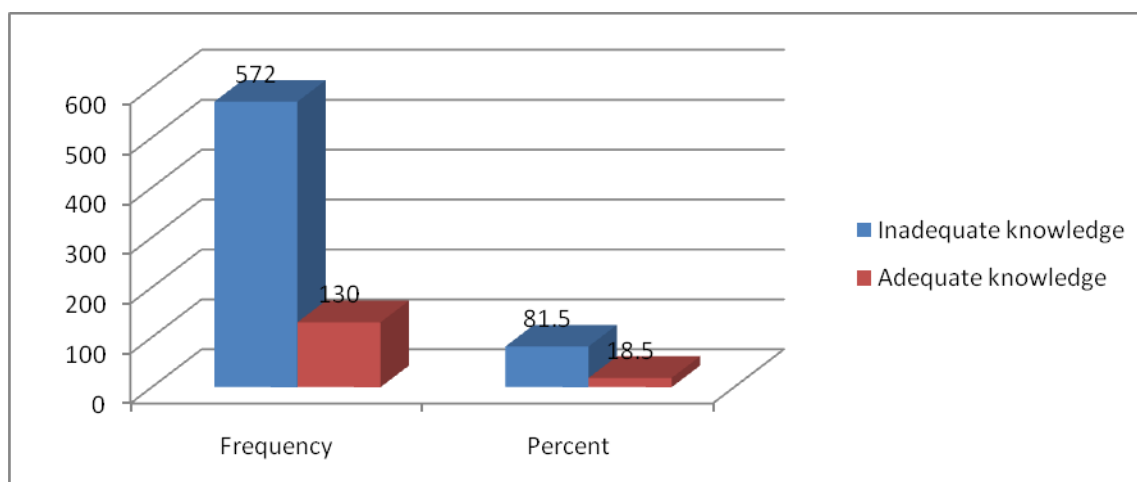
### ***Training on anti-doping***

The study participants reported that, majority (63.2%) of them didn't take training on anti-doping drugs [Fig-1].



**Figure 3: Prevalence of training on anti doping of Ethiopian middle and long distance running athletes (n-702), Ethiopia, 2017**

After categorization based on their score from the study participants, 81.5% of them had inadequate knowledge towards doping [Fig-2].



**Figure 2: Prevalence of knowledge about doping of Ethiopian middle and long distance running athletes (n-702), Ethiopia, 2017**

#### ***Factors associated with adequate doping knowledge***

The result of multivariate analysis showed that factors associated with adequate knowledge about doping were educational status, marital status of the athlete and training on anti doping. Socio demographic characteristics were among the categories of variables that showed significant statistical association with adequate knowledge about doping. Among the socio demographic characteristics athletes' educational status and marital status were the only variables which showed significant association. Athletes who had educational status of college and above were about three times more likely to be knowledgeable than female athletes [AOR: 3.239, 95%CI: 1.55, 6.746]. In case of marital status married athletes were almost three times more likely to have adequate knowledge about doping as compared to unmarried counterparts.

Among those associated factors attending training on doping was one of them. Athletes who attend training about doping were about 70 % more likely to be knowledgeable about doping as compared to who didn't attend [Table-3].

**Table 35: Multivariate logistic regression analysis for potential factors associated with adequate knowledge of Ethiopian middle and long distance running athletes (n-702), Ethiopia, 2017**

Variables	Knowledge about doping		Crude OR(95%CI)	Adjusted OR(95%CI)	P-value
	Adequate	Inadequate			
Sex	88	329			
Male	42	243	<b>1.548(1.034-2.316)*</b>	1.471(0.967-2.238)	
Female			1	1	
Educational status					
Primary education	12	87	1	<b>1</b>	
Secondary school	76	382	1.442(0.752-2.768)	1.667 (0.849-3.273)	
College and above	42	103	<b>2.956(1.465-5.966)*</b>	<b>3.239 (1.55 -6.746)*</b>	
Parental educational status					
No formal education	106	506	1	1	
Formal education	24	66	<b>1.736(1.04-2.896)*</b>	1.698(0.995-2.899)	
Marital status					
Currently Unmarried	108	536	1	<b>1</b>	
Married	22	36	<b>3.033(1.72-5.359)**</b>	<b>2.861 (1.595- 5.13)*</b>	

Residence				
Urban	39	221	1	1
Rural	91	351	1.469(0.974-2.216)	1.468(0.957-2.253)
Training on anti doping				
Yes	58	200	<b>1.498(1.018-2.205)*</b>	<b>1.675(1.117-2.51)*</b>
No	72	372	1	1

Note: 1= Reference \*\*, =p<0.001, \* =p<0.05

## Discussion

Less than one-third of the athletes were felt very well informed about the procedure that follows a positive test of doping which is significantly less than a study from Gauteng province (South Africa)(Nolte, Steyn et al. 2014), Norway (Hisdal 2014) and Austria (Fürhapter, Blank et al. 2013). The greater problem found in the study were the Ethiopian professional middle and long distance runners demonstrated very limited knowledge and understanding of doping based on the result of this study, providing only 18.5 % of them had adequate knowledge towards doping. The result of this study is too far from other studies conducted on Sub Saharan Africa (Kenya(Chebet 2014), Nigeria(Ohaeri, Ikpeme et al. 1993)).

A study conducted in Australia, Canada, the UK, and the USA representing 10 Olympic sports in order to explore knowledge and understanding of over-the-counter (OTC) medication reported that elite athletes required targeted education strategies that would enable them to make informed decisions on the potential properties of medications for therapeutic or performance- enhancing purposes. According to the same study, delivery of this information is also incumbent on national federations and the support personnel, including team doctors(Mottram, Chester et al. 2008). In the present study among the study participants only 36.8% were taking training on anti doping. This result is in contrast with some studies. A study conducted in Korea by Kim et al revealed that 79% of Korean Olympians received regular education on anti-doping regulations.(Striegel, Vollkommer et al. 2002). And also the study from Germany reported that 92 % of 74 elite athletes surveyed received a doping education update within the last 6 months, and most believed that the update was relevant. This difference could be explained by socio economic differences between Ethiopia and these developed countries (Mottram, Chester et al. 2008).

It is not only necessary to educate the athlete to have adequate knowledge about doping, but testing procedures also need to be clearly communicated. The whole anti-doping process has to be reliable and effective, with the athlete, coaches and other parties involved, having complete faith and trust in the procedures(Harris 2008). The result of this study showed that among those study participants, who had undergone doping test (212 middle and long distance running athletes, more than half (59.9%) were very satisfied with the explanation of testing procedure and also almost half (49.52%) of the respondent were very satisfied about the fairness and accuracy of the test.

In this study, the likelihood of adequate knowledge towards doping among the study participants having college and above educational status was higher than those respondents having primary educational status. This is due to the educational programs which increase the awareness of the athletes in bringing adequate knowledge towards doping.The other factor that was statistically associated with adequate knowledge about doping was marital status. The odds of having adequate knowledge about doping were higher among married Ethiopian middle and long distance runners as compared to currently unmarried counterparts. This is could be explained by marriage appears to have a positive effect on a variety of health outcomes. Mental health is the most prominent; married individuals have a lower risk of depression than their unmarried peers. Being married has also been linked to better cognitive function(Kiecolt-Glaser and Newton 2001). Likewise, the likelihood of having adequate knowledge about doping was higher among those athletes who take training on anti doping.

## Conclusion

From the present study very low prevalence of adequate knowledge of doping was observed. Educational status, marital status and taking of anti doping training were significantly associated with knowledge of doping.

## Recommendations

Information and prevention programs better to be started with athletes at a young age, and involving other stakeholders (e.g. coaches or family), are necessary, better to expand a regularly scheduled awareness creation about doping by conduction anti doping trainings or workshops and it is advisable to consider the educational status while providing training towards doping. In addition to that present study is the first study to assess the knowledge about doping and its associated factors among Ethiopian middle and long distance running athletes. Further research is needed with enlarge the study, include other populations, study design and additional independent variables.

## References

- Chebet, S. (2014). Evaluation of knowledge, attitudes and practices of doping among elite middle and long distance runners in Kenya.
- de Hon, O., H. Kuipers, et al. (2015). "Prevalence of doping use in elite sports: a review of numbers and methods." *Sports Medicine* **45**(1): 57-69.
- Fürhapter, C., C. Blank, et al. (2013). "Evaluation of West-Austrian junior athletes' knowledge regarding doping in sports." *Wiener klinische Wochenschrift* **125**(1-2): 41-49.
- Harris, L. (2008). "How Effective are Anti-Doping Sport Measures in the UK?".
- Hisdal, E. (2014). Knowledge, attitudes and temptation to use doping in sport: an examination in a sample of Norwegian junior elite athletes.
- Kiecolt-Glaser, J. K. and T. L. Newton (2001). "Marriage and health: his and hers." *Psychological bulletin* **127**(4): 472.
- Lentillon-Kaestner, V., M. S. Hagger, et al. (2012). "Health and doping in elite-level cycling." *Scandinavian journal of medicine & science in sports* **22**(5): 596-606.
- Mottram, D., N. Chester, et al. (2008). "Athletes' knowledge and views on OTC medication." *International journal of sports medicine* **29**(10): 851-855.
- Nolte, K., B. J. M. Steyn, et al. (2014). "Doping in sport: Attitudes, beliefs and knowledge of competitive high-school athletes in Gauteng Province." *South African Journal of Sports Medicine* **26**(3): 81-86.
- Ohaeri, J. U., E. Ikpeme, et al. (1993). "Use and awareness of effects of anabolic steroids and psychoactive substances among a cohort of Nigerian professional sports men and women." *Human Psychopharmacology: Clinical and Experimental* **8**(6): 429-432.
- Striegel, H., G. Vollkommer, et al. (2002). "Comnbating drug use in competitive sports." *Journal of sports medicine and physical fitness* **42**(3): 354.
- Yesalis, C. E. and M. S. Bahrke (2002). "History of doping in sport." *International sports studies* **24**(1): 42-76.

## Evaluate the Placements and displacements of the Basket Ball Players and his contribution on decision making in the official Competitions (Predictive Analytical Approach)

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### Abstract:

Our research is articulated on a systematic analysis after an observation and an evaluation of the behaviors of the placements and displacements in the competitions, and its contribution on the various readings of the sporting actions during the game in the young basketball players, exerted with the championship Algerian of basketball season 2017/2018, after a treatment of information on with dimensions of the driving acts are in stop and displacements, and the importance on the decision making given by the young basketball players. We treated a significant number of the analyses of the young basketball players of a rate of 210 catches, and using a technique of observation by a software, which gives us sequences of games during the matches of the official competitions, and one applying a scale of a table of quotation, we transformed the qualitative data with the quantitative information. Lastly, we found results very significant, on the technical plan by movement by contribution with the static positions of the young basketball players, with and without balloon, on the other hand we noted results non-significant on the technico-tactic plan of positioning of the movements of placements and especially displacements of the young basketball players during the game. Here is, our research remains relative to the various variables, such as the nature of the matches, and the adversary, and especially the preparation of the teams observed.

**Keywords.** Analysis of the movements, observation, the evaluation, decision making, young people the basketball player, placement and displacement, game of competition.

### Introduction.

The driving behaviors given by our players in basketball, are regarded as a demonstration and a complement of the human nature and its state normal, and which acts as the motivations of the gestures either techniques or tactics, after an adaptation or short or long, and is dominated by emotions over the spirit often, which leads the thought and to form the fate of the human man, condemns in the quality and the force of the impact of the emotions in all the human business, and the exercise to feel well, it should reach wise to have which it. (Fanget. F, 2006, p 21)



On another vision, interactivity of the man between what is a person who has competences and ability of mental information and which transforms them into driving capacities such as the technical epic, placement and displacement in the game, and what is emotional the any capacity to translate this knowledge and necessary competences for the behaviors, then it is the goal is to know to draw peacefully from any situation. (Hambly.K, 2008, p 11) What this skew led side cognitive mental to a change in the glance of the psychologists to pay attention to the emotion and which is of interest and does not separate from the spirit and of the thought it interferes with and it is supplemented, the operations are cognitive positively contribute to change the emotion and the name and the emotion which will support the creative thought and the resolution of problems which oppose the individual in usual or new situations. (Fanget . F, 2006, p29)

#### **Theoretical context.**

Basketball players are subject in many sports positions (training competitions) to the positions of the emotions to make decisions after a reading of situations, related to the performance of the players and the course of the match and success, failure, etc., are seen as variable and disorganized disorganized and confused and difficult to control and regulate, and it is contrary to logical thinking he must appeal to reason and feeling of isolation because they negatively affect the performance of the coach and the team. (Huguet, S, 2014, p 67) The concept of self-psychological information processing followed by an adequate response, develops when an individual through experience and practice, perception and see the researcher that many athletes think that self-confidence is the athlete of waiting to achieve success and win that is based on the positions of objective competition that appear on the player during a sports competition and what are the things that have worked by the athletes to succeed. (Gastaldi, J, 2005, p46). On the other hand, it can be said that failure, is a very difficult phase in the individual, especially an experience that gives the idea very dark, and it becomes a blockage for future situations be the same or that look like , and for that Fanget. F, asks the following question: What mechanism for this "Blocking"? But he responds quickly, it is the fear of not getting there: in fact, you anticipate failure, which paralyzes you in action. (Fanget, F, 2006, p32)

#### **Statistical method.**

##### **The method used.**

Is the parametric statistic (CHAMPELY 2004), which allows to characterize and to cut the population and more exactly the series of values of a variable which it comprises by using like parameters the arithmetic mean (which is determined by the sum of the observed values divided by the number of items in the series); the variance and coefficient of variation.

$$\bar{x} = \frac{1}{n} \sum_{i=1}^n x_i$$

Since it is very important to know how the group is arranged around the average is it clustered or scattered around it? The standard deviation is a dispersion index because it tells us about the dispersion of values around the mean. The standard deviation of the sample is calculated by the use of the following formula:

$$\sigma = \sqrt{\frac{\sum (x - \bar{x})^2}{n - 1}}$$

For the analytical statistics we used the Student's Test, to calculate the difference of the averages of the two samples -And for all our calculations (average, standard deviation and T Student) we used the Excel 2007 office software.

**Table n°01** : Détail of the sample.

	<b>Pmayers</b>	<b>Variations /competitions</b>
<b>choice</b>	+03 fois	+05 fois
<b>Nbre</b>	16	16
<b>Participation</b>	65%	71%
<b>Actions Tech(+)</b>	51%	58.50%
<b>Age</b>	19.17±0.89	19.17±0.89
<b>Standard variation</b>	1.67±0.70	1.94±1.63
<b>Average</b>	19.41±1.31	21.06±1.97
<b>Participation/test</b>	13.36±1.19	14.29±1.26

### 7-Analysis and discussion of the results:

We put a presentation of the two (02) axes, these statements of a decision by techniques with and his ball on self-confidence before and after the competition.

**Table n°02** : Resultts of the questionnaire

	<b>Before the competition</b>	<b>After the competition</b>
<b>Feelings</b>	Yes or no	Yes or no
<b>yes</b>	88.77 ± 2.52	91.89 ± 0.02
<b>Quick reactions</b>	6.05 ± 0.71	5.13 ± 0.88
<b>Standard variation</b>	3.37 ± 0.21	2.52 ± 0.20
<b>Decisions</b>	79.73 ± 0.70	69.72 ± 0.36
<b>Standard variation</b>	2.5 ± 5.73	2.22 ± 4.38
<b>T. test</b>	1.94 ± 0.32	1.74 ± 0.59

Table 02 shows, that the arithmetic mean of the self-reporting measure on confidence (88.77) and standard deviation (3.37), although the median in comparison with the average premise of the scale is more greater than average premise using (v) per sample and the calculated T value (1.94) that is greater than the adult tabular T value (1.88) at the significance level (0.05) and the degree of freedom (30 ) and demonstrates the level of moral and motor significance and through decisions declared by most basketball players, are characterized by self-confidence and knowledge of the field and (Fanget, F, 2006, p73) researcher with expertise Theoretical data, as a result of the experience of the quick reaction on the answers is a fundamental factor in the formation of personal appearances that indicate where trust is the belief in the realization of gain.

**Table n°03** : comparative analysis of the technical and tactical motor responses of the basketball players for the running of the competition (during the matches).

TEST	T STUDENT
Nbre	75%( questioned players)
Affirmation of decisions before	1.23
Difference	S* à 0.05
Amways	0.98 (after verification)
	S à p < 0.05
By references to situations tec / tac	
Never	0.45
With model	NS à 0.05
Affirmation Decision	2.02
T. of the table	NS à 0.05
Others	S ** à 0.01

NS: Not significant difference, \* significant difference at  $p < 0.05$ , \*\* significant difference at  $p < 0.01$ , \*\*\* significant difference at  $p < 0.001$

Table 03 shows that the norm of the assertion of the decisions made by basketball players in technical-tactical situations of the measure of self-declared confidence (1.23) 'is a very small standard deviation compared to the data of the questionnaire (see Table 02), and this statement leads us to show that the players of volleyball clubs Algiers are characterized by self-confidence and (Blain, P, 2006, p81) researcher to the expertise of the reflections that by the experience of the Practice and cognition is a fundamental factor in the formation of personal appearances that indicate where trust is always remains stable and yet the individual goes through moments and situations not similar, for a good realization of gain.

### Conclusion.

The way of processing information by our basketball players remains very small, compared to the technical gestures provided by these athletes, and mostly cause by active factors that reflect its impact on the group as a whole and this attribute is complete refers to the requirements of the competition for example, the score and the importance of the match and especially the personal or external motivations.

On the other hand, it can be said that the psychological competence that basketball players need to train and exercise such as sports skills and can develop through, among other things, the development of the spirit of cooperation (technico-tactics) between the whole exercise group some simple and collective exercises between the team during practice periods. This confirms us, that coaches encourage players to excel at the need for self-confidence to give fair and appropriate game decisions to different game situations and especially the short moments of the game, and that some players are unhappy with the lack of trust in their abilities, they can resort to showing confidence to read the game and master situations, as a kind of compensation to hide the weaknesses and the doubt in their abilities.

The decision in the field of sport, remains a very large subject and especially very difficult, because in a certain position of the performance or behavior of the responses to the phenomenon, the behavioral responses raise the perception of the self-result or the result, and includes self-results, satisfaction, perceived success in the future for a win or loss and self-tour results affect and are affected by competitive athlete guidance and allow gender of personal confidence of sport.

### References;

- Bruno.E (2006) : Observer et évaluer l'apprentissage, Ed : CONBB , Paris.  
 Fanguet. F (2006) : OSER thérapie de la confiance en soi. Ed : Odile Jacob, Paris.  
 Hambly. K (2008) : Les vrais clés de la confiance en soi. LEDUC.S édition, Paris.  
 Huguet. S (2014) : Sport - Psychologie et performance - Du sportif au champion : la quête de soi. Ed, @mphora, paris.  
 Mayer. J, Geher. G (1996): "Emotional intelligence and the identification of emotional intelligence " Vol 22 (2) p. 89 – 114.

## **Anthropometric Relationship of State and National level Power Lifters**

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### **Introduction**

The body structure and physical performance plays a significant role in the degree of efficiency and the level of success in weight lifting. Many researcher (Tappen 1950; Tanner, 1964; Carter, 1970; de Gray et al., 1974; Ward et al., 1979; Orvanova, 1984; Rose and Ward, 1984; Verma S.K., et al., 1985) have concluded that apart from the technical and physiological characteristics Studies in the sports of lifting have shown positive relationship between the structure and function (Alonso, 1980; Chovanova, 1983; Carter, 1984; Orvanova et al., 1984; Katch et al, 1986; Stepnica, 1986; Rajni, 1994; Sodhi, H.S. and Sidhu, L.S., 1994; Kanupriya et al., 2007). Power lifting as show of strength began to get favorable recognition and popularity all over the world. The analysis of performance and its relation to physique would discriminate the best of two contributing factors towards the competition performance.

### **Material and Methods**

One hundred and thirty two power lifters comprising state (N=66) and national level (N=66) of different weight categories were taken as the subjects. Power lifters of all the weight categories were combined to form pooled group. Each subject has been measured anthropometrically by following the technique of Tanner et al. (1969). Somatotype was assessed by using the method of Heath and Carter (1967). The mean, standard deviation and independent student's 't' test were used to find out the significant difference between physique and performance of two groups. Coefficient of correlation was computed to find the relationship of somatotype to performance. The data was analyzed with the SPSS computerized package.

### **Result and Discussion**

Table 1. shows the results of somatotype components of state and national group of power lifters. The mean values of endomorphy component for state and national group are 3.22 and 3.59 respectively and the difference is non significant. The mean values of mesomorphy component of weight lifters of state and national groups are 4.56 and 5.14 respectively. The high significant difference was observed (t value = 4.10,  $p < 0.01$ ). Similarly the mean values of ectomorphy component for power lifters of state group is highest .64 and the lowest .56 for national group however the difference was non significant.

Table1:Shows mean values and standard deviations of various components of somatotype of State and National level power lifters.

Components	State level (N=66)		National level (N=66)		't' value
	M	SD	M	SD	
Endomorphy	3.22	.69	3.59	.81	1.32
Mesomorphy	4.56	.80	5.14	.80	4.10**
Ectomorphy	.64	1.19	.56	1.05	.40

\* Significant at 0.01 level

The result on high mean values for endomorphic and mesomorphic component and lower values in ectomorphic component in higher representation group are in agreement with the finding of Stepnica (1986) in which he concluded that the lifters were suppose to have high mesomorphic component for strength training

The mean values of various physical performance tests of state and national power lifters groups are presented in table 2. The average values of 50 meter dash for state and national group are 7.38 and 7.27 sec respectively. The mean values of standing vertical jump for state level powerlifters are lowest 60.12 and the highest 63.08 for national group. It is evident that power lifters having national participation to their credit were found to possess significantly ( $p < 0.05$ ) high values of SVJ than their counterparts. The best 1RM each of bench press, squat and dead lift for each subject were added together to give the score of total weight lifted as test of maximum strength. The mean values for maximum strength for state and national group are 502.86 kg. and 517.61 kg. respectively.

Table2. Shows mean values and standard deviations of various physical performance tests of State and National level power lifters.

Tests	State level (N=66)		National level (N=66)		't' value
	M	SD	M	SD	
50 meter dash ( sec )	7.38	.06	7.27	.40	1.08
Standing Vertical Jump ( inches )	60.12	6.09	63.08	5.26	2.98*
Maximum Strength ( kg )	502.86	89.03	517.61	74.64	1.03

\* Significant at 0.05 level

Finding supports the statement of Orvanova (1984) who stated that weight lifters require very strong muscular frame. This makes them capable of applying greater dynamic strength and applying strength of static nature where weights were momentarily held in certain position during and at the finish of the lift.

## Conclusion

On the basis of findings of this study, it may be concluded the physique of power lifter is more a function of his physical performance and consequently his physical performance status is a better indicator of his competition performance. Efforts to be made to select only those individuals who have endo-mesomorph type of body and better physical performance ability as required by this iron game. Further the test of speed, explosive power and maximum strength used in this study seemed to be valid for predicting the performance of the power lifters.

## References

- Alonso J 1986. Aerobic, Anaerobic assistant exercise and weight lifting performance capacities in elite weight lifters. *J. Sports Med.*,27: 240-246
- Carter J E L 1970. *The Somatotype of Athlete – A Review. Human Biol.* 42: 535.
- Carter J E L 1984. *Physical structure of Olympic Athlete,Part II :Kinanthropometry of Olympic Athlete.*,Basel : Karger
- Chovanova E, Pataki,L. and Vavrovic D 1983 Somatotypological characteristics of young weightlifters. *Tor. Praxe. Tel Vych.* 31:1, 31-35.
- de Gray A C, Levine L and Carter J E L 1974 Genetic, anthropological and mental adolescence group. *Proc. Conf. on adolescence.* Oct.1930 Cleaveland, Ohio, U.S.A.
- Heath B H and J E L Carter 1967 A modified somatotype methods, *Am. J. Phys. Anthropol.* 27;54-74.
- Kanupriya, Koley S and Sandhu J S 2007: An Evaluation of Kinanthropometric Measurements in Inter University Female Gymnasts and Rope Mallkhamba Players. *J. of Sports Traumatol, Allied Sports Sci.*,8:56-62
- Katch, V L, Katch F L, Mrfflot R and Gliitelson R.1980. Muscular development and lean body weight in body builders and weight lifters. *Med. Science sports* 12:340
- Orvanova E, Udher L, Slamka H, Pataki L and Ramacsay L. 1984. Body size, shape and composition analysis of weight lifters and variables discriminating them according to performance and age. *Human Growth and Development* , Plenum Press, 1984.
- Rajni R 1994. A comparative study of fat assessment in top ranking Indian weight lifters. *SNIPES Journal*, 17 (2) : 29-35.
- Rose W D and Ward R 1984 Proportionality of Olympic athletes. *Medicine and sports*, Vol.17, Basal, Karger, 1984.
- Sodhi H.S and Sidhu L S 1984. *Physique and Selection of Sportsmen.* Punjab Publishing House, Patiala.
- Sodhi H S 1991. *Sports Anthropometry*, Anova Publication, Patiala.
- Stepnicka J 1986. Somatotype in relation to physical performance , sports and posture. VIII Commonwealth and international Conf. on Sports and Physical Education.
- Tanner J M 1964. *The physique of Olympic athletes.* George Allen and Unwin :London
- Tanner J M, Hiernaus J and Jarman S.1969. Growth and Physique Studies. : *Human Biology – A Guide to Field Methods* (Ed.) Weiner J.S. and Lourte, J.A., Blackwell Scientific Publication,
- Tappan N L 1950 An anthropometric and constitutional study of champion weight lifters. *Am J. Phys. Anthropol.* 8 : 49.
- Verma S K, Sidhu L S, Kansal D K and Babbar 1985. A study of physique and body composition in Indian weight lifters. *Human Biology. Recent advancement*Vol1 : 267-275. Today and Tomorrow Pub. New Delhi.
- Ward J, Groppe J. L. and Stone M. 1979. Anthropometry and performance in master and first class Olympic weight lifters. *Journal of Sports Med. Phy. Fit.* 205-212.

## **Role of Sports in developing the Personality of Students of Osmania University,Hyderabad**

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### **Abstract**

The Purpose of the study is to find out effect of Sports Programme on the Personality development of Sports Persons. The sample for the study consists of 30 normal Students of Osmania University. The investigator has given just sports practice of different sports and games like basket ball, foot ball, running etc regularly for six weeks.Pre Test and Post Test 16 personality traits scale of R.B.Catell were used as a research tool for the study to find out the personality .The research study shown that sports activities have the positive effect on the personality.Key words- Sports activities, Personality

### **Introduction**

PERSONALITY may be described as the most characteristic integration of an individual's structure, modes of behavior, attitudes, capacities, abilities and aptitudes. Most theorists agree that personality is an internal, mental, and emotional pattern of response to the environment – a pattern of thought, feeling and behavior that affects every aspect of a person's life. Personality can also be defined in terms of characteristics (traits) of the individual which are directly observable in the behavior. It is quality that makes a person stand out from others; it is whatever makes a person unique.Playing sport helps much more than in the physical aspects. It builds character, teaches thinking – analytical and strategic, leadership skills, goal setting and much more. You might encourage your child or people in general to play sports because being physically active is healthy for the mind and body. People who play sports also might learn character and behaviour traits that help fill out their personalities. Sports and games play an important role in the development of human personality

### **Objective of the study**

To find out the Role of sports activities on the personality

### **Hypothesis of the study**

There would be significant positive effect of sports activities on personality traits

### **Methodology**

The researcher was organized the camp for the sample before the experimental personality levels were measured, after the sports activities the researchers again collected the data and statistically interpreted to prove the hypothesis of the research study

## Sample of the study

The sample for the study consists of 30 normal Students of Osmania University. Pre Test and Post Test 16 personality traits scale of R.B.Catell were used as a research tool for the study to find out the personality. The Students has given 16 PF Catell Test before and after the Sports Training.

## Data Interpretation & Discussion

Table 1 shows the difference between personality traits before & after the Sports Practice

		A	B	C	E	F	G	H	I	L	M	N	O	Q1	Q2	Q3	Q4
BEFORE	M	4.9	4.7	4.8	4.9	4.9	4.1	4.9	5.7	5.6	5.4	4.5	4.9	4.1	4.5	5.0	5.1
	S	1.4	1.9	1.3	1.2	1.61	1.8	2.4	1.2	1.1	1.1	1.09	1.6	1.9	1.1	1.6	1.55
AFTER	M	6.2	6.0	6.5	6.2	6.45	5.6	5.2	4.5	4.3	4.3	3.93	4.0	5.5	6.1	6	4.48
	S	1.4	1.5	1.7	1.3	1.75	1.1	1.0	1.0	1.0	1.2	1.00	1.2	1.6	1.0	1.8	1.15
t-value		8.3	7.4	8.6	9.0	7.83	5.7	1.0	5.6	6.1	6.0	3.12	3.3	5.5	7.2	3.5	2.46

Significance level of 0.05\*

This clearly indicates that After involving outdoor sports activities the sample group was more expedient, venturesome, hard to fool' practical, calculating forthright, liberal, experimenting, open to change, critical, self sufficient, prefers own decision etc. Where the Before sports activities the same sample groups was cool, less intelligent, less abstract thinkers, bright, emotionally less stable, mild, accommodating, sober, serious, rule bonded, persevering, shy, timid, tender minded, sensitive, group dependent, undisciplined, tensed. etc. The t-value on all these factors are significant beyond 0.05 level.

This indicates that there are significant influence of sports activities on personality factors, therefore it can be said that there are significant personality differences in majority of the factors between Personalities. The earlier studies have also supported the present findings. The outdoor sports activities were very having the influence on the personality.

## Conclusion of the study

The research study was proved the research hypothesis of the study, the sports activities like Basket ball, foot ball, running etc, were very much useful in molding the personality of the sample, This study shows the positive impact of outdoor sports activities on the personality traits, Further research can be useful to the normal citizens, police persons, Army persons etc.

## References

Allport (1961). Pattern and growth in personality. New York, Holt, Renihart and Winston.  
 Eysenck (1959) Headache, Personality and the stress. The British J. of Psychiatric, 111, 1193-1197.  
[www.Outdoor sports.com](http://www.Outdoor sports.com)  
 Cattell's personality Wikipedia



## **Role of Yogasanas in Management of Diabetes Mellitus**

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### **Introduction**

India has become the Diabetic capital of the world. Diabetes mellitus is one the most common endocrine diseases in all populations and all age groups. The defect in pancreas to produce proper amount of insulin leads to decreased uptake of glucose from the blood and hence increased level of blood sugar. It is also a chronic metabolic disorder in which the body cannot metabolize carbohydrates, fats and proteins because of a lack of or ineffective use of the hormone insulin. The basic defects is in utilization of sugar by the body. Glucose is the main source of energy for all the bodily functions. After digestion, it passes into the blood stream where cells use it for energy and growth. Diabetes mellitus is not a single diseases entity, but rather a group of metabolic disorders sharing the common underline feature of hyperglycemia. Hyperglycemia in diabetes results frame defect in insulin secretion, insulin action or most commonly both. The chronic hyperglycemia and attendant metabolic deregulation may be associated with secondary damage in multiple organ systems, especially the kidneys, eyes, nerves and blood vessels.

### **Methodology**

The purpose of the present study:

I. Dietary management it varies according to the severity of the disease, activity and metabolic needs. There are certain general principals for all diabetic:

- The caloric intake should allow the patient to loose or to gain weight as required.
- the protein recommend in the diet is normal.
- carbohydrates should be sufficient to prevent ketosis.
- high fiber in diet helps in controlling diabetes by preventing excessive rise in blood glucose helps in decreasing blood cholesterol Foods to be avoided:
  - Root vegetables: potatato, yam etc
  - Fried foods and sweets
  - Soft drinks and Alcoholic drinks
  - Fruits like mango, Banana, chiku, custard apple, grapes and dates
  - Oily, fried, frozen and fast foods should be avoided.

II. The purpose of the present study is to yogic practices are found to be useful in the management of Diabetes mellitus through various research studies. The aim of the yogic treatment in the management of the diabetes is of two-fold:

- A) To stimulate the pancreatic cells to produce adequate amount of insulin.
- B) To reduce the insulin resistance in general.

The practices prescribed for the Diabetic patients are as under:

**Kriyas:** Kunjal, Vastradhouti, Kapalabhati, Agnisr and nauli.

**Asanas:** Tadasana, Katichakrasana, Pavanamuktasana, Sarvangasana, Matsyasana, Halasana, Ushtrasana, Gomukhasana, Bhujangasana, Shalabhasana, Dhanurasana, Shavasana.

**Pranayama:** Nadishuddhi, suryabhedana, Bhastrika and Bhramari

**Bandhas:** Uddiyana Bandha

Meditation: Breath awareness, om chanting and om meditation.



## Discussion and Conclusion:

The study conclude that yoga asana are compulsory controls the diabetes mellitus inventory of different parameters which gives more strength and stability in provided in each and every practices of yoga asana events and which are play a huge role in real life. Therefore, yoga asana inventory is very much important to all persons in their daily life.

## References

- Honkola, Forsen and Eriksson (1997). Resistance training improves the metabolic profile in individuals with type 2 diabetes. *Acta Diabetol.* 34 (4); 245-258
- Tietz, N. W. (1982). "Fundamentals of Clinical Chemistry", 2<sup>nd</sup> edition. W. B. Saunders Co., Toronto, 242-251.
- Mody BS (2011). Acute effects of Surya Namaskar on the cardiovascular & metabolic system. *J Bodyw Mov Ther.* 15 (3); 343-347.
- Yoga Physical Education for women, Yogendra Sit Devi, 1981.
- Pranayama made easy, The Yoga Sadhfaka, 1981.
- Speaking of Yoga: Author Pandit Shamburg Nath. 2005.

## **A Comparative Study on Personality and Well Being of the Female Volleyball Players.**

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### **Introduction:**

Personality is defined as distinctive patterns of behavior (including thoughts and emotions) that characterize each individual's adaptation to the situations of his or her life. Personality is shaped by inborn potential as modified by experiences common to the culture and sub-cultural group (such as sex roles) and by the unique experiences that effect the person as an individual. Psychological well-being is a very subjective term but from all the research that has been carried out, the term is used throughout the health industry as kind of a catch all phrase meaning contentment, satisfaction with all elements of life, self-actualization (a feeling of having achieved something with one's life). In a broad way we may state that psychology deals with two aspects of the problems of behavior. There is on the one hand the interest in the general laws of human behavior and experience. Sports performance has been found to be related to some personality variable. Extraversion, neuroticism psychotics are among the variables which influence sports performance along with well-being. **KEY WORDS:** Female volleyball players, personality, well being.

### **Methodology:**

To study the personality and psychological well-being of the female volleyball players.

**Objectives:** To study the psychological well-being of female volleyball players. To assess the effect of personality dimensions on the psychological well-being of female volleyball players. To study the effect of demographic factors (age and sex) on the well-being of the sample.

**Independent Variables:** a) Personality b) Age c) Sex

**Dependent Variable:** Psychological well being

### **Sample:**

The sample of the study consists of 100 female volleyball players selected from various colleges. The students who have participated in inter university level are considered as players. The sample was matched for age and gender. The personality inventory and psychological well being scale were administered to the sample. The dimensions of personality like psychoticism, extraversion and neuroticism were considered in the present study.

### **Analysis:**

The major objective of the present research is to assess the effect of personality dimension on psychological well-being of female volleyball players selected from various colleges from Ballari University Ballari. The student who have participated in inter university Volleyball competitions are considered. Thus, there are 100 students' players of two age groups 18to24 and 25-28 and female.

Table Showing 'r' value between variables (N=100)

Variables	t-value
Age x Psychological well being	0.413**
Sex x Psychological well being	0.334**
Extroversion x Psychological well being	0.329**
Neuroticism x Psychological well being	0.214**
Psychoticism x Psychological well being	0.216**

Table shows the 'r' values / correlation / coefficient between the variable of the study. It can be observed that there is a significant correlation between age and psychological well-being 0.413, between sex and psychological well being 0.334 and extroversion and psychological well being 0.329, Neuroticism and psychological well-being 0.214, and also in psychoticism and PWB 0.216. All the 'r' values are significant beyond the 0.01 level. This shows that there is significant correlation between the independent variables and psychological well-being of the sample.

#### **Conclusion:**

There is significant effects of personality on the psychological well-being of the sample.

In the dimension of extra version, neurotic, psychotocism and well-being between the two-age group female volleyball players are found to be more in age group of 18 to21. The lower age group have displayed higher in personality dimension and well-being then the higher age.

#### **Reference:**

Morgan W.P. (1968). Extraversion Neuroticism and Athletic performance symposium presented at the meeting of the American College of Sports Medicine, State College, Pennsylvania.  
 Kane, J.E. (1972) psychological aspects of sports with special reference to the female in D. Harris (Ed). Women and Sport: A National Research Conference. The Pennsylvania State University Park.  
 Alderman, R.s. 91974), Psychological Behavior in Sports Shiladepphia, W.B. Saunders. Co.  
 Berham R.M. and Kroll, W. (1967), Personality differences between Non swimmers and swimmers research quarterly, 38 – 163-171.

## **Impact Of Motivational Techniques And Physical Fitness On The Performance Of High School Level Basketball Players**

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### **INTRODUCTION**

According to Hungarian psychologist Mihaly 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. Central to the attainment of flow is a situation in which there is a perfect match between the perceived demands of an activity and an athlete's perceived ability or skills. The article will also outline some of the key findings from recent literature and provide four evidence-based techniques relating to the enhancement of motivation. You will be able to tailor the motivational techniques to enhance your participation in sport or the performance of others. You will learn that motivation is a dynamic and multifaceted phenomenon that can be manipulated, to some degree at least, in the pursuit of superior sporting performance. One of the most popular and widely tested approaches to motivation in sport and other achievement domains is self-determination theory. This theory is based on a number of motives or regulations, which vary in terms of the degree of self-determination they reflect. Self-determination has to do with the degree to which your behaviors are chosen and self-initiated. The behavioral regulations can be placed on a self-determination continuum. From the least to the most self-determined they are amotivation, external regulation, introjected regulation, identified regulation, integrated regulation and intrinsic motivation

### **METHODOLOGY**

#### **OBJECTIVES**

- 1.To study the effect of motor abilities on the performance of High school Basketball players.
- 2.To study the effect of physical fitness on the sports performance of High school Basketball players.

#### **HYPOTHESIS**

The following are the hypotheses of the present study:

- 1.There would be significant impact of motivational techniques on performance of High school Basketball players.
- 2.There would be influence of motor abilities of samples of High school Basketball players.

#### **SIGNIFICANCE OF THE STUDY**

The importance fact that motivational techniques play a significant role in sports competition. The present study makes an attempt to add to the existing knowledge of this particular aspect. The study will also address itself to establish the extent to which an individual performance is influenced by motivational techniques. The knowledge of this kind is more helpful to the coaches, trainee and other experts in the field of training and preparing the individuals High school Basketball players. for a higher level of performance.

#### **LIMITATIONS :**

1. The study is limited effect of High school Basketball players performance of sportsmen.
2. The study is limited to motor test on High school Basketball players.

#### **DELIMITATIONS**

1. The study was delimited to male High school Basketball players.
2. The study was further delimited to find out the effects of motivation and motor components.

**The Sample :**

The students who are representing their respective High school level Basketball players are the sample of the present study. The major aim of the study was to assess the motivation on the sport performance of High school Basketball players. High school Basketball players are randomly selected from various schools during taluk level tournaments selected to examine their effect on performance of the sample on motor ability tests. The distribution of the sample is given in Table-1.

**Table-1****Distribution of Sample**

Players	Age	Sex	Total
High school Basketball players.	12 to 16	Male	100

Further the sample was selected in such a way, as the number of cases in independent variable viz., Social support, SES, and one gender is equal in number. The performance of sample was measured on different motor ability tests like Endurance (12 minutes' walk/Run), Speed (50 Yard Dash), Strength (Pull Ups), Flexibility (sit and reach test) and Agility (Shuttle Run). The performance of motor components tests was taken twice: first was pre-test (without using any motivational techniques) on motor components and the second test was called as post-test (after applying all the motivational techniques) on motor components. All the Post-test were conducted with a minimum gap of 20 days between the items of each test.

**Statistical Techniques used**

The following statistical tests were used in the present study:

1. t- test to examine differences in samples.
2. ANOVA to assess independent and interaction effects of independent variables on dependent variable.

**CONCLUSIONS:**

The impact of motivational devices on performance is not equal in all the persons. It is believed that sports performance like speed, endurance, flexibility, agility and strength are being improved and increased by different motivational techniques. However, it appeared that the studies related to the measurement of sports performance by motivation factors are yet inconclusive. Therefore, present study makes an attempt to study the effect of different motivational techniques on the performance of players in different motor ability tests. The results of the study clearly indicated that different motivational techniques have produced differences in the sports performance of the sample selected. The performance on various motor components is found to be increased when the motivation was induced. The performance in pre test condition (in without motivation) was significantly lower than the post test where in motivational techniques were introduced. This categorically revealed the fact that motivation produces prominent differences in the performance of players.

**Reference:**

Atkinson, J.W. (1964): An Introduction to Motivation. Van Nostr. and Reinhold Company, New York.  
Barrow, H.M. (1957) Motor Ability Testing for College Men. Burgess publishing Co., Minneapolis, U.S.A.  
Bhardwaj and others, (1984): The Socio-Economic status scale, N.P.C' Agra.  
Brook and Whiting (1975): H.T.A. Human Movement: A field of study, Henty Kimpton Publisher, London.  
Brown, William (1926) Mind and Personality, London, University of London Press Ltd.  
Clarke, H.H. (1973): "Individual Difference: Their Nature, Extent, and Significance: Physical Fitness Research Digest, President's Council on Physical Fitness and Sports. 3:No.4  
Clarke, H.H. (ed) (1971),

## A comparative study on anthropometric measurements between Hockey and Football players of Ballari District

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### Introduction

An anthropometric measurement is defined as dimension of the structure of the human body taken at specific sites to give measures of length, girth and width and subcutaneous fatty tissue. This was comparing the anthropometric variables between Hockey and Football players Sports have become the media of international relationship between the countries. Sports in the present day have become extremely competitive, previous records are being broken whenever there is competition. on-availability of sophisticated instruments for measuring anthropometric measurements and 16 Personality factors were considered as one of the limitations for the study. No special motivational techniques were used while conducting the tests was considered as limitation. Factors such as socio-economic status, dietary habits, geographical variations, daily routine work, training, diet might have influenced the results which were not taken into consideration, which will be considered.

### Methodology

The present study is to compare the selected, anthropometric measurements between hockey and football university players of Ballari University, Ballari. a total of 50 players in Ballari District. The age of the subjects chosen was 18 to 25 years. The physical fitness, anthropometric measurements and psychological. Anthropometric Measurements 1. Arm Length 2. Forearm Girth 3. Calf Girth 4. Thigh Girth There would not be any significant difference in selected anthropometric measurements between hockey and football university players

### Tools:

A two-sample t-test can only be used to assess the significance of the difference between the mean values of two independent groups. To compare differences in the mean values of three or more independent groups, Analysis of Variance (ANOVA) is used. Thus, ANOVA is suitable when the outcome measurement is a criterion variable and when the explanatory variable is categorical with three or more groups.

### Analysis and Interpretation of the Data

the present study was to compare the selected anthropometric measurements variables between hockey and football university players of Ballari District. To achieve this, fifty male players were selected randomly from each category of hockey and football games, a total of 50 players in Ballari university. The 't' value obtained by 't' Test Analysis was compared at 0.05 and 0.01 levels of significance.

Table 1: Table showing the Mean scores, Standard Deviation and 't' value of the Forearm Girth of the university Hockey and Football players.

Arm length (in cms)	Hockey Players	Football Players
Mean	23.654	24.227
Standard Deviation	1.600	1.667
't' value	1.56NS	

NS Not Significant

The formulated hypothesis is that “there is a significant difference in the Forearm Girth between Hockey and Football university players”, hence, the collected data was applied to the statistical techniques to find out the significant difference in the Forearm Girth between Hockey and Football university players. the calculated mean scores, standard deviation of Hockey players is 23.654 and 1.600 respectively and mean scores and standard deviation of Football players are 24.227 and 1.667 respectively. The calculated ‘t’ value 1.56 is less than the table value 1.98 at 0.05 level.

Table 2: Table showing the Mean scores, Standard Deviation, and ‘t’ value of the Arm Length of the university Hockey and Football players.

Arm length (in cms)	Hockey Players	Football Players
Mean	60.010	71.654
Standard Deviation	2.413	2.465
‘t’ value	1.55*	

\*Significant at 0.05 level

The formulated hypothesis is that “there is a significant difference in the Arm Length between Hockey and Football university players”, hence, the collected data was applied to the statistical techniques to find out the significant difference in the Arm Length between university Hockey and Football players. The calculated mean scores and standard deviation of Hockey players are 60.010 and 2.413 respectively and mean scores and standard deviation of Volleyball players are 71.654 and 2.465 respectively.

The calculated ‘t’ value 1.55 is greater than the table value 1.55.

Table 3: Table showing the Mean scores, Standard Deviation and ‘t’ value of the Calf Girth of the university Hockey and Football players.

Arm length (in cms)	Hockey Players	Football Players
Mean	30.290	28.654
Standard Deviation	1.213	1.365
‘t’ value	0.76*	

NS Not Significant

The formulated hypothesis is that “there is a significant difference in the Calf Girth between Hockey and Football university players, hence, the collected data was applied to the statistical techniques to find out the significant difference in the Calf Girth between university Hockey and Football players. The calculated mean scores and standard deviation of Hockey players are 30.290 and 1.213 respectively and mean scores and standard deviation of Football players are 28.654 and 1.365 respectively. The calculated ‘t’ value 0.76 is less than the table value 1.98 at 0.05 level.

Table 4: Table showing the Mean scores, Standard Deviation and ‘t’ value of the Thigh Girth of the university Hockey and Football players.

Arm length (in cms)	Hockey Players	Football Players
Mean	45.254	42.657
Standard Deviation	1.413	1.465
‘t’ value	0.86	

NS Not Significant

The formulated hypothesis is that there is a significant difference in the Thigh Girth between Hockey and Football university players”, hence, the collected data was applied to the statistical techniques to find out the significant difference in the Thigh Girth between university Hockey and Football players. The calculated mean scores and standard deviation of hockey players are 45.254 and 1.413 respectively and mean scores and standard deviation of Football players are 42.657 and 1.465 respectively. The calculated ‘t’ value 0.86 is less than the table value 1.98 at 0.05 level.



## **Conclusion**

The Football players showed markedly greater standing height, forearm length and arm length than Hockey players. It may be concluded that anthropometric information would have assessment in the identification of sport talents in overhead games such as Hockey and Football. Some authors opined the height as an important condition of sports talents in such events that require it, and the presence of tall players was an indispensable element in success as a team. Even though no significant difference was observed in the values of body weight, leg length and forearm, calf and thigh girths between the two groups. The possible reason could be explained in terms of nature and skills of the games.

## **References**

- Singh, Hardayal (1991) Sports Training General Theory and Methods. Netaji Subash National Institute of Sports, Patiala.
- A Duxbury, Andrew (2006-02-28) Water fitness 2008-01-07
- Agarwal, J.C. Educational Research; An Introduction New Delhi: Agar Book Dept., 1975.
- Adel Mirzaei, Reza Nikbakhsh, Farideh Sharififar. The Relationship between Personality Traits and Sport Performance, European Journal of Experimental Biology. 2013; 3(3):439-442.
- Aldijana Muratovic, Dobislav Vujovic, Rasid Hadzic. Comparative Study of Anthropometric Measurement and Body Composition between Players. Monten, J Sports Sci Med. 2014; 3(2):19-22.
- Cattell RB. 16 P.F., Form A, Institute of Personality and Ability Testing Inc, 1978. Dalbara Singh, Agyajit Singh. A Comparative Study of Sports Personology of Indian Sports-Persons at Different Level of Participation, International Journal of Behavioral Social and Movement Sciences. 2013; 02(02):11-18.
- Kamlesh ML, Sangaral MS.
- [www.ijhpecss.org](http://www.ijhpecss.org), [www.ifcss](http://www.ifcss)

**Schools Intervention Program**  
**Basis for Implementing Therapeutic Physical Education Program**

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**Abstract**

The educational system, encounters the same problems other countries are facing today. Educators, parents, and policy makers are already acknowledging biopsychosocial crisis in a classroom. The study aimed to determined and analysed the psychosocial problems reported in schools in order to design an intervention program to address these problems. Specifically the study sought to answer the following questions; what are the reported cases of psychosocial problems in school, what are the schools' intervention programs, what gaps were identified in the implemented program, how may an intervention program be designed in order to address the gaps. Descriptive research utilizing qualitative and quantitative design had been employed in the study. Convenient sampling was used in determining the schools, and snowball sampling was used to determine the number of respondents interviewed and who answered the survey questionnaire. The study revealed that bullying is the highest reported case among other psychosocial problems followed by broken family or family with issues, cyber addiction, teenage pregnancy, gambling, and substance addiction, parents who have problems with drugs, alcoholism, child abuse, and suicide as the last. The study concluded that the schools' intervention program which was implemented in addressing students' psychosocial problems need thorough evaluation and assessment to redesign implementation procedures. Lastly, the researcher recommends that policy makers use the Physical and Health Education curriculum with enhanced therapeutic activities in helping the students with psychosocial problems. Researchers may use the findings of this study to generate further studies on the significance of therapeutic physical and health intervention program to address students with psychosocial problem. Keywords: Schools Intervention Program , Therapeutic Physical Education Program

**Introduction**

The school is considered as institution which builds the child's opportunity and life success. Each school develops curriculum and program that cater to the needs of a child holistically. School is the first formal social institution that the child is exposed to and constitutes the most important site of socialization into the norms, values and ideologies of citizenship in the modern society (Manjrekar, 2007). There are many issues the educational institutions are facing today. Bullying, drug addiction, emotional and behavioral problems and health problems are as common as truancy and underachievement. The pressing issue of maintaining a healthy academic environment remains the same all throughout the time when formal education was first introduced.

There are children and adolescents who have been in school but have dropped out because of psychosocial problems that should have been addressed in school. In this sense, the “zero dropped out” agenda of the Philippine government particularly the Department of Education (DepEd) seems need attention to vigorously adapt an educational philosophy which deals with the different dimensions of personhood. This is in order for schools under DepEd to religiously implement these developmental programs in their respective institutions.

Additionally adolescent pregnancy, the other problem is a development issue. Globally, about 16 million girls aged 15-19 give birth each year. In 9 out of 10 of these cases, the girl is married. The Philippines, the incidence of teenage pregnancies almost doubled from 125,270 in 2000 to 206,574 in 2010 (Source: NSO) of the 206,574 teenage women who got pregnant in 2010, 132,400 are of age 14. In the Philippines ranks number 3 in Southeast

Asia in the incidence of teenage pregnancy according to the National Youth Commission. The leading causes of teenage pregnancy are the absence of overseas parents, child abuse and the improper use of the internet. In the Philippines, 26 percent of women aged 15-24 have begun childbearing; it is higher in rural areas, with no education and are from poor families. (WHO, September 2014)

The Philippine educational system, encounters the same problems other countries are facing today. Educators, parents, and policy makers are already acknowledging biopsychosocial crisis in a classroom. Even the best and competitive schools in the country and abroad, cannot deny that drug addiction, bullying, early pregnancy, suicide, child abuse and family issues are the present challenges. Students who are vulnerable and at risk are schools’ immediate concern.

The Department of Justice Child Protection Program states that the administrators and teachers of the public schools are required by law to report child abuse cases. To take action, the Department of Education just recently issued a memorandum on bullying. Department of Education Memorandum (DepEd) No. 68 series of 2014 has directed officials of elementary and secondary schools to submit school-based child protection policy and anti-bullying school policies and reports on compliance. Reports on anti-bullying policies being implemented by schools as well as initial data on bullying are based on the DepEd Order No.

55 s. of 2013 entitled “Implementing Rules and Regulations (IRR) of Republic Act No 10627 or otherwise known as the “Anti-Bullying Act of 2013” took effect on January 3, 2014.

On the other hand, in the same report DepEd, said that schools in the National Capital Region (NCR) have the highest number of reported cases of abuse with 489 where 443 are cases of bullying and 46 other child abuse cases; followed by Cordillera Administrative Region (CAR) with 228 where 216 are bullying cases and 12 are other child abuse cases. Region VI had 134 where 114 are cases of bullying and 20 other child abuse related cases. Meanwhile, Region X has the least number of reported child abuse cases with only one case of bullying and four other Child abuse related incidents (Manila Bulletin dated July 7, 2014.) The Police Regional Office (PRO) reported an increase in the number of cases involving juveniles in Central Visayas from 2010 to 2013. Most of these are petty offenses like theft and physical injuries. There are few who were involved in the serious crimes like robbery and rape. On the other hand, records from Women and Children’s Police Desk

(WCPD) showed that youthful offenders jumped from 20.69% to 50.10 % from the year 2012. Data provided by the WCPD, that 129 minors were charged in court, some 421 cases were referred to the intervention program. (Sunstar Daily News, issued August 24, 2014).

Weare (2000) states that schools are now seen as one of the key agencies that can help address society’s most fundamental problems, create more cohesive communities and promote citizenship and a sense of social conscience in the young. Though keen to respond, schools are already under so many pressures that such responsibilities can seem daunting. In addition, Ecclestone and Hayes (2009) asserted that diminished images of students and pupils are common throughout the educational system as reflected in the routine use of labels such as ‘vulnerable learners’, ‘at risk learners’, students with ‘fragile identities’, ‘the disaffected and disengaged’, ‘the hard to reach’, people with ‘fractured and fragmented lives’, learners with ‘complex needs’ and ‘low self-esteemers’, which are common and must be attended to and be given interventions.

From the above mentioned issues, it calls that education is the key to improve self-esteem and in shaping a person's personality. Schools generally need to do much more to build up and enhance young people's emotional well-being. The role of the school is not only giving report or to give a data on the different cases encountered, but rather to help the government unravel these situations and save the students or children who are "at risk". Schools must not only have intervention programs that are implemented by the guidance office but rather schools must create or enhance the curriculum that emphasizes children and young people's emotional well-being in order to prevent or address students' psychosocial problems.

It is therefore best that the output of the study is a therapeutic intervention program that can be integrated in the subject curriculum of Physical and Health Education or use as therapeutic intervention modalities for students who are "at risk" or with psychosocial problem.

### **Objectives of the Study**

This study aims to determine and analyze the psychosocial problems reported in schools in order to design an intervention program to address these problems. Specifically it seeks to answer the following questions;

1. What are the reported cases of psychosocial problems in school?
2. What are the schools' intervention programs?
3. What gaps were identified in the implemented programs?
4. How may an intervention program be designed in order to address the gaps?

### **METHODOLOGY**

Descriptive research utilizing qualitative and quantitative design was employed in the study. A researcher-made questionnaire and interview was also conducted to teachers, guidance counselors, parents, and students. Convenient sampling was employed to determine the number of schools surveyed for the quantitative data while snowball sampling was used to determine the number of respondents interviewed for the qualitative data. The locale of the study was conducted in selected secondary public and private schools. Furthermore, the convenient sampling was used in determining the schools to be surveyed. The total number of respondents 35 secondary schools, with 16 private schools and 19 public schools both (*night and day school*) served as respondents of the study. From the private schools only 3 private schools administrators and 5 from the public schools responded to the questionnaire. A total of 7 from the private schools with 1 licensed guidance counselor, while in the public schools there are 12 designated guidance counselor with 1 licensed guidance counselor responded to the surveyed questionnaire. Consequently out of 1,892 of grade 10 students answer the questionnaire only 736 total number of grade 10 students from the private schools, while 1,162 grade 10 students from the public schools. Additionally from the total number of 42 teachers only 19 responded from the private schools teachers while 23 teachers from the public schools answered the questionnaire. Out of 5 parents 2 from the private schools and 3 from the public schools responded. Check list on the psychosocial problem and questionnaire was also used to obtain the results. Three (3) types of questionnaire have been used in the study (1) Questionnaire and interview guide for administrators, guidance counselor and teachers – these consist of survey questions, about the different psychosocial problems in their respective schools. It also gives information what intervention programs were undertaken in addressing student problems. (2) Questionnaire for the students.

The researcher obtained informed consent from school principals, teachers, parents and school guidance counselor. Confidentiality was assured since no names were mentioned anywhere in the report on the findings. The participants would get feedback after the findings were written up. An interview was conducted to the same respondents to validate some information. The researcher gathered the questionnaire and quantitative data was taken from the data. Thematic analysis and triangulation was used in order to obtain the information from qualitative data.

### Statistical Analysis

Frequency count and simple percentages were used in the gathered data on different psychosocial problems. For the qualitative, there was a triangulation of method for interview, questionnaire and analysis of documents was also used in the study.

### Limitations of the Study

The study included reported cases and perceived psychosocial problems and schools intervention program obtained from the respondents who were interviewed and surveyed questionnaire. The type of school was also considered to examine the most prevailing cases. However exclusion of the study are those parents, schools administrators , teachers, guidance counselors and that are not willing to be interviewed or refused to answer the confidential issues.

### Results and Discussions

#### REPORTED CASES OF PSYCHOSOCIAL PROBLEM IN SCHOOLS

Schools play a vital role in shaping the students learning. It can develop, facilitate or restore the wholeness of the person and it can also impede or facilitate student's wellness and wellbeing. There are many issues' the educational institutions are facing today. Bullying, drug addiction, emotional and behavioral problems and health problems are as common as truancy and underachievement. School's may not basically the one accountable of the problem of the students however if the problem of the child affects the whole learning therefore schools have the primary responsibility to help the child.

Evidently student's psychosocial problem requires school's attention as presented in the study and other agencies concerning adolescence juvenile delinquency and student's psychosocial problem. In this chapter presents what are reported cases of selected public and private school. It presents of how the problem become prevalent and how do schools respond to the psychosocial issues experienced by the students that are manifested in school. Moreover a total number of 37 respondents answered the surveyed questionnaire and total of 8 administrators, with 24 guidance counselors including (2) registered guidance counselors and 5 parents referred by the school guidance counselors.

**Table 2 Reported Cases on Psychosocial Problems Public and Private Schools**

Psychosocial Problems	Cases Reported Cases		Cases Reported by Parents	Total Score (n=37)	Rank
	by Administrators	Reported by Guidance Counsellors			
Bullying	5	20	0	25	1
Broken Family/Family with Issues	6	17	0	23	2
Cyber Addiction	3	14	1	18	3
Teenage Pregnancy	5	8	1	14	4
Gambling	1	8	0	9	5
Parents with drug problems	3	6	0	9	6
Substance Addiction	3	5	0	8	7
Child Abuse	1	5	0	6	8
Suicide	0	1	3	4	9
Alcoholism	0	2	0	2	10

Table 2 presents the reported cases of psychosocial problem in public and private schools. Bullying is the first in rank (1) with the as the highest reported case among other psychosocial problem. This means that bullying is rampant in schools. Administrators, Guidance Counselors or Designated Guidance Counselors conveyed similar themes that anchor on student bullying had always been the most common problem in their respective school due to the family orientation, peer and media influences, lack of parental and peer attention, and peer competition inside the classroom. A student had tendency to outdo each other. In high school students experienced some forms of violence; verbal abuse is the most prevalent form of violence, this includes being ridiculed and teased, being shouted at and being cursed or spoken to with harsh words. Children's peers, more than the adults, are the perpetrators of violence in schools. Male children are more likely to experience physical violence than female children. (Plan International, 2008). On the other hand, in order to get rid and minimize bullying the Department of Education implemented Republic Act No. 10627 otherwise known as the "Anti-Bullying Act of 2013" through DepEd order no. 55, series of 2013 on "Implementing rules and regulations (IRR) of Anti-Bullying Act of 2013". Because of this implementing rules most school have increased number of cases reported on bullying. Students who belong to broken family or family with issues ranked 2. The school's administrator and guidance counselors stated that due to parents who are problematic or separated or some are victims of domestic violence ie. mother is physically and verbally abused by the father resulted to have some students having social and emotional issues. Moreover with the rising number of nullified marriages and petitions for nullification of existing marital union, children are the affected recipients of its outcome. Children who come from broken families are more likely to encounter crisis than their counterparts. Children in divorced families receive less emotional support, financial assistance, and practical help from their parents (Amato and Booth, 1997). As a result, broken homes are often correlated with teenage pregnancy, addiction, suicide and juvenile delinquency. Children in stepfamilies and single-parent families are almost three times more likely to drop out of school than are children in intact families (Fagan, 1999).

Cyber addiction ranked 3 in the reported cases, conveys the need to curb the use of internet at home and in other places aside from the school. As stated by the Guidance Counsellors because of the accessibility of the internet café and affordability of internet usage, school children are hooked up on online games like *Dota*, which is one of the popular massive multiplayer role playing games. Due to internet at home, there were less family time and bonding and had more adverse influences in the children as added by the administrators. Consequently, popular internet sites like Facebook, Twitter, Instagram and online games become the perennial problem in the urban areas. Studies about the reasons for internet addiction showed that characteristics like shyness, depressive signs and low self-esteem

(Aydin and Sari, 2011) attributed with inclination towards internet addiction (Yang and Tung, 2007). Furthermore social sharing sites like Facebook, Twitter, online games and online gambling causes an increase in the number of internet addiction cases and it is stated that internet addiction will become a serious problem in the near future (Andreassen et al., 2012; Herrera et al., 2010; Teke, 2011). Teenage pregnancy ranked 4<sup>th</sup> among the reported cases from administrators and guidance counsellors, though there are no existing data that accounts for students who have been pregnant, it is apparent that this problem exists in school but it went unreported. According to a licensed Guidance Counsellor cases on teenage pregnancy are due to the lack of parental guidance, parental maltreatment and neglect like parents are busy with their careers and drug problems as mentioned;

*"Our students, usually mabuntis kay walaymgaginikanan, parents were separated"*  
(some of our students, get pregnant because there were no parents watching over them, parents are separated)

*"Usahaypud kay kuwang attention saginikanan, or lack of guidance saginikanan"*  
*ang uban.*

(Sometimes, the cause is lack of attention from the parents; and others students lack guidance from their parents)".

Additionally as stated by the mother (separated);

"My daughter got pregnant maybe because my daughter is looking for a father image and I cannot give full attention because I am the only one working for my children."

According to Osulah (2007), teenage pregnancy can usually be attributed to abundance of sexual tradition that they have learned from their peers and lack of factual information that they have received from their parents. Research shows, that problems in parent-child relationship, which may encourage the adolescent to seek comfort, acceptance and consolation through sexual activity could be a cause for teenage pregnancy. Another case worth noting is gambling as ranked 5. Aside from local betting games like *hantak*, *taksi* and spider fight, children engaged in video games popularly known as video *Carrera*. The situation is complicated all the more by confusing signals from the government, which has legalized some forms of gambling, including sports betting as stated by the schools administrators that;

*"Maglisod man mi ug guide samga students basta gambling kay ang government mismonaaygi - legalized namga forms of gambling like sports betting".*

(It's difficult to guide the students in terms of gambling considering that the government had already legalized some forms of gambling like sports betting).

Verbeke and Ditttrick-Nathan (2007) explained that people gamble for fun but also because of the potential to win money, to "escape" from problems at home, school or other areas, and to alleviate feelings of depression, loneliness or other unpleasant moods. A youth's inclination to gamble is usually increased because of a need for immediate gratification, a hope to "get rich quick," a means of increasing social standing, or a feeling of disconnect at home, school or other settings, as well as increased access to gambling through the internet (Vitaro, Arseneault, & Tremblay, 1999; Ladouceur, Boudreault, Jacques, & Vitaro, 1999). As with many addictions, youth problem gamblers have higher rates of depression, suicidal ideation, and suicide attempts (Dickson et al., 2002). Therefore, every case of problem of gambling is unique, that school needs to be addressed by creating a program.

Parents who have problems with drugs ranks 6 as cases presented by the administrators and guidance counselors they said that students seldom would report about family drugs involvement. However study showed that students are more likely to use of drugs, alcoholism, bullying and some resulted to teenage pregnancy due to their parents or family involvement in illegal drugs as mentioned by the schools Guidance Counselor. Furthermore substance addiction ranked 7. Guidance Counselors reported that student's involved in the use of alcohol, *rubgy*, *marijuana*, or even buy *shabu* especially those who belong to high income family because parents can afford to give extra money to their children. Administrators and Guidance Counselors express the same observations. Furthermore, peer pressures, curiosity and students home and community environment are factors why there are reported cases of substance addiction in schools as mentioned;

*("Kasagaransa amu mga students are staying in the squatter places , where usually rampant ang drugs")*

(Mostly of the students stayed in the squatter area, where drugs abused are rampant.)

Moreover, American Academy of Child and Adolescent Psychiatry (2014) states that teens will experiment and stop, or continue to use occasionally, without significant problems. Others will develop a dependency, moving on to more dangerous drugs and causing significant harm to themselves and possibly others. Teenagers at risk for developing serious alcohol and drug problems include those with a family history of substance use disorders, who are depressed who have low self-esteem, and who feel like they don't fit in or are out of the mainstream. Drug use is associated with a variety of negative consequences, including increased risk of serious drug use later in life, school failure, and poor judgment which may put teens at risk for accidents, violence, unplanned and unsafe sex, and suicide.

As shown from the table 1, other reported cases child abuse ranks 8 , suicide as the ranked 9 alcoholism ranks 10 and others that (include depression, anxiety, stress) , are considered factors in the above mentioned psychosocial problem that results to prolonged use of drugs, teenage pregnancy and others. Others identify student's psychosocial issues like depression, anxiety and sexual identity, suicidal thoughts and suicide because of parental expectation students need to please others and their guardians as stated by Guidance Counselor. Furthermore, research states that depression will occur in the adolescent's years. Adolescents who are depressed may say they want to be dead or may talk about suicide. They have increased risk for committing suicide, abuse alcohol or other drugs as a way of trying to feel better, which cause trouble at home or at school. Parents and teachers may not realize that troublesome behavior is a sign of depression. When asked directly, these children or students can sometimes state they are unhappy or sad. (American Academy of Child and Adolescent Psychiatry, 2014).

From the above mentioned reported cases by the Administrators, Guidance Counselors and parent's school setting must reflect in its teaching-learning philosophy a tenet that guides the students in their attitude and behavior inside and outside school in order to prevent the psychosocial problem of the students. The role of the school in the society is to help unravel and save the children or young adults who are "at risk". In addition, school is a place where students consider as the second home, where they spend most of their waking hours during the day. It is also where they can find peers, intimate relationships, and find diversion in order to overcome their problems and get help. As mentioned by the administrator that;

*"We need the cooperation and help of the parents in dealing with the problems of their children, because schools is just secondary in the building the lives of the students, it has to start within the family."*

Consequently, school is a crucial place in the growth of the person. It was suggested that the administrators and schools Guidance Counselors reflect and study their school program or curriculum as to how to deal with the psychosocial problems of students because this crisis would affect the whole learning of the child. Parents are enjoined to work hand in hand with school for the betterment of the school of the students as added by the Guidance

Counselor.

#### **Implemented Schools Intervention Programs in Public and Private Schools**

Intervention Programs	Administrators (n=8)	Guidance Counselors Designated Guidance Counselor (n=19)	Parents (n=5)	Teachers (n=42)	Students (n=1892)	Total Score	Rank
<b>Attendance Monitoring</b>	6	17	4	34	1,339	1400	1st
<b>Drug Awareness Seminar</b>	6	15	0	24	1,099	1144	2nd
<b>Counseling/Therapy</b>	6	19	5	30	968		3rd
<b>Students Retreat</b>	4	12	3	15	916	1028	4th
<b>AIDS Awareness Seminar</b>	2	7	0	9	438	950 456	5th
<b>Family Counseling</b>	2	9	0	9	387	407	6th
<b>Home Visit</b>	5	14	0	21	335	375	7th
<b>Psychological Testing</b>	2	9	2	8	211	232	8th
<b>Referral Family Day</b>	5	14	5	7	192	223	9th
	2	9	0	23	149	183	10th

Table 3 The data revealed that among the intervention program *Attendance Monitoring* considered as the ranked 1, which reflects how schools are concerned on class monitoring and had considered as evidence of student academic performance, that is, less absences, better class performance. As according to Guidance Counsellors and teachers in monitoring the attendance of the students they would be able to identify the reason behind low or high academic performance. aside from tracking the academic performance of the students it is considered as an effective way to use to support and enhance student learning". Additionally schools are deemed to follow the Department of Education Order No. 46 series of 2006, as stated in the guidelines of the pilot implementation of open high school program, (OHSP) which aims to retain in school potential drop outs, encourage drop- out school youth of high school age (12-16) to return to school and contribute to the accomplishment of Education for All (EFA target 2015) which is 100% participation rate and zero drop out. With this measures attendance monitoring system is considered as intervention program of schools that measures and facilitate the achievement and failure of the students.



Second *Drug awareness seminar* all Private and Public schools are mandated to conduct drug awareness seminar to all high school students as stated in DepEd order No. 130, s. 2015 April 16, 2015. Drug prevention and awareness programs are identified as commonly used tool in dealing with the students who are involved in drug problem or substance abuse. According to the Guidance Counselors and Administrators the program is well implemented considering that there are other agencies such as the Philippine Drug Enforcement Agency (PDEA) who visits school and gives awareness program in order to educate students about substance abused. However, when there times when no volunteers from the other agency are available, the teachers are ones who give a talk about drug awareness in subjects like Science and Health Education. Additionally, the administrators are bound to drug awareness program to support the anti-drug abuse awareness campaign in adherence to Republic Act (RA) No. 9165 otherwise known as the Comprehensive Dangerous Drugs Act of 2002. Together with the DepEd and other government agencies and non- government (PDEA – Philippine Drug Enforcement Agency and non-government agencies, or Drug Rehabilitation Center) are enjoined to support drug or substance abuse campaign with free seminar for the high school students. Based on the gathered data, the campaign for drug awareness program was religiously implemented due to the Deped Order, PDEA and other agencies that help the private and public schools to implement the program.

As mentioned by the Guidance Counselors that:

*"I usually make a letter of request for a speaker to the PDEA for drugs awareness seminar for our students and so far our request is always granted".*

*As students added;*

*"Naay mag testimony na recovering addict, after the speaker from COSAP talked about the effects drugs."*

(There is a testimony of a recovering addict, after the speaker from Cebu City Office for Substance Abuse Prevention talked about the effects drugs.)

Third is *Counseling/ Therapy*, According to Louis and Gordon (2006) on Education Trust New-Model, school counseling is a profession that focuses on the relations and interactions between students and their school environment. The study shows that Counseling and therapy is more effective in some schools considering that although there is just licensed Guidance Counselor; the teachers take the role of the counselor. Most school guidance programs are ones of the given priorities in order to address the needs of the students psychologically. As added by the Administrators the guidance program is well implemented in such a way that psychological testing, referral, family counseling and home visits are available as needed.

However the study shows that the reasons for this are not all schools have a strong and effective program, as mentioned by one of Designated Counselor, that there was is budget, no facilities or guidance office is assigned for this purpose. Not all Guidance Counselors are registered counselors most of them are designated only and sent to seminar and trainings. Furthermore, in other schools sometimes the Principal serves as the Counselor and the Principal's office serves as the guidance office. Additionally, Designated Counselors express the same thought that it is hard for them to perform multitasking works as this is an additional work. There are programs in Guidance and Counseling that they cannot perform due to having been overworked during the day as a classroom teacher. Furthermore, not all teacher-counselor can perform counseling and therapy because they are not professional or licensed, however they can only give suggestions and make some referrals to the students who have problems. As affirmed by a designated Guidance Counselor that;

*"I am not allowed to performed therapy to the students because I am not a Licensed, I am ICT teacher designated as Guidance Counselor although I was I sent to regular trainings."*

Moreover, according to Education Trust (2000) states that school counselor as consultant empowers families to act on behalf of their children by helping parents/guardians identify student needs and shared interests, as well as access available resources.

Fourth *Students Retreat and Recollection*, Some schools believed that these could help students spiritually, as mentioned by the school administrators. Teachers added that sending students to a recollection would help the students realize all their mistakes in life. Retreat and recollection is part of the intervention program design to address the spiritual needs of the students as added by the school counselor. Additionally teacher added that as catholic schools part of their mission is to educate students on Christ's teachings therefore, students are required to attend retreat and recollection. As mentioned that;

*"It is part of the school program that students need to attend recollection para realized pudsamga students ang ilamgasayupsakinabuhì".*

(It is part of the school program that students need to attend recollection So that they would realized mistakes in their life.)

*"Para ma address pudsa schools ang ispiritulna aspect sa students"*

(So that schools would address the spiritual needs of the students.)

According to Ignatius retreat center the purpose of a spiritual retreat, is an addition to daily spiritual activities, to temporarily leave behind the usual distractions in life. A time to allow the mind to relax and for the conversion of the heart. Likewise, the *Catholic Encyclopedia* describes the necessity of such retreats as quoted "In the fever and agitation of modern life, the need of meditation and spiritual repose impresses itself on Christian souls who desire to reflect on their eternal destiny". Retreats are initiated by some schools, to address the spiritual needs of the students.

*Aids Awareness Seminar* ranks fifth. Based from the results of the study in public and private schools AIDS awareness seminars has been a, part of the schools intervention program in order to increase student's awareness on effects of pre-marital sex, early pregnancy and consequences of changing sexual partner. However, the research found out that is only conducted for the grade 10 students. Schools invited speakers from the Department of Health (DOH) or a medical doctor and sometimes the school nurses were asked to conduct the seminar.. On the other hand, teachers are the one who discuss drug awareness in the subject of science.

The Department of Education order 47, s. 2012, Pursuant to Republic Act (RA) No.

8504 otherwise known as the "Philippine AIDS Prevention and Control Act of 1998" and the

Civil Service Commission (CSC) Announcement No. 21 dated March 25, 2010 entitled

Program on HIV and AIDS" and in compliance with its duties responsibilities as a member of the Philippine National AIDS Council (PNAC), the Department of Education (DepEd) will accelerate the implementation of the school-based HIV and AIDS Education Program (SBHAEP) nationwide were implemented by the school in compliance to the mandate of the government. With this, all high schools public and private schools are required to comply with the said memorandum for the student as well as with the government and non-government employees. The Department of Health and other non-government agency are closely working with the schools and institutions. However, as added by the teachers, "there was no regularity in the implementation of the seminar conducted".

Rank sixth is *Family Counseling* is basically part of the guidance and counseling program of the school. Based from the results gathered in both private and public schools, majority of schools have Designated Guidance Counselors but other private schools have guidance counselors however only a few are licensed. With this, according a Licensed Guidance Counselor, guidance program would vary especially in the giving family counseling and other guidance services. Family counseling can only be conducted by a licensed Guidance Counselor to the family who is willing to consult their problems. Some common answers by the Guidance Counselors on the question about family counseling was that, "some families submit themselves into counseling as a way to help their children and only few numbers of families undergo the intervention. In addition, the teachers designated as Guidance Counselor mentioned that parents are called and informed about the psychosocial cases of their children however teacher don't give family counseling because they are not licensed to perform it. Parents were just called to be informed about their child's behavior or misbehavior. Furthermore, other schools, if there are concerns from the students, only the

Administrator and the class advisers settle the problem. As affirmed by the students that;

*"Ang amu school principal and my class adviser ang ni-atubangsaako parents when I got pregnant"*

(It was the school principal and my class adviser who informed and talked to my parents when I got pregnant.)

*Home visit*, Ranked seventh. "Connecting with the family is connecting with the community that creates an enormous impact in lives of the individual". Visiting home would capture the whole background of a child. Based from the surveyed data of both public and private schools, seldom do the teachers visit homes. If the student is always absent they just call up and inform parents about their children's absences. However there are some cases where some family who visited with a student issue. An administrator mentioned that, the environment of the child is considered as one factor that influences how the child behaves and deals with his or her surroundings particularly in school. Home visit also serves as the important groundwork for the teachers and other support group in the school community on how to

scaffold the growth and development of the child. So it is important for school to put up a designated guidance office with a licensed Guidance Counselor.

*Psychological testing* ranked eight is a part of Guidance and Counseling program. Based from the data gathered in both public and private schools, most schools cannot afford to buy the different battery test for psychological testing, instead they only conduct an interview with parents and students" as mentioned by one school Guidance Counselor that :

*"It was too expensive for our school to buy different psychological or personality test instead, we conduct interview for the students and parents which we believed that it is more reliable than a test."*

In addition, a teacher mentioned that; some private schools do not have psychological testing because they do not have a guidance counselor and psychometrician to conduct and interpret the test. In the public schools they just directly enroll students as long as he or she has the complete document necessary for enrollment and no psychological test is conducted before enrollment.

Furthermore, the purpose of conducting psychological testing is to identify the Intelligence Quotient and Emotional Quotient of the students. It serves as the basis of the schools to identify the strengths and weaknesses and the readiness level of learning of the child especially not only mentally but including emotionally. Although, some of the results of psychological testing would not warrant any intervention, due to the developmental changes in the children and other factors in the child's learning, this is given by some private institutions to help the teacher determine the best learning styles attitude and behavior towards learning of the children.

*Referral* ranked ninth. Referral is a bridge and doorway in the whole process of helping the students who is in need not just academically but of emotional support from the whole school community. However, as the data revealed only few schools give referrals as part of the intervention program depending on the severity of the case of the student. If problem needs to be referred to a specialist, this is referred directly to the school administrator, for they are the ones who will decide if referral is needed about the case of the student according to a designated Guidance Counselor.

Ranked tenth, *Family Day* based from the surveyed data of both public and private schools family day is ranked least among the schools intervention program. As expressed by the schools administrators, "every year family day is celebrated but only few number of the family and parents attend. To encourage parents and students teachers check the attendance of the student's family and guardians, to force them to come during the celebration so that there will be participation from the family." The PTA – officers are the ones in charge of the family day as mentioned by one of the parents. The parents, further said, "Family day celebrations are not fully realized in school due to lack of parents cooperation even though it is the Parents Teacher Association (PTA) who organized it themselves. Few family members join during the family day. As affirmed by one of the parents that;

*"As PTA President and the rest of the officers, maglisod mi usahay conduct samga activity kay kuwanggyud ug coopration sa family or ginikananunya gamay ra ang mu attend maski compulsory pa ang attendance."*

(As PTA President and the rest of the officers, sometimes we had a Difficulty in conducting the activity due to lack of cooperation of the family or parents, even though attendance is compulsory.)

According to Karen Kiernan, CEO of One Family, the concept of Family Day is so broad that everyone should be able to see themselves reflected in the notion of family, no matter what size or shape their family is. Families and children deserve a voice on their behalf calling for equality and celebration because unfortunately every day children feel different, excluded, and not normal and may be bullied because of the family they live in

Lastly, results of the study indicated that all implemented schools interventions program has the potential to help student's psychosocial problem. Creating and implementing intervention program requires scientific data of student's psychosocial problem to serve as foundation of intervention, evaluation and assessment necessary before implementing the said program to make it effective. Continuity and consistency of program is very essential hence it must be given priority by the schools officials or administration as strongly suggested by the students, teachers, parents and administrators of both respondents public and private school

## GAPS IN THE EXISTING PROGRAMS

Gaps in this study provides a basis for measuring and classifying how well an implemented intervention program of the school meets the psychosocial problems of the students. It identifies issues on how the program was implemented whether it is effective or not effective and provides essential data that are necessary for improving school program. the gaps that existed between the reported and perceived psychosocial problem of the students in relation to the existing intervention program of the selected 16 private schools and 19 public high schools. It also presents the main themes and sub-themes obtained from common responses in the surveyed questionnaires. Responses derived from interview served as the basis for triangulation and was analyzed cautiously in order to derive accurate results that served as the basis in identifying gaps in the study.

The identified gaps in the study will be the basis of making a strategic intervention program that can be integrated in the Physical and Health Education curriculum or can use as separate therapeutic intervention program to facilitate and develop the existing intervention program in addressing students with psychosocial problem. Based from the gathered data from questionnaires and interview of the respondents there are two major gaps which can be seen in the diagram. The first gap pointed out was the *existing intervention program* of the schools and *reported psychosocial problems* of the students. The second major gap pointed out was on the factors why and how the schools intervention program is not effective in relation to the reported psychosocial problem of the students.

The five minor gaps that existed are the *administrator* that emphasizes on lack of implementation, monitoring, evaluation of the program. Second, diminishing *teachers role* in making observation of students behaviour and the use of the *referral* that served as bridge in the process of helping the students problem and in making the program more effective, third is the *guidance program* which identified as the one of the weakest, not supported by the school officials and lack of guidance counsellors and mostly are only designated counsellors. Fourth, *family* identified with less involvement in the school activities and awareness of the existing intervention program given by the school. Fifth, the *school activity offered by the schools* does not cater to the needs of the students.

### Existing Gaps in the Program

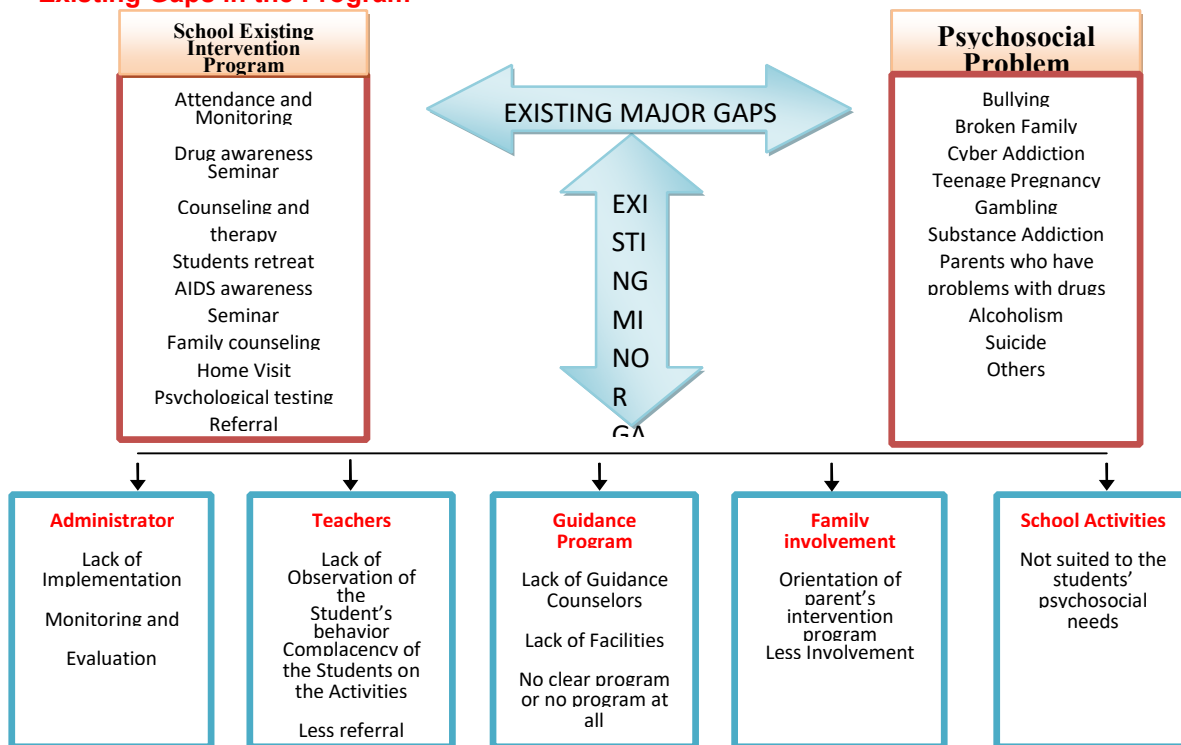


Figure 2 Existing Gaps in the Program

In summary as presented in the Figure 2, there are two major gaps identified in the study. Gaps between the existing intervention program of the schools does not meet with the reported psychosocial problem of the students. Second minor gaps are the factors why the schools intervention program is not effective in relation to the reported psychosocial problem of the students.

As presented on first major gaps the study found out that the existing implemented program of the schools was mostly anchored on the mandated the policy of the government such as the *attendance and monitoring* that are based on in the policy of the Department of Education Order No. 46 series of 2006, guidelines of the pilot implementation of open high school program, (OHSP) which aims to retain in school potential drop outs, encourage drop- out school youth. The Drugs and AIDS awareness anchored on the *anti-drug abuse awareness campaign* and in adherence to Republic Act (RA) No. 9165 otherwise known as the Comprehensive Dangerous Drugs Act of 2002 and The Department of Education order 47, s. 2012, Pursuant to Republic Act (RA) No. 8504 otherwise known as the "Philippine AIDS Prevention and Control Act of 1998. All schools are deemed to follow with the policy and memorandum.

Moreover based on results of the study, the schools were not consistent in the implementation program after the seminar was conducted and there was no follow- up from the implementing body. Survey and evaluation were not conducted to evaluate how the seminar can affect level of awareness of students particularly on the Drugs and AIDS awareness program. According to the research, exposing adolescents to serious situations can trigger more their curiosity on the use of drugs and lead them to more risky decisions. Moreover, in delivering information to students through Science and Health subjects, seminars and orientations must be comprehensive and regularly done which help students lead to better decision making ability.

Another gap identified in the study is *counseling and therapy* intervention program which have rank 3. Intervention programs are necessary in order to address bullying and other psychosocial problem of the students. Furthermore, the study has found out that counseling and therapy are not comprehensively implemented due to lack of guidance counselors and mostly teachers are the ones designated to do the job but they lack training or are overload with teaching work. Consequently, counseling and therapy, family counseling, referral and psychological testing as intervention program are not addressed by the school's guidance program, and not given priority by the schools officials. Likewise, student's psychosocial problems could not be addressed suitably because of poor counseling and therapy programs as an intervention. This has been implemented with a little success.

On the other hand, *school's students' retreats* were identified as gap. The primary goal of students retreat is to enhance students' spiritual development. However, according to research on American Psychological Association on the effect of catharsis like retreats some activities are not helpful for it triggers personal issues that would lead the student into or other mental health issues. Hence, some mental health professionals suggest that after the activity has been done, stress debriefing or counseling is needed with the same person who facilitated of the said retreat or activity. On *Home visit, Referral and Observation of student's behavior* the study shows that the results presented were found as gaps in the intervention program of schools. It was found out that there was of lack of concern of schools community in checking the child's background including the condition of the environment of the child's. Therefore, students with psychosocial problem on *bullying, broken family, cyber addiction, teenage pregnancy, gambling, substance addiction, parents who have problems with drugs, alcoholism, suicide* and other problems of the students could not be traced and be given the right intervention by the right authority. *Moreover use of referral and observation of the student's behavior* are not prioritized by the teachers and designated counselors particularly in the classroom where teachers are considered as the frontliner in identifying student's disturbing experiences. Less referral means fewer cases. Hence, the situation gives the impression that there are not many students have psychosocial problems and only few students will be helped. This scenario continues as a perennial problem of schools or even in the society.

On *family day and other activities* data revealed this as gap, because among the top ten intervention program it was ranked last. This means that there is less involvement of family in school's activities. Family involvement in school is a key factor to help in the student's problem and their involvement in school curriculum would make the school a healthier environment. Lastly, the research suggests among the school intervention programs that family day involvement in school must be one of the priorities in order to minimize student's psychosocial problem.



Another major gap presented in the study are the factors that involve why the existing intervention program does not meet the psychosocial problem of the students. Moreover, this section presents the main themes and sub-themes derived from interview and common responses from the questionnaire that served as the basis for triangulation in order to identify gaps in the study. Furthermore, the following themes derived in the study are the role of administrator as to the implementing of the program, teacher as the forefront agent as to referral and use of the observation of the behaviour of the students in the classroom, family as to less involvement in the school activity and awareness of psychosocial intervention program, school guidance program including the presence of guidance counsellors and school activities that support every unique needs of the students.

### **The role of the administrators**

#### **Implementation of the program**

Most of the participants affirmed that the administrators implemented the program in addressing the psychosocial problem of the students however, effectiveness in the implementation are not recognized by the student and stakeholders.

As mostly of students stated that;

*"Programs are needs to be improved" "Programs are not implemented well"*

*"It's efficient, but needs more improvement, or requires utmost attention by the principal"*

*"I think there should be innovative programs to make it attractive to the recipients."*

In all academic institutions, school administrators have a great stake about the kind of curriculum and programs that schools offer. With this, administrators play a crucial role in the program implementation, evaluation, monitoring and supervision of how the program works. The principle of command responsibility and institutional leadership rest on the shoulder of the school administrators that define success and failure across the implemented program especially the intervention program for the psychosocial problem of the students

According to Maxwell (2009) in the implementation of Character Education the role of the administrator varies from principal to principal as far as the level of knowledge, experience, and interest in program implementation. Therefore, relationship between the involvement of the principal and how comprehensive program was implemented in the school are crucial. They are the main factors in determining the success of the program.

Students and teachers affirmed that;

*"It's efficient, but needs more improvement, or requires utmost attention from the administrator"*

*"Intervention program happens sometimes only"*

*"No school intervention programs are done by the school authority but we teachers, just call the parents' attention to solve the problem" "It's not effective because it will only last for less than a month" "The administrators leave the responsibility to the teachers."*

#### **Lack of monitoring and program evaluation**

Another gap identified from the data gathered was that majority of the administrators had no monitoring and evaluation system on the implemented program. According to Winfrey, (1999) every program should at least, be evaluated to provide for program improvement; for assessing to know the learner satisfaction; or how have they changed especially on the offenders' behaviour and how the program made difference on the person. Therefore, program evaluation would help define the effectiveness and efficacy of the schools' intervention program for students with psychosocial problem. All administrators are urged by the teachers and students to make some changes based on gathered data and responses to meet the psychosocial problems of the students.

Majority of the respondents stated that;

*"The administrator has to be informed of any misbehaviour but not necessarily settles the problem unless he has to make decision"*

*"Proper evaluation of the program is needed to address different psychological problems"*

*"Intervention happens only if there are psychosocial problems occur and if the situation is already alarming"*

*"They did not offer direct a solution towards the students' needs"*

According to Leithwood and Jantzi (1999), the individual and the whole organization would depend on high levels of motivation and commitment in solving the substantial problems associated with the implementation of restructuring initiatives. Likewise, professional leadership plays a big role in creating a safe and teaching- learning environment. Effective leadership style creates shapes in the organization. Various studies support the idea that 'it is the leadership of the school that makes a difference between mediocrity and excellence (Hugghes 1991). Lastly, the study of Forbes (2011) states that there is a positively significant correlation between effective principals and effective schools.

### **Teacher as the forefront agent**

#### **Focuses on the Academics**

The study revealed gaps that existed on part of the teachers, and one of the factors that make implemented intervention not effective is due to the reason that most of the teachers are not concerned about the student's problem but rather focus on the academics. As one of the students stated that;

*"The teachers have not acted on our problems that are brought to them"*

*"They are concerned only about our academic performance."*

According to Frank, (2004) cited the work of Willian Glasser which stated that, unless the teacher redefines and stop teaching in generalities and begin to talk about some specific changes in the structure of teaching, and give these changes a fair trial, we will not make a dent in the growing number of unmotivated students who are essentially forced to attend school. As mentioned by the students;

*"Instead of teachers helping us with our problems in school ,they try to put us down but instead they give more attention to the subjects they are teaching and how much we get in the exams."*

*"Teachers lack follow-up of problems we bring up to them"*

*" Teachers don't deal with our problems and only focus on academic aspects how we perform and get in national test"*

Levine et al. (1992), argue that schools ignore the students' whole learning experience and instead focus on ways of obtaining statistical results. They express that schools need to be 'learning communities'; places where our children can gather in social activities and experience the process of learning. Most of our educational system is in fact based on a model of quantitative results instead of helping students develop holistically. This has been the same observation by the students and parents as shown in this study.

#### **Referral to the right authority**

Another gap that was identified on the part of the teacher pointed out the lack of proper and right referral of the authority of the behaviour manifested by the students observed as by the teacher in the classroom. Teacher serves as point-person to the right office who can handle the situation that is beyond their function and expertise. This is done if they can no longer control the situation. This would have become effective if teachers gave utmost attention to what they have heard, saw and feel in student's actuations in the teaching- learning environment.

As what the students affirmed:

*"Teachers not giving effective remedy against bullying and the bully"*

*"Every psychosocial problem has to be directly given to the proper authority"*

On the study of Abidin and Robinson (2002) the study suggests that, the best predictors of teachers' referral judgments are teachers' judgment about the presence of behavioral problems and the students' academic competence. In addition Sugai et al. (2000) on their study about preventing school violence, the use of office, discipline- referrals to assess and monitor school – wide discipline interventions stated that confronted by increasing incidents of violent behavior in schools, educators are being asked to make schools safer by attending the problem immediately and giving discipline –referrals to the school authority. Referrals might be used as an information source to provide an indicator of the status of school-wide discipline and to improve universal interventions for all students and their targeted interventions for students who exhibit the most severe problem behaviors.

## Family Involvement

### Orientation and awareness for parents on school intervention program

Another gap presented in the study as one factor that determines the effectiveness of the intervention program are parents. Based from the gathered responses and interviews; the main problem that hinders the effectiveness of schools' intervention is lack of educating parents to increase their level of awareness of the school psychosocial program. The teachers, guidance counselors, administrators including the parents convey the themes stated that;

the mother affirmed that:

*"Ambot, wala ko kahibalonanaaymgaing- ana na program (psychosocial intervention program), kay akoanakhangtudkrunadikgihapon sa internet."*

*( I am not aware that there are psychosocial intervention program, what I knew is that until now my son is addicted to internet.)* (author's translation) Stated by teachers that:

*"Some parents, do not give special attention to problems concerning their children"*

*"Not all parents have active participation in the program and give full support to the program."*

Resnick et.al. (1997) cited that the findings from the National Longitudinal Study on Adolescent Health on protecting adolescents concluded that Parent-family connectedness and perceived school connectedness were protective measures against every health risk behavior of the students. Family and school contexts as well as individual characteristics are associated with health and risky behaviors in adolescents. The results should assist health and social service providers, educators, and others in taking the first steps to diminish risk factors and enhance protective factors for our young people.

the Administrators stated that:

*"Some parents lack special attention to the problems concerning the performance of their children and in attending programs conducted by the school"*

*"Not all parents had active participation and not give their full support for this program."*

As added by Guidance Counselors:

*"These problems need to be addressed both by the schools and parents so that there is a continuous monitoring both school and the family."*

*"Not all parents are aware of their children's problems or what challenges they are undergoing."*

*"Teachers are there to help and it should start with the family and the environment."*

According to Cornwall and Walter (2006) claims that the materialism of societies, bad parenting and the pressures of schooling and modern life makeup the childhood toxic for the majority of children. Some might agree with neuroscientists that poor parenting damages emotional receptors in the brain permanently, requiring 'repair' through 'nurturing interventions' in schools.

### Involvement of family in student's activity

Parents should always be included in the school activity as solution to the psychosocial problem, but based from the results parents stated that:

*"Family I think, is a part of the school program, but during family day, there were no activities given to interact with the family, it is purely students activity"*

*"Family day for me is making money for the school because we always have a raffle draw"*

*"On the family day we just go to school to bring foods and eat, that's all."*

Families are the first educators of their children and they continue to influence their children's learning and development during the school years and onwards. Schools plays important responsibility in nurturing future generations. At the same time, likewise, schools need to recognize the primary role of the family in education. According to the Department of Education and Family –School partnership of framework of Australia states that, it is important for families and schools to work together in partnership not only in the school activities and academics but somehow in the schools intervention program.



In addition, school that involves the family in curriculum is much likely progressive and school that involves the parents in the school programs has lesser cases with psychosocial problem. According to the study family involvement can have significant effect on student achievement. Although it is impossible to attribute student achievement gains or other student outcomes in any of the school's program or solely to their parent involvement in some activities, it does appear that many schools that make parent involvement a priority also see student outcomes improved. Nevertheless, it appears that strong parent involvement is an important feature of many schools that succeed in raising student achievement (Family Involvement in Children's Education - October 1997).

### **School Guidance Program**

#### **School Guidance Counsellors**

Another factor that the research considered as a gap between the intervention program and psychosocial problem of the students is the ineffectiveness of schools' guidance program. Majority of the respondents complained that they encountered problems on how schools promote the mental health services such as lack of support and having not created a guidance program. They pointed out that the problem was lack of guidance counsellors and designated teachers act as guidance counsellor. The result is poor psychosocial intervention program.

The majority of the students expressed their experiences on the guidance program as follows:

*"Not all available psychological problem interventions have been given to promote students well-being for lack of time and personnel"*

*"The guidance designate is not really a guidance counsellor"*

*"Lack of appropriate person to administer the program"*

*"It takes a long time to process implementation before promoting a psychosocial program because the school lacks budget."*

According to the Guidance Counselor:

*"We lack budget and facilities"*

*"The school lacks support from the administration" "Only a few incidents are reported in the office because usually the problems are settled or solved by the teacher and the principal."*

As affirmed by one mother:

*"The intervention program is not well established."*

*"We are not aware of the program."*

*"There is parents' orientation but we are not informed about the different interventions like counseling or drug awareness."*

*"Very poor ang intervention program because when my daughter got pregnant, gin patawag lang ko sa eskwelahan unyagi pa rest ug eskwela kay ma uwawandaw ang ako anak ug ang school"*

*(The intervention program is very poor, because when my daughter got pregnant, I was just called by the school and advised my daughter to rest because she might put herself and the school to shame and the school might be involved in the scandal.) (author's translation)*

However, in one surveyed school, the studies shows that the school with guidance program had it well implemented especially in dealing with psychosocial problem of the students as affirmed by a mother that:

*"My attention was called to come to school by the guidance counselor and the adviser. I was told regarding the case of my son.( a suicide case) I can't believed that my son will commit suicide because at home, He has not shown any problem that bothered him."*

Another respondent stated that;

*"When my son told me that he was bullied, I was immediately informed by the adviser and they referred us to the guidance counselor"*

*"Pagkahibaw nakunana ay problema ang ako anak, akogi- refer sa school guidance counselors then he was given therapy, but my son gave up walakununiya ang problema na akunusaako or saiyaginikananan"*

*(When I knew that my child is having a problem I was immediately referred to the school guidance counselor, then he was given a therapy, but my son gave up because he said that the problem is not about him but it's all about us his parents). (authors translation)*

As stated by Hirokazu, (1994) effects of early family support and education on chronic delinquency and its risks, states that a using the cumulative protection model to explain why chronic juvenile delinquency may be amenable to prevention and how early family support and education may help achieve this important societal goal. Interventions combining comprehensive family support with early education may bring about long-term prevention through short-term protective effects on multiple risks. With these gaps family support and education need to be addressed as to strengthen guidance program of the schools and employ the right professional to handle psychosocial cases.

### **School Activities for Psychosocial Program**

#### **Understanding and supporting students with unique needs**

School activities are considered as gap based on the results of the study. Due to the high expectations for achievement in school and the natural comparison group with same-age peers, a child may first be identified as at risk in school. These students may require additional support in order to make adequate progress in school. Educators and counselors can help facilitate a supportive and therapeutic environment for students with significant emotional problems by seeking greater understanding of students' unique strengths and interests, assisting students effectively and by making suitable school activities.

Majority of the students stated that there are a lot of activities offered by schools, however, those activities are not suited to the needs of the students. The studies show that activities initiated by the schools are what the schools wanted students to do, not the students wanted to do. Majority of the respondents stated that:

*"Makalimtanimuhang problems, like during intramurals, makalimtannanimuimong problems tungodsakalingaw" ( you can forget your problems, during intramurals, you will be able to forget your problem because of fun)(authors translation)*

*"Teachers encourage students to join sports and other activities but don't both look at what we need"*

*"For me, the school is doing fine with these programs, it just needs to more more aggressive in seeking problems affecting their studies, attitudes towards others and classroom behavior, since some students won't tell the truth."*

*"Teachers should be able to know everything that is affecting the wellness of the student."*

*"On sex education at our age we still are unaware about what will happen if we engage in pre-marital sex, and we need to learn to be open minded about the subject."*

*"What we need is for the school to conduct seminars or activities about depression or stress because that is the most common problems here because of too much work or family problems. Seminars can really help alleviate if not eradicate the problem."*

*"We need retreat and recollection"*

*"Bible Sharing will be effective"*

Glasser asserts that up to half of all students experience school unsatisfying because the structure can stifle five human needs: survival, belonging, power, freedom and fun.

Depending on how these needs met, people may seek to satisfy one or more that are lacking.

As stated by the students:

*"For emotional sharing, a one hour sharing with each section for those students who suffer emotional, pain problem will help and I am included those students with problems"*

*"I would like to have a seminar in school with the entire studentry; section by section so that everyone would be accommodated and attended to properly"*

*"We need to express ourselves in the program. This will help students be confident about who they truly are without being judged"*

*"I would like a program where students will be taught how to control their emotions"*

*"Teachers should give less school projects to help prevent stress"*

In Gardener's view, students are seen as a whole person rather than cognitive beings. Students must be given a variety of avenues in which to learn, and other areas of content need to be brought into curriculum. Students need the emotional skills to deal with the difficult issues in their lives. These skills include "self-awareness; identifying, expressing and managing feelings; impulse control and delaying gratification; and handling stress and anxiety". A classroom is a place where students can experience and practice emotional skills that will benefit them throughout their lifetime. Therefore student's activity must be comprehensively studied on how it can help student's psychosocial problem.

### **Family and school partnership**

#### **Involvement of family in student's activity**

The parents should always be included in school social activities. This is the solution to the psychosocial problem students encounter. Using therapeutic education approach could help give students a fresh perspective of their problem and come up with a doable solution.

Families are the first educators of their children and they continue to influence their children's learning and development. Schools have an important responsibility in helping nurture and teach the future generation. Families trust schools to provide educational foundation for their children's future. At the same time, schools need to recognize the primary role of the family in education. This is why it is important for families and schools to work together in partnership not only in the extracurricular activities, academics but also in the schools intervention program (*Department of education and Family- School Partnership Framework of Australia*)

The leadership of administrators in implementing intervention program shown has that there are schools leaders who are effective in the implementation of the program and enjoy some success, however one of the most vital roles which some administrators have not done are facilitating and guiding in a holistic manner. Holistic in a sense that the responsibility would not only focus on the development of the students intellectual but with utmost interest be given to the emotional, social, physical and spiritual facet of learning of the child. Students must be given a variety of avenues in which to learn, and other areas of content need to be brought into curriculum. Therefore, teachers must be responsive and sensitive to the needs in such a way that students will be engaged in the teaching – learning environment. Guidance and counseling for students is an integral component of the educational mission of the school. Guidance and counseling services and programs promote the personal/social, educational, and career development of all students (*Program and Student Services Manitoba*).

In the Philippines, Declaration of Policy declares the policy of the State to promote the improvement, advancement, and protection of the guidance and counseling profession. This shall be done by undertaking and instituting measures that will result in professional, ethical, relevant, efficient, and effective guidance and counseling services for the development and enrichment of individuals and groups. The State recognizes the important role of Guidance Counselors in nation building and promotes the sustained development of a reservoir of licensed Guidance Counselors whose competence has been determined by honest and credible Licensure Examinations. The standards of professional practice and service are deemed world-class, and internationally recognized through preventive regulatory measures and program of activities. The policy shall foster continuing professional development. In this sense, gaps would continue in schools and psychosocial problems would constantly occur if schools would not follow

with what the government is emphasizing and requiring every educational institution. Furthermore, according to Koo (2008) , family involvement makes a difference. It

As a result showed that there are still schools inclined to academics and less priority is given to school activities that somehow lead to psychosocial program of school. Lastly, the study revealed that the educational environment which engages young people as active participants in their own learning are linked with higher student attendance, student achievement, greater creativity , conceptual learning, and increased intrinsic motivation and determination in learning. Thus, with this finding the interviews made there will be fewer cases of student's psychosocial problem in schools.

### **THERAPEUTIC PHYSICAL EDUCATION PROGRAM IN ADDRESSING THE GAPS BETWEEN STUDENT'S PSYCHOSOCIAL PROBLEM AND IMPLEMENTED SCHOOL'S INTERVENTION PROGRAM**

Therapeutic Physical Intervention Program that addresses the gaps between the student's psychosocial problem and the existing school's intervention program. This therapeutic intervention program in a form of an action plan to address the gaps that existed between the stakeholders , (school administrators, teachers, guidance/designated counselors, parents) and the therapeutic modalities for student activities was designed to address the psychosocial problems of the students. In addition, this Action plan can be use as a reference to improve existing schools intervention programs to address the student's psychosocial problems. Likewise, it can be implemented through the curriculum of Physical and Health Education for it uses selected content in the physical and health education curriculum as therapeutic modalities.

#### **Action Plan Design**

The Therapeutic Physical and Health Education program designed an action plan in order to address the gaps revealed in the findings. The *action plan* has been developed to support members of the school community (administrators, students, parents, staff and community members) through a step by step protocol of activities and to evaluate their progress in implementing strategies or goals to strengthen the school's intervention program in relation to the students' psychosocial problems.

The Action Plan comprises of the program goal, such as targets to improve the leadership's monitoring and evaluating competencies and the manner of implementing the new therapeutic physical and health intervention program. The level of mental and emotional condition where implemented program is intended for or to whom the program is proposed to be used. Activities - a specific action of series of bodily movement, exercises, dance, rhythms ,games and sports and strategies a school will undertake to achieve its goals. Time frame the timeline or deadlines to be met or when the program is scheduled to be implemented. Contact or lead persons, who are assigned and be responsible to run the program and evaluation on how the data or other forms of evidence collected for the purpose of program evaluation for remediation or enhancement.

#### **Role of the Stakeholder in Implementing Therapeutic Physical and Health Intervention**

##### **Program**

The following stakeholders shall be involved in the development of the school's intervention program.

- Parents— Parents will be engaged in the school activities or curriculum of the Therapeutic Physical and Health Education by sending home newsletters, posting e-Newsletters for parents.
- Teachers -Teachers will be trained about handling student's psychosocial problems and the implementation of the school intervention program especially for the proposed Therapeutic Physical and Health Education intervention program. Teachers will have opportunities to have hands-on experiences on how to use referrals, student's behavioral and attitudinal behavior, and anecdotal records.

- Administrators - Administrators are responsible for planning, leading, organizing, coordinating and evaluating on the Therapeutic Physical and Health Education of his or her respected school. The administrator shall in turn give to recommendation; feedback or reports to the school higher-up for their action.
- School guidance counselor/ Designated Counselors - the counselors will analyze the data taken the implemented intervention program for the purpose of institutionalizing it school wide. He or she serves as the liason between the parents and other community stakeholders. More importantly he/she develops a school guidance program that addresses psychosocial problems of the students.

## **Conclusion**

Schools must have scientific evidence and reliable data of student's psychosocial problems so that it has the basis of creating or implementing intervention program. Schools need to create an intervention program that is embedded in the curriculum not only for academic purposes but must also contain therapeutic activities for prevention of psychosocial problems. Family or parents orientation on the schools intervention program must be given in order for the family to engage and have active participation in helping their children psychologically and academically. The proposed therapeutic intervention program uses the subject content of PE and Health curriculum in order for schools to easily to implement the said program Therefore the psychosocial problems of the students must be addressed appropriately through a comprehensive school intervention program that incorporates therapeutic activities for prevention of the psychosocial problems earlier discussed in the study.

## **Recommendations**

The researcher recommends to school agencies to make use of the therapeutic intervention program in the subject Physical and Health Education as the pioneer intervention program embedded in the curriculum. It is also recommended that school administrators update the activities in Physical and Health Education to include on therapeutic physical and health intervention program in the respective school PE program and not use it only as the subject nor extracurricular activities rather as intervention program that promotes students well-being. The guidance counselors will use the module for therapeutic activities as modalities in counseling for the students who have problems. It is also recommended that the guidance counselors must work as a team with the teachers, parents and administrators to establish a guidance program. Moreover, other researchers may use the findings of this study to generate further studies on the significance of therapeutic Physical and Health intervention program in terms of serving and addressing students with psychosocial problems.

## **References**

- Abidin, R and Robinson, L ( 2002) . Stress, Biases, or Professionalism What Drives Teachers' Referral Judgments of Students with Challenging Behaviors? Journal of Emotional and Behavioral Disorders Vol. 10 no. 4204-212Sage Journals
- AceroV,Javier ,Castor H. (2004) Human Growth and Development and Learning. Rex Book Store , 856 Nicanor Reyes,Sr..St. 1977 C.M. Recto Avenue. Manila Philippines.
- Andin, C. (1984) The Teaching of Physical Education in Philippine Schools. Rex Book Store , 856 Nicanor Reyes,Sr..St. 1977 C.M. Recto Avenue. Manila Philippines.
- A.S. Niel (1960) Foreword by Fromm E. Summer Hill: A Radical Approach to Child Rearing. Hart Publishing Company,74 Fifth Avenue, New York 11,NY.
- Brierley, J. (1994)Give Me a Child Until He is Seven Brain Studies and Early Childhood Education. The Falmer Press, 4 John Street, London

- Calfas, K and Taylor , W. (1994). Effects of Physical Activity on Psychological Variables in Adolescents .*Pediatric Exercise Science*, 1994, 6, 406-423 O 1994 Human Kinetics Publishers, Inc.
- Cohen,J (2006). *Social, Emotional, Ethical, and Academic Education: Creating a Climate for Learning, Participation in Democracy, and Well-Being*. Harvard Education Publishing Group. ISSN0017-8055 (Print),1943-5045 (Online)
- Cornwall, J and Walter, C (2006). *Therapeutic Education: Working alongside troubled and troublesome children* Routledge 2 Park Square, Milton Park, Abingdon Oxon OX14 4RN 270 Madison Ave, New York, NY 10016
- Cornwell, S , Bundy, J.(2009)*The Emotional Curriculum ;A Journey Towards Emotional Literacy*. SAGE Publications Ltd 1 Oliver's Yard 55 City Road London EC1Y 1SP
- Durlak, J, Wells, A. (1998).*Evaluation of Indicated Preventive Intervention (Secondary Prevention) Mental Health Programs for Children and Adolescents*. *American Journal of Community Psychology* October, Volume 26, Issue 5, pp 775-802
- Ecclestone, K and Hayes,D (2009).*The Dangerous Rise of Therapeutic Education*. Routledge 2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN Published in the USA and Canada, 270 Madison Ave, New York, NY 10016
- Ecclestone, K. et. al (2010 )*Assessment in Lifelong Learning*. Two Penn Plaza, New York, NY 10121-2289, USA.
- Elias , M et.al (2007)*Promoting, Social and Emotional Learning; Guidelines for Educators*.Association for Supervision and Curriculum Development 1250 N. Pitt Street Alexandria, Virginia USA
- Elias, M ( 1989) *Schools as a source of stress to children: An analysis of causal and ameliorative influences*. Department of Psychology, Rutgers University, Tillett Hall-Kilmer Campus, New Brunswick, NJ 08903, USA.
- Frank ,L .(2004) *Journey Toward the Caring Classroom*. Wood 'N' Barnes Publishing & Distribution 2717 NW 50th,Oklahoma City 73112
- Freiberg, J. (1999).*School Climate: Measuring, Improving and Sustaining Healthy Learning Environments*. UK Falmer Press, 1 Gunpowder Square, London, EC4A 3DE USAFalmer Press, Taylor and Francis Inc., 325 Chestnut Street, 8th Floor, Philadelphia, PA 19106
- Fullan, M. (2001).*The New Meaning of Educational Change*. Teachers College Press, 1234 Amsterdam Avenue, New York, NY 10027 and Routledge Falmer, 11 New Fetter Lane, London, EC4P 4EE.
- Glassers,W. (1969) *Schools Without Failure*. Harper and Row, Publishers, Inc. 49 East, 33rd St. New York.10016.
- Greenberg, Mark T et al.; Weissberg, Roger P.; O'Brien, Mary Utne; Zins, Joseph E.; Fredericks, Linda; Resnik, Hank; Elias, Maurice J. (Jul 2003) *Enhancing school-based prevention and youth development through coordinated social, emotional, and academic learning*. *American Psychologist*, Vol 58(6-7), 466-474. doi: 10.1037/0003-066X.58.6-7.466
- Hayes, Dennis(2004).*The Routledge Falmer Guide to Key Debates in Education*. Routledge Falmer 2 Park Square, Milton Park, Abingdon, Oxfordshire OX14 4RN U SA and Canada, Routledge Falmer 29 West 35th Street, New York, NY 10001
- Hawkins, J. David; Catalano, Richard F.; Abbott, Robert D.; Day, L. Edward( 1995). *Preventing school failure, drug use, and delinquency among low-income children: Long-term intervention in elementary schools*. *American Journal of Orthopsychiatry*, Vol 65(1), Jan 1995, 87-100. doi: 10.1037/h0079598

Hyson ,M.(2004).The Emotional Development of Young Children; Building an Emotion Centered Curriculum. Published by Teachers College Press, 1234 Amsterdam Avenue, New York,Teachers College, Columbia University

Jenlink, P.(2009) Dewey's Democracy and Education Revisited Contemporary Discourses for Democratic Education and Leadership. A Division of Rowman & Littlefield Publishers, Inc. A wholly owned subsidiary of The Rowman & Littlefield Publishing Group, Inc.  
4501 Forbes Boulevard, Suite 200, Lanham, Maryland

Johnson , K .(1989). *Trauma in the Lives of Children*. Hunter House Inc.2200 , Central Avenue Avenue ,Suite 202.Alameda . CA 94501- 4451.

Reinstein, D (2006)To Hold and Be Held; The Therapeutic School as a Holding Environment Routledge Taylor & Francis Group 270 Madison Avenue New York, NY 10016

Reinke, Wendy M.; Stormont, Melissa; Herman, Keith C.; Puri, Rohini; Goel, Nidhi (Mar 2011)School Psychology Quarterly, Vol 26(1)

Resnick, M. PhD; Peter S. Bearman, PhD; Robert Wm. Blum, MD, PhD; Karl E. Bauman, PhD; Kathleen M. Harris, PhD; Jo Jones, PhD; Joyce Tabor; Trish Beuhring, PhD; Renee E. Sieving, PhD; Marcia Shew, MD, MPH; Marjorie Ireland, PhD; Linda H. Bearinger, PhD, MS; J. Richard Udry, PhD.(1997). Protecting Adolescents From Harm Findings From the National Longitudinal Study on Adolescent Health.

Kraus,R (1973) Therapeutic Recreation Service, principles and practices.W.B. Saunders Company,West Washington Square Philadelphia, Pa. 19105.

Leithwood, K &Jantzi, D. ( Aug 2010) Transformational School Leadership Effects: A Replication.10.1076/sesi.10.4.451.3495 doi: 10.1177/0022427804271931Journal of Research in Crime and Delinquency

ÖzgürErdur-Baker, OnurÖzmen, HandeÖzmen.(2011) Teachers' Perspectives on Psychological Issues Among Their Students. Elementary Education Online, 10(1), 197-205, 2011.İlköğretim Online, 10(1), 197-205, 2011

Steiner, R. (2004) A Modern Art of Education ; Lectures presented in Ilkley, (1923)Yorkshire. Published by Anthroposophic Press 400 Main Street Great Barrington, MA 01230

Sugai G, Sprague J, Horner R, Walker H. ( 2000), Preventing School Violence  
The Use of Office Discipline Referrals to Assess and Monitor School-Wide Discipline Interventions.  
Journal of Emotional and Behavioral Disorders.Vol. 8 no. 294-101

Welsh, W. (2000). The Effects of School Climate on School Disorder. Temple University. The ANNALS of the American Academy of Political and Social Science guide school improvement.

World Health Organization (2019), Mental Health and Well-Being. <https://www.who.int> › Health topic

Yoshikawa, Hirokazu (1994) Prevention as cumulative protection: Effects of early family support and education on chronic delinquency and its risks. Psychological Bulletin, Vol 115(1), Jan . 28-54.

Villar, V. (2004) *Empowering Lives through Comprehensive Guidance Program*. Aligned Transformation Publications, 3423 Guernica St. Makati City, Philippines