



COMPARISON OF SELECTED SKINFOLDS BETWEEN TRIBAL AND NON-TRIBAL MALE PLAYERS OF HIMACHAL PRADESH

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ABSTRACT

The present study has been conducted on 300 players with an aim to find out the difference in selected anthropometric variables i.e. skin-fold between tribal (n=150) and non-tribal (n=150) male senior secondary school players of Himachal Pradesh. Tribal sample were taken from the two tribal district i.e. Lahaul- Spiti and Kinnaur and two tribal tehsil i.e. Bharmour and Pangi of Chamba district in Himachal Pradesh. Non-tribal sample were taken from the three districts i.e. Hamirpur, Bilaspur and Una of Himachal Pradesh. Each player was tested for various skin-fold measurements necessary for estimation of biceps skin-fold, triceps skin-fold, forearm skin-fold and sub-scapular skin-fold of tribal and non-tribal players. To analyze the difference in selected skin-fold of two groups of tribal and non-tribal players were determined through 't' test. From the findings, it has been found that non-tribal players possessed significantly greater triceps skin-fold and forearm skin-fold than tribal senior secondary school players. In biceps skin-fold and sub-scapular skin-fold also non-tribal players possessed slightly greater mean value than tribal senior secondary school players.

Keywords: Tribal, Non-tribal, Male, Anthropometric variable, School Players.

1. INTRODUCTION

The term anthropometry invented by J. S. Elsholtz, a German Physician, in Seventeenth Century refers to measurement of human body and its various proportions. It encompasses a wide variety of measurement procedures for determining endless number of body dimensions. Anthropometry is the study of the measurement of the human body in terms of the dimensions of bone, muscle, and adipose (fat) tissue. Measures of weight, height and different diameters or width and subcutaneous adipose tissue are important because individuals with large values are reported to be at increased risks for hypertension, adult onset diabetes mellitus, cardiovascular disease, arthritis, various forms of cancer, and other diseases. Combined with the dietary and related questionnaire data, and the biochemical determinations, anthropometry is essential and critical information needed to assist in describing the data collected from persons in the sample.

Anthropometry is a powerful method for description and analysis of body size, shape, form and proportions. It has been extensively used to quantify and analyze human growth and as such it has become an important specialization not only in anthropology and human biology but also of sports sciences, nutrition, medical sciences, psychology and numerous other sciences. Anthropometry has greatly contributed to sports medicine management. Physiotherapist in sports medicine clinics uses anthropometry in the everyday treatment and rehabilitation of the injured. Measurement of body size include such descriptive information as height, weight and surface area while measurement of the body proportion describe the relationship between height and weight and among length, width and circumference of various body segments. It has been bound that top athlete in some sports tend to have those proportional that biomechanically aid the particular performance required.

Results of the study conducted by **Bhasin and Jain (2007)** reveals that tribal groups experience low body mass associated with reduced bone mass. Both male and females show the least development in terms of body weight, subcutaneous fat disposition and bone width than the other tribal group. Study conducted by **Shilpi Saha and Samir Kumar Sil (2019)** reveals that Chakma tribal girls showing a greater subcutaneous adiposity in comparison with Bengali girls. The age specific mean skin-fold thickness i. e. Triceps skin-fold thickness and sub scapular skin-fold thickness (TRSF & SBSF) values were observed to be statistically higher among Chakma tribal girls compared to Bengali girls. Chakma tribal possessed significantly higher sub scapular triceps ratio than Bengali girls at the age between 8 & 10 Years.. The study of **Dharam Singh (2013)** also show that on the basis of means of weight, height, fat percentage and fat mass are higher in non-tribal sports person as compared to the tribal sportsperson and the reason seems to be that tribal sportsperson live in difficult climatic and geographical conditions which requires more strenuous exercises in every walk of life leading to more consumption of energy, secondly the food consumed by the tribal is more rich in proteins, carbohydrates and minerals and have less contents of fat resulting in more lean body mass and less fat mass and because of this reason the mean weight, fat mass and fat percentage are more in non-tribal sports person.

Various researches suggest that suitable physique plays a predominant role for success in sports (**Hirata, 1979; De Garay et al. 1974; Kemper, 1985; Mathur et al. 1985;**). The investigator in the underline study would like to compare the certain

anthropometric variables i.e. skin-folds between tribal and non-tribal senior secondary school players of Himachal Pradesh

To study and find out the difference in skin-fold of Senior secondary school male players of tribal and non-tribal areas of Himachal Pradesh in respect of their selected skin-folds i.e. biceps, triceps, forearm and sub-scapular. It was also hypothesized that there would be no significant difference between senior secondary school tribal and non-tribal male players in respect of their selected skin-folds i.e. biceps skin-fold, triceps skin-fold, forearm skin-fold and sub-scapular skin-fold.

2. METHODOLOGY

2.1 Selection of Subjects

To achieve the purpose of the present study 300 players i.e. tribal (n=150) and non tribal (n=150) were selected randomly from the six district of Himachal Pradesh i.e. tribal (Kinnaur, Lahaul & Spiti and two tribal tehsil i.e. Bharmour & Pangi of Chamba district) and non-tribal (Hamirpur, Bilaspur and Una district) are used as subjects in this study. Age group ranged from 14 to 19 Years.

2.2 Selection of Variables

Each player was tested for various anthropometric measurements necessary for estimation of biceps, triceps, forearm and sub-scapular skin-folds parameters.

2.3 Statistical Analysis

To test the significance of mean difference between tribal and non-tribal male players, statistical technique of 't' test was applied

3. RESULTS

TABLE 1
SIGINIFICANCE OF DIFFERENCE BETWEEN TRIBAL AND NON-TRIBAL MALE PLAYERS
IN THEIR MEAN SCORE ON BICEPS SKINFOLD MEASUREMENT

Group	Variable	N	Mean	S.D	M.D	S.E.M	d f	't'
Tribal	Biceps skin fold	150	4.09	1.155	.113	.094	298	.662
Non-Tribal		150	4.21	1.751		.143		

Non-significant at 0.05 level

$t_{.05} (298) = 1.97$

Table 1 reveals that t value for tribal and non-tribal senior secondary school male players with respect to their mean scores on 'biceps skin-fold' came out to be .662, which is statistically insignificant at 0.05 level of significance (Table value of 't' at 0.05 level =1.97 for df 298.) This indicated that tribal and non-tribal senior secondary school male players do not differ significantly with respect to their mean scores on 'biceps skin-fold'. Since, the mean scores for tribal senior secondary school male players (4.09) is lower in comparison to non-tribal senior secondary school male players (4.21), it may be interpreted that non-tribal senior secondary school male players have better 'biceps skin-fold' in comparison to tribal senior secondary school players. Hence, the formulated hypothesis that "there would be no significant difference between tribal and non-tribal senior secondary school male players in the variable of biceps skin-fold" null hypothesis stand accepted.

TABLE 2
SIGNIFICANCE OF DIFFERENCE BETWEEN TRIBAL AND NON-TRIBAL MALE PLAYERS
WITH RESPECT TO THEIR MEAN SCORE ON TRICEPS SKINFOLD MEASUREMENT

Group	Variable	N	Mean	S.D	M.D	S.E.M	d f	't'
Tribal	Triceps skin fold	150	6.41	1.814	.767	.148	298	2.583*
Non-Tribal		150	7.17	3.151		.257		

*Significant at 0.05 level , t .05 (298) =1.97

Table 2 reveals that t value for tribal and non-tribal senior secondary school male players with respect to their mean scores on 'triceps skin-fold' came out to be 2.583, which is statistically significant at 0.01 level of significance (Table value of 't' at 0.05 level =1.97 for df 298.) This indicated that tribal and non-tribal senior secondary school male players differ significantly with respect to their mean scores on 'triceps skin-fold'. Since, the mean scores for tribal senior secondary school male players (6.41) is lower in comparison to non-tribal senior secondary school male players (7.17), it may be interpreted that non-tribal senior secondary school male players have better 'triceps skin-fold' in comparison to tribal senior secondary school players. Hence, the formulated hypothesis that "there would be no significant difference between tribal and non-tribal senior secondary school male players in the variable of triceps skin-fold" null hypothesis stand rejected.

TABLE 3
SIGNIFICANCE OF DIFFERENCE BETWEEN TRIBAL AND NON-TRIBAL MALE PLAYERS
WITH RESPECT TO THEIR MEAN SCORE ON FOREARM MEASUREMENT

Group	Variable	N	Mean	S.D	M.D	S.E.M	d f	't'
Tribal	Forearm skin fold	150	4.59	1.044	.633	.085	298	3.448*
Non-Tribal		150	5.22	1.993		.163		

*Significant at 0.01 level , t .05 (298) =1.97

Table 3 reveals that t value for tribal and non-tribal senior secondary school male players with respect to their mean scores on 'forearm skin-fold' came out to be 3.448, which is statistically significant at 0.05 level of significance (Table value of 't' at 0.01 level =2.59 for df 298.) This indicated that tribal and non-tribal senior secondary school male players differ significantly with respect to their mean scores on 'forearm skin-fold'. Since, the mean scores for tribal senior secondary school male players (4.59) is lower in comparison to non-tribal senior secondary school male players (5.22), it may be interpreted that non-tribal senior secondary school male players have better 'forearm skin-fold' in comparison to tribal senior secondary school players. Hence, the formulated hypothesis that "there would be no significant difference between tribal and non-tribal senior secondary school male players in the variable of forearm skin-fold" null hypothesis stand rejected.

TABLE 4
SIGNIFICANCE OF DIFFERENCE BETWEEN TRIBAL AND NON-TRIBAL MALE PLAYERS
WITH RESPECT TO THEIR MEAN SCORE ON SUBSCAPULAR SKINFOLD
MEASUREMENT

Group	Variable	N	Mean	S.D	M.D	S.E.M	df	't'
Tribal	Sub-scapular skin-fold	150	8.36	1.750	.440	.143	298	1.546
Non-Tribal		150	8.80	3.015		.246		

Non-significant at 0.05 level , $t_{.05} (298) = 1.97$

Table 4 reveals that t value for tribal and non-tribal senior secondary school male players with respect to their mean scores on 'sub-scapular skin-fold' came out to be 1.546, which is statistically insignificant at 0.05 level of significance (Table value of 't' at 0.05 level =1.97 for df 298.) This indicated that tribal and non-tribal senior secondary school male players do not differ significantly with respect to their mean scores on 'sub-scapular skin-fold'. Since, the mean scores for tribal senior secondary school male players (8.36) is lower in comparison to non-tribal senior secondary school male players (8.80), it may be interpreted that non-tribal senior secondary school male players have better 'sub-scapular skin-fold' in comparison to tribal senior secondary school players. Hence, the formulated hypothesis that "there would be no significant difference between tribal and non-tribal senior secondary school male players in the variable of sub-scapular skin-fold" null hypothesis stand accepted.

4. DISCUSSION

In triceps skin fold and forearm skin fold there exists/ established significant difference between tribal senior secondary school male players and non-tribal male players. In these variables non-tribal senior secondary school male players possess greater value than their counterpart tribal male players. It is concluded from the present study that tribal players had less adiposity as compared to non-tribal players. The negative life style coupled with increased in energy intake seems to be the reason for increase in fatness in non-tribal players. These two group i.e. tribal and non-tribal senior secondary school male players don't live together in geographical proximity and their nature of physical work is also not similar. The differences whatsoever they may exhibit in their body physique/ skin fold will mainly be due to their genetic makeup. The typical tribal diet is almost devoid of the fats. To supplement this, the caloric intake is also deficient. Thus the lower amount of body fats are due to lower intake of fats and oils and calories while on the other hand, this lower amount of body fats may be advantageous in carrying food because it increases the mechanical efficiency of the individual as suggested by Sloan and Masall, 1978. It may be disadvantageous on the other hand in a cold climate in which the tribal live, because of possessing a very thin layer of subcutaneous tissue.

It is being attributed to the fact that the environment of the school campus, routine lifestyle, regular diet and exercise schedule of the non-tribal school players may help them to excel in sports activities. It can be calculated that the differences occurred in skin fold measurements may be due to geographical variation, genetic factors, nutritional factors and socioeconomic status.

There was no significant difference in biceps skin-fold and sub-scapular skin-fold between tribal and non-tribal senior secondary school male players. In these variables tribal senior secondary school male players have lesser value as compared to non-tribal senior secondary school players. Tribal players had less fat deposition in biceps and sub-scapular skin-fold. It may be due to the fact that they involve themselves in many household activities like wood cutting, orchard work like pruning, cleaning of bushes, spraying in orchard etc. they intake less oil and fats in their diet it may be the reason for less fat deposition in tribal senior secondary school players.

5. CONCLUSIONS

1. Tribal senior secondary school male players possess lesser value for biceps skin-fold as compared to non-tribal senior secondary school male players. Statistically, it has been observed that tribal and non-tribal senior secondary school male players do not differ significantly from each other in biceps skin-fold.
2. Non-tribal senior secondary school male players possess greater triceps skin-fold as compared to tribal senior secondary school male players. Statistically, it has been observed that tribal and non-tribal senior secondary school male players differ significantly from each other in triceps skin-fold.
3. Non-tribal senior secondary school male players possess greater forearm skin-fold as compared to tribal senior secondary school male players. Statistically, it has been observed that tribal and non-tribal senior secondary school male players differ significantly from each other in forearm skin-fold.
4. Non-tribal senior secondary school male players possess greater sub-scapular skin-fold as compared to tribal senior secondary school male players. Statistically, it has been observed that tribal and non-tribal senior secondary school male players do not differ significantly from each other in sub-scapular skin-fold.

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ACHIEVEMENT MOTIVATION CAPABILITY IN CRICKETER MOHAMMAD

KAIF: A REVIEW

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ABSTRACT

Achievement motivation is an individual's urge to achieve something in their life. It is the driving force which makes an individual feel like attaining some situations or achieve something in turn give satisfaction. It is a broader theme that focuses on how specific situations influence their desires, emotions and behaviours. Those who are motivated by achievement tend to plan their activities well because their activities are aimed at a particular target and they want to achieve it at any cost. Their plan will be accurate and well designed. A person motivated by achievement would probably choose something of moderate difficulty because it will help them to attain the aim at a reduced risk level. The purpose was the study to know the quality of Achievement sports motivation. For this purpose Legend cricketer Mohammad Kaif selected as a subject of the study. To know that quality, researcher applied questionnaire to him which was developed by M.L. Kamlesh (1990) Results of he study revealed a moderate level of sports achievement motivation among Legend cricketer Mohammad Kaif . He possesses lot of patience and perseverance. He also motivates younger players inside or outside the game.

Keywords: Achievement, Motivation capability, Cricket. Review

1. INTRODUCTION

The world is full of people who have achieved milestones in their journey of life. They are the role models that inspire, motivate and stimulate others to follow their examples in achieving target objective. Among varied extraordinary achievers, there are quite a few sports persons who have excelled in different games and sports and are role model to follow by budding and aspiring young sports enthusiasts. For most people, personality is “what makes one individual different from others”. Based on the various descriptions, personality seems to refer to an “attribute that people possess in varying amount. Yet personality is not something which an individual possesses in small or big amount nor is it a concrete thing that is easily observable as white skin or black hair. Rather, it is what one is”. Mohammad Kaif was very laborious since his childhood. He expands long period time to achieve his target. His devotion towards cricket is a good example for the beginners. He gave a lot of time for achieving perfection in his fielding skills. His family members also supported him for achieving his goal.

Many researchers had done related to sports achievement motivation. It attempts to measure what an individual has learned –his or her present level of performance. Sport achievement tests are particularly helpful in determining individual or group status in sports settings. Various studies have been conducted to discover what motivates students. With these studies came ideas on how to predict an individual’s task performance.

Achievement Motivation was proposed by Atkinson and Feather stated that a person’s achievement oriented behaviour is based on three parts: the first part being the individual’s predisposition to achievement, the second part being the probability of success, and third, the individual’s perception of value of the task. They also stated that “the strength of motivation to perform some act is assumed to be a multiplicative function of the strength of the motive, the expectancy (subjective probability) that the act will have as a consequence the attainment of an incentive, and the value of the incentive (**Atkinson and Feather,1966**).

Singh et al.(2010) indicated the insignificant difference between male and female north zone badminton players in their sports achievement motivation. **Kaur et al.(2007)** revealed a significance difference in the level of achievement motivation of high pre-competition anxiety group and low pre-competition anxiety group of interuniversity level male hockey players. **Thakur etal (2008)** indicated that the achievement motivation level of high performance groups was better than non-sportsmen. **Schilling (2001)** revealed that the basketball players indicated the importance of social factors in achievement motivation. They suggested that Cross-country Athletes has highest Motivational level than High School Basketball Players.

Motivation is the reason for the actions undertaken by people and the underlying concept is a driving force that helps a person achieve a specific goal (**Osabiya, 2015**). Achievement motivation the behaviours of an individual who strive to accomplish h something and so his best to excel his performance (**Khan & Rizwanuddin, 2015**). Motivation is the reason for people’s action, desires and needs. It is the cause for an individual to design one’s own behaviour. The underlying concept of motivation is a driving force within individuals which helps them to achieve specific goal in order to fulfil some need or expectation (**Osabiya, 2015**). Motivation encourages a person to either repeat or

stop a particular kind of behaviour. Motivation is made up of beliefs, perceptions, values, interests, and actions (Lai, 2011).

A motive is the reason for the individual to have a particular aim or have an inclination to a particular behaviour. Motivation can be seen as a cycle in which thoughts influence behaviours, increases performance, performance affects thought sand the cycle continues. Motivation is the driving force behind a person's actions. It acts as an important foundation to complete cognitive behavioural tasks such as planning, organization, decision-making, learning, and assessments (Singh, 2011).

Achievement motivation is understood as behaviours dedicated to developing and demonstrating higher abilities. It refers to the behaviour of an individual who strive to accomplish something and so his best to excel his performance (Khan & Rizwanuddin, 2015). Although achievement is relatively a new concept inthe world of motivation, it is now widely used in the area of education (Dhanya & Anitha, 2013).

The effect of achievement motivation and sports achievement on frustration tolerance capacity of male sportspersons was accomplished that high achiever sportspersons with superior achievement motivation possesses enhanced excellence to tolerate frustrating condition as compared to low achiever sportspersons with poor achievement motivation (Chand, 2015).

2. METHODOLOGY

2.1 Selection of Sample

For the purpose of present investigation, Legend cricketer Mohammad Kaif was selected as a subject of the study.

2.2 Description of Questionnaire

The Sports Achievement Motivation Test prepared by M. L. Kamlesh (1990) is a self-evaluation test used to assess the level of sports achievement motivation of the players. The test-retest reliability of the questionnaire with (N=79) was reported to be 0.70, which is quite high. Although the test is axiomatically valid as it measures only one thing i.e. level of sports achievement motivation yet to strengthen the further belief in its validity, an effort was made by the author to correlate it with the actual sports achievement of a mixed sample of athletes. The validity quotient of 0.55 showed marked relationship between the level of sports achievement motivation and the level of sports achievement on different samples.

2.3 Administration of Questionnaire

The sports achievement motivation questionnaire has twenty statements. Every statement has two proposed parts. Mr. Mohammad Kaif was asked to tick the part, which fits him best in his opinion. Each statement carries a maximum of two and the minimum zero. The response value of the total questionnaire extends from 0 to 40 in total. Scoring: After conducting further studies by using Sports Achievement Motivation Test the author has given the following classification criteria:

<u>Raw/Mean Score</u>	<u>Classification</u>
0 - 24	Low
24 - 30	Moderate
30 - 40	High

The treatment of the data obtained from the administration of Sports Achievement Motivation Test to Mr. Mohammad Kaif was done in the light of the instructions contained in the test manual.

3. RESULT

The Sports Achievement Motivation Test developed by Kamlesh (1990) was used to examine the level of sports achievement motivation of Mohammad Kaif. Mohammad Kaif scored 28 points in sports achievement motivation test which indicates that he possesses a moderate sports achievement motivation. It is shown that his personality indicates that he handled easily pressure of game to achieve the target.

4. DISCUSSION

As of July 2005, Kaif was one of only five cricketers from Uttar Pradesh to have made it to the national side. In 2009, the Indian team was well represented by Uttar Pradesh with as many as three regulars, Suresh Raina, Praveen Kumar and Rudra Pratap Singh in the ODI team. He was the captain of both Central Zone and Uttar Pradesh. He also captained the national ODI team in the 2005/06 Challenger Trophy in the absence of regular captain Rahul Dravid.

5. CONCLUSIONS

A moderate level of sports achievement motivation among Legend cricketer Mohammad Kaif was observed. Respondent also possesses lot of patience and perseverance. The ability to Motivate the younger players inside or outside the game was also observed among him. Legend cricketer Mohammad Kaif was also found the following characteristics:

1. He is a cool-headed person.
2. He possesses lot of patience and perseverance.
3. He believes in more work and less talk.
4. He motivates younger players

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**A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURE
TEACHING PROGRAM ON KNOWLEDGE REGARDING
PREVENTION OF COMMON CHILD HOME ACCIDENTS
AMONG MOTHER'S IN SELECTED COMMUNITY
AREA IN JABALPUR CITY**

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ABSTRACT

The aim of the study was to assess the effectiveness of structure teaching program on knowledge regarding prevention of common child home accidents among mother's in selected community area in Jabalpur city, The planned teaching program was prepared to evaluate the knowledge on prevention of common child home accidents by reviewing published as well as unpublished review of literature conceiving the knowledge of the mothers regarding prevention of common child home accidents .**Result:-** Result of the present study justified the effectiveness of structured teaching program .In the present study significant improvement in post knowledge score was recorded .the knowledge improvement of home accidents mean score was 24.66 with the "t" value 10.61 which showed the effectiveness of structured teaching program .so it is hoped that implementing appropriate education program can raised awareness and correct the misconception among mothers education program may be considered as effectiveness tool to enhance the knowledge of mothers , common child home accidents .

Keywords: Effectiveness, Teacher, Community, Prevention, Teaching, Mother, Education

1. INTRODUCTION

Children are gift of God. They are wet clay in potter's hand. Handled with love and care, they become something beautiful or else break and are discarded. The future of nation is in their hands." Accidental injuries are the leading causes of death in children under five of age and injuries are the most common cause of death in children over the age of one. Every year, millions of children are permanently disabled or disfigured because of accidents (**Latifa, 2013**). The developmental stage of the child partially determines the type of injuries that are most likely to occur at a specific age. The toddler with highest curiosity to explore, investigate and with the ability to run and walk are more prone to variety of injuries like burns, scalds1 (**Marlow, 1998**).

Accidental aspiration of food objects such as nuts and seeds are common in young children may result death, Inedible objects such as balloon , coins, pills, safety pins, marbles and baby powder may also be fatally aspirated.(**Winn et.al., 2011**)

Accidental poisoning was commonly involving 50-90 per cent of children below 5 years of age. It is a global problem. Children between 1-3 years age were the most vulnerable group. During toddler period, exploratory nature aided by their newly acquired hand skills and mobility. Negligence and ignorance of parents and caretakers in making environment of child for poisoning. In small house with limited space, the households chemicals, disinfectants and kerosene are most likely ingested by the children accidentally. Raising awareness in safe keeping of all toxic chemicals out of child's reach into child resistant details found (**Goel, 2005**)

Accident is an unexpected and unexplained occurrence which may involve injury. there are mainly two type of accidents that occur in under 5year children road traffic accidents and domestic accidents .which take places in the home or its immediate surrounding and generally happen in under 5 year age children .the most frequent cause of domestic accidents are drowning , burn drug injuries from sharp and pointed instrument and another cause of childhood accidents (**Goyet , 2006**) .

According to world health organization every year about 830,000 die from home accidents worldwide .this corresponds to child death in a day. In addition majority of children have referred to hospital due to home accidents in permanent disabilities.

1.1 OBJECTIVES:-

- 1.1.1 Assess the pre-test knowledge regarding prevention of common child home accidents among mothers in selected community area in Jabalpur city .
- 1.1.2 Assess the post -test knowledge regarding prevention of common childhood accidents among mothers in selected community area in Jabalpur city.
- 1.1.3 Compare the pre-test and post -test knowledge level of knowledge regarding prevention of common child home accidents selected community area in Jabalpur city.
- 1.1.4 Associate pre-test score with selected demographic variable.

1.2. HYPOTHESIS:-

- 1.2.1 There will be no significant difference between pre-test and post -test knowledge regarding prevention of common child home accidents among mothers in selected community area in Jabalpur city.

1.2.2 There will be significant difference between pre-test and post -test knowledge regarding prevention of common child home accidents among mothers selected community area in Jabalpur city.

2. METHODOLOGY

The planned teaching programme was prepared to evaluate the knowledge on prevention of common child home accidents by reviewing published as well as unpublished review of literature conceiving the knowledge of the mothers regarding prevention of common child home accidents .pre and post test score will be compared using the descriptive and inferential statistics.

2.1 SAMPLE

In the present study, sample include 30 mothers of rural area in Jabalpur .

2.2 SAMPLE TECHNIQUE

A purposive sampling is a deliberate of sample unit that purposive sample technique used to selected sample for study.

2.3 DATA COLLECTION TECHNIQUE AND TOOLS

The questionnaire was developed by the researcher which provide answer to the question under study related to common child home accidents..

2.4 PLAN FOR ANALYSIS

Socio- demographic data were analysed using descriptive statistics that is frequency and percentage mean and standard deviation. Whereas inferential statistics were use to find out significant of differences between the mean pre-test and post test knowledge score.

3. RESULTS

TABLE 1
PRE TEST KNOWLEDGE SCORES ON PREVENTION OF COMMON CHILD HOME ACCIDENTS AMONG MOTHERS IN SELECTED COMMUNITY AREA IN JABALPUR

Level Of Knowledge	Count	Percent
Adequate	0	0.00%
Moderate	2	6.67%
Inadequate	28	93.33%

Data presented in table 1 shows pre-test score on Prevention of common child home accidents among mothers in selected community area, data revealed that 93.33% subjects had inadequate knowledge, 6.67% subjects had moderate knowledge whereas none of the respondents has adequate knowledge in above context.

TABLE 2
COMPARATIVE ANALYSIS OF KNOWLEDGE SCORES BETWEEN PRE-TEST AND POST-TEST

Pre Test		Post Test		Mean Difference	df	't' Value	p -Value
Mean	SD	Mean	SD				
7.43	2.07	13.43	2.32	6.0	29	10.61*	<0.000

* Significant at level 0.05 level

To find out the significance of the difference t test was computed on the obtained data. The data in table 2 on pre test and post test mean scores concerning to the knowledge

on prevention of common child home accidents among mothers in selected community areas were presented. The knowledge score of pre test had mean value 7.43 and SD 4.07 whereas post test had mean value 13.43 and SD 2.32. Results indicated significant difference among the group as the obtained 't' value 10.61 (df=29) was much higher than the required level of significance.

TABLE 3.
ASSOCIATION OF DEMOGRAPHIC VARIABLE WITH PRE TEST KNOWLEDGE SCORE.

Demographic Variables	Criteria	df	x ²	p
Age of Infants	0 to 3 Months	3	0.926	0.819
	4 to 6 Months			
	7 to 9 Months			
	10 to 12 Months			
Type of Family	Nuclear	2	0.288	0.865
	Joint			
	Extended			
Parity	Primi	1	0.871	0.35
	Multi			
Educational Status	Secondary	3	6.202	0.102
	Diploma			
	Graduates			
	Professional			
Occupation	Government job	3	2.72	0.435
	Non Government Job			
	Daily Wages			
	House Wife			
Source of Knowledge about Anemia	Family Members	3	1.678	0.641
	friends			
	Health Professional			
	Mass Media			

Data presented in above table reveals the association between demographic variable and pre test knowledge scores, obtained data determined that there was no significant association between demographic variable and pre test knowledge scores as the obtained chi-square value was lower than the required table value and $p > 0.05$ in all the demographic variable, hence null hypothesis was accepted.

4. DISCUSSION

Obtained results showed pre test had mean value 7.43 and SD 4.07 concluding that the pre test knowledge scores among the mothers was inadequate in most of the respondents which increased by mean 13.43 SD 2.32 after administration of STP. This shows that the mothers were having inadequate knowledge regarding common home accidents it may be because the study was conducted in Algin Hospital which is a

government concern and the mother admitted in the hospital belongs to the poor families where they have few or no source of knowledge regarding the common home accidents among the children's, teaching programme, workshops or other education activities may be implemented to enhance their knowledge.

5. CONCLUSION

In the light of the findings it may be concluded from this study that mothers in Jabalpur were poorly educated about the domestic accidents among children's as the pre test score showed that majority of mothers had inadequate knowledge. Results of planned teaching program had enhanced the knowledge of mothers on common home accidents. Hence it may be concluded that PTP may be applied on mothers to enhance knowledge regarding common home accidents among children's. Finding of the study was alarming and needs rapid and active measures to enhance mothers knowledge to prevent such accidents by conducting education programs via mass media, including information about accidents prevention in school curricula and creating group education sessions in primary health care centers.

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EFFECT OF YOGIC ACTIVITIES ON SELECTED PSYCHOLOGICAL VARIABLES OF COLLEGE MALE STUDENTS

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ABSTRACT

The purpose of the study was to find out the effect of Yogic activities on selected psychological variables of college male students. To resolve the purpose of the study 40 college male students were randomly selected from Govt degree college RS pura. Their age ranged between 18 and 22 years. The selected subjects were randomly divided into two groups consisting of twenty each. No attempt was made to equate the groups. Experimental Group I underwent Yogic activities (YPT) for a period of 16 weeks. Group II acted as control group (CG) and were not engaged in any training programme other than their work. The subjects were free to withdraw their consent in case of feeling any discomfort during the period of their participation but there was no dropout during the study. The psychological variables namely anger, stress and anxiety were selected and anger was tested through Anger inventory, and stress and anxiety were taken though DASS inventory. Pre and post tests were conducted in all the variables. A yogic practice was given to the experimental group for a period of 16 weeks. Dependent t test was used to determine the significant difference between the treatment means. Group performing yogic activities had significantly decreased in anger, stress and anxiety whereas the control group had no significant decrease in all the variables.

Key words: yogic activities, anger, stress and anxiety

1. INTRODUCTION

Several branches. Among the best known and leading divisions are **(1)** Yogic practices; **(2)** Raja Yoga; **(3)** Karma Yoga; **(4)** Gnana Yoga. This book is devoted Yogic practices have become increasingly popular in western countries as a method for coping with stress and as a means of exercise and fitness training **(Bernadi, et.al., 2001)**.

Yogic practices are an ancient practice that was developed to promote physical health as well as an awareness of one's true nature. It consists of a series of postures, called asana, and various breathing exercises, called pranayama, which encourage balance between the physical, mental/emotional, and spiritual aspects of a human being. **(Birkel and Edgren,2002)** In short, yogic practices promotes health. Like other forms of yoga, yogic practices is purported to quiet the mind and focus the concentration; however, of all the yoga traditions, the importance of physical fitness is emphasized most in yogic practices.**(Chen, et.al., 2009)**.

Yoga has been practiced for thousands of years. It is based on ancient theories, observations and principles of the mind-body connections. Substantial research has been conducted to look at the health benefits of yoga – yoga postures (Asana), yoga breathing (pranayama) and meditation **(Davis, 2000)**. These yoga practices might be interacting with various somatic and neuro-endocrine mechanisms bringing about therapeutic effects **(Dykens, 2007)**. Yoga is traditionally believed to have beneficial effects on physical and emotional health **(Edwards, 2000)**.

The overall performance is known to be improved by practicing yoga techniques and their effects on physical functions were reported**(Gangong, 2005)**. Yoga practices can also be used as psycho-physiological stimuli to increase the secretion of melatonin which, in turn, might be responsible for perceived well-being **(banson,1979)**. Yoga may be as effective as or better than exercise at improving a variety of health-related outcome measures**(Joshi, Joshi andGokhale 1992)**.

The science of Yoga is divided into only to the first named, and we will not attempt to describe the others at this time, although we will have something to say upon all of these great branches of Yoga, in future writings. Yogic practices is that branch of the Yoga Philosophy which deals with the physical body its care its well being its health its strength- and all that tends to keep it in its natural and normal state of health. It teaches a natural mode of living and voices the cry which has been taken up by many of the Western world: "Let us get back to Nature," excepting that the Yogi does not have to get back for he is already there, for he has always clung close to nature and her ways, and has not been dazzled and befooled by the mad rush toward externals which has caused the modern civilized races to forget that such a thing as nature existed **(Luke, et.al., 1996)** .

2. METHODOLOGY

2.1 Selection of Subjects

The investigator used pre and post test random group design in this study. This procedure involves dividing the sample into two groups based on random selection. The investigator did not make any attempt to equate the groups in this study. The selected forty subjects were divided into two groups consisting of 20 each such as Experimental Group I and a Control Group. The treatment was administered to the experimental groups for a period of sixteen weeks. At the end of 16th week the post test were administered to both the groups.

2.2 Instrumentation

The psychological variables namely anger, stress and anxiety were selected and anger was tested through Anger inventory and stress and anxiety were tested through DASS inventory. Pre and post tests were conducted in all the variables. A yogic practice was given to the experimental group for a period of 16 weeks. Dependent t test was applied to find out the significant difference between the pre test and the post test.

2.3 Training Program

The following training programme was given for the experimental group for a period of sixteen weeks.

Table I

Experimental Group - Yogic Practices				
s.no	Name of practice	Frequen cy	Duration of the practice	Total duration of the practice
A	Meditation			20 minutes
	prayer	16Weeks	2 minute	
	Thanduvadasudhi&Nadisod hana	16Weeks	8 minute	
	Nama-Rupa Meditation	16Weeks	10 minutes	
B	Yogasana - Loosing exercise	16Weeks	2 minutes	40 minutes
	Vrksasana & Trikonasana	16Weeks	8 minutes	
	Trikonasana & Ardhachakarasana	16Weeks	8 minutes	
	Sugasana & Padmasan	16Weeks	8minutes	
	Yoga Mudra & Matsyasana	16Weeks	8 minutes	
	Matsyasana	16Weeks	6 minutes	
Total				60 minutes

3. RESULTS

The collected data were analysed using dependent t test and the results were given below

TABLE 2

SIGNIFICANCE OF MEAN GAINS & LOSSES BETWEEN PRE AND POST TEST SCORES ON SELECTED VARIABLES OF YOGIC ACTIVITY PERFORMING GROUP

S.No	Variables	Mean		Mean difference	SD (±)		σ DM	't' Ratio
1	Anger	65.50	55.35	10.15	4.50	3.52	1.31	7.72
2	Stress	32.60	22.50	10.10	5.99	4.27	1.46	6.88
3	Anxiety	18.20	11.35	6.85	4.71	2.43	0.89	7.67

An examination of table 2 indicates that the obtained 't' ratios were 7.72, 6.88 and 7.67 for anger, stress and anxiety, respectively. The obtained 't' ratios on the selected variables were found to be greater than the required table value of 2.861 at 0.05 level of significance for 19 degrees of freedom. So it was found to be significant. The results of this study showed statistically significant and explained its effects positively.

TABLE 3
SIGNIFICANCE OF MEAN GAINS & LOSSES BETWEEN PRE AND POST TEST SCORES ON
SELECTED VARIABLES OF CONTROL GROUP

S.No	Variables	Mean		Mean difference	SD (\pm)		σ DM	't' Ratio
		Pre	Post		Pre	Post		
1	Anger	65.95	64.80	1.15	5.27	4.84	1.38	0.83
2	Stress	32.80	34.50	1.70	7.66	4.68	1.58	1.07
3	Anxiety	18.85	19.00	0.15	5.30	4.97	1.69	0.08

An examination of table-III indicates that the obtained 't' ratios were 0.83, 1.07 and 0.08, for anger, stress and anxiety respectively. The obtained 't' ratios on the selected variables were found to be lesser than the required table value of 2.861 at 0.05 level of significance for 19 degrees of freedom. So it was found to be insignificant.

4. DISCUSSION

The prime intention of the researcher was to analyse the effect of yogic activities on selected psychological variables among college male students. The yogic practices group had significantly reduced anger, stress and anxiety. But there is no significant change in the selected variables anger, stress and anxiety in the control group.

Yoga can help to check any imbalance in muscular development and enable individual both mind and body to function more efficiently. Practicing yogasanas strengthens the muscles release physical tension and improves concentration and poise. Yoga makes limbs balanced, strong and relaxed. The standing poses improve balance and muscle flexibility. Yogic practice can help players to relax and replenish their energy after strenuous games. It also promotes calm, clear thinking even in situations that call for fast reactions. Yoga stretches and strengthens all muscles of the body and brings peace and calm to the mind and spirit. (Chandrasekaran, 1999).

5. CONCLUSION

It was very clear that sixteen weeks of yogic activities produced significant changes in psychological variables anger, stress and anxiety of college male students.

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**CORRELATIVE STUDY OF PHYSICAL FITNESS VARIABLES
BETWEEN BATSMAN BOWLER AND ALL-ROUNDERS
OF INTER COLLEGE CRICKET PLAYERS**

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ABSTRACT

The purpose of this study was to the selected physical fitness variables between batsman, bowler and all-rounder of inter college cricket players. To achieve the purpose of the study 90 inter collegiate cricket players of Jammu University were selected as subjects. The age group of the subject was between 18 to 26 years. The criterion variables selected for this study were arm strength and leg explosive power. The selected criterion variables were measured by push-ups and standing broad jump tests respectively. In order to find out the differences on the selected physical fitness variables among intercollegiate cricket players of Jammu University one way analysis of variance was applied. The level of significance was fixed at 0.05 levels and whenever the 'F' ratio was found to be significant scheffe's post hoc test was applied to find out which paired means got significant difference. Within the limitations imposed by the study it was concluded that there was no significant difference found on arm strength and leg explosive power among batsman bowler and all-rounder of inter collegiate cricket players.

Key words: Batsman, bowler and all-rounder, cricket, arm strength and leg explosive power

1. INTRODUCTION

Physical fitness is the basis of our daily life and a sick nation cannot produce healthy attitudes although we can recognize individuals who have that special optional quality of life. It is many individuals and groups have used the term wellness to emphasize that positive health is much more than simply being free from illness that is an added quality to being well. **(Doborz , et al., 2015)** The total fitness is a condition reachable through striving for optimal quality of life in all aspects of life in social, mental, spiritual, psychological and physical. This dynamic multi-dimensional state has a positive health base and includes individual performance goals.

The American Alliance of Health, Physical Education, Recreation and Dance **(AAHPER)** defines physical fitness as "A physical state of well-being that allows people to perform daily activities with vigor, reduce their risk of health problems related to lack of exercise, and to establish a fitness base for participation in a variety of physical Activities" Fitness means being in good physical condition and being able to function at one's best level. Total fitness for living necessarily involves spiritual, mental, emotional and social, as well as physical qualities. Each is dependent upon and affected by the other. Though our primary concern is developing good physical condition, we must recognize this interrelatedness and interdependence in our approach. It must be recognized not only in terms of the complexity of the mutual effects created, but also in its implication that understanding is needed if efforts are to be meaningful and lasting **(Liao , et.al., 2013)**.

We must also recognize that fitness is not a static condition, but a dynamic one that is constantly changing and is influenced by many factors. Basic to good physical condition is good medical and dental care; the proper type, amount and method of exercise; good posture and body mechanics in daily living; proper diet and weight control; adequate rest, relaxation, and recreation; and sound practices with respect to drinking, smoking, and the use of drugs. Weakness or neglect in any of these areas can have a detrimental effect on physical condition and undermine the effectiveness of efforts in the other areas. Because of the interrelatedness of physical fitness with all areas of total fitness and the multiple factors involved in it, the term fitness must be seen as implying more than just the "physical" and "exercise". Physical fitness is to the human body what fine tuning is to an engine. It enables us to perform up to our potential. Fitness can be described as a condition that helps us look, feel and do our best. More specifically, it is: "The ability to perform daily tasks vigorously and alertly, with energy left over for enjoying leisure-time activities and meeting emergency demands. It is the ability to endure, to bear up, to withstand stress, to carry on in circumstances where an unfit person could not continue, and is a major basis for good health and wellbeing".

Physical fitness involves the performance of the heart and lungs, and the muscles of the body. And, since what we do with our bodies also affects what we can do with our minds, fitness influences to some degree qualities such as mental alertness and emotional stability.

Physical fitness must be defined with consideration for an individual's age and lifestyle. For a younger person, physical fitness is defined as a physical condition that allows an individual to work without becoming overly fatigued, perform daily chores, and have enough energy left over to engage in leisure activities. For example, if an individual is unable to make it through an eight-hour work day or is too tired at the end of the day for

leisure or household activities such as gardening, walking, playing tennis or cleaning, then he or she probably has too low a level of physical fitness. For the older person who may not necessarily be working eight to ten hour days, physical fitness could be defined within the context of being able to conduct the day's chores (e.g., cleaning, dressing, shopping, doing laundry, climbing stairs) without becoming exhausted or tired. Stated another way, the person has enough energy to do daily chores, and still has a reserve of energy left over in order to participate in some type of leisure activity such as gardening or going for a walk.

Physical fitness is extremely important for the older population because as a person ages, there is a higher level of fatigue and often pain resulting from arthritis, low back problems, or other ailments. As these conditions worsen over time, many older people become more sedentary thinking that if they rest they will get better. On the contrary, when older people rest and become more inactive, they feel increasingly tired because they have decreased their physical fitness. Thus, it is a vicious cycle: disability and pain cause decreased movement, and decreased movement results in less fitness and a higher level of dysfunction. A good physical fitness level-regardless of the disability-helps older people maintain their quality of life and can reduce their dependence on others to help with activities of daily living such as climbing stairs, bathing, and doing housework.

Physical fitness encompasses human physical abilities such as body composition and coordination, cardiovascular capacity, stamina, speed, flexibility and overall strength. Physical fitness prevents the occurrence of a variety of diseases. It develops a capacity to fight infections and certain other diseases. Physical fitness helps prevent many of the major cardiovascular diseases. **(Lifshitz, et.al., 2014)**

Most importantly, our physical fitness is responsible for the postponement of the process of aging. A healthy body is home for a healthy mind. Physical fitness facilitates a sound psychological state, thus preventing us from mental diseases. A physically fit individual is happier than an unhealthy one. Physical fitness coupled with a healthy lifestyle is one of the vital factors contributing to quality life.

As physical fitness is responsible for the overall well-being of an individual, the maintenance of physical fitness should be one's top priority. Engaging in some daily physical activity is the need of the sedentary life of today. After all, health is the only wealth that is going to remain with us for a lifetime.

Batting in cricket requires motor and psychological skills to play the best shot from a wide repertoire of attacking and defensive strokes against bowlers of different types \pm fast, spin, seam and swing. A good innings can last several hours (occasionally, days) and will involve the batsmen running the length of the pitch (about 19 m) for each run scored (other than boundaries), wearing protective equipment, including pads and helmet. The fitness and morphology of the batsman are, therefore, also important. Previous reviews of scientific research into cricket have concentrated on the biomechanical and injury aspects of fast bowling **(Bartlett et al., 1996)**.

The aim of this review is to evaluate the scientific research into the morphology and physiology of batsmen, their motor skill, the biomechanics of batting, injuries, the equipment used and the psychology of the game. Because of the lack of published scientific research into women's cricket, this review focuses on the men's game; there found between batsmen and bowlers, with the batsmen tending to be shorter and lighter than the bowlers, but having a greater relative fat mass. Bowlers have been shown to have a significantly greater androgyny index and absolute muscle and bone masses than batsmen **(Stretch,**

1987). It may be that bowling selectively favours larger and taller players; for batting, size is not necessarily advantageous.

A classical information-processing approach to cricket batting emphasizes that stimulus information from the preparatory movements of a bowler before delivery may be encoded, together with features of early ball flight. When batsmen take up a stance at the crease, they seek any postural cues from the bowler that may assist in perceptually anticipating the line, length and speed of the delivery. Once the ball has been released, parts of the trajectory may be visually tracked and relevant characteristics ± such as speed, swerve and spin ± have to be identified to predict when and where the ball will pitch. In an inferential process, cues from the event are compared to an internalized representation of the 'target' action already stored in memory from many similar experiences (see, for example, (Marteniuk, 1976). Based on the available perceptual information, a decision is reached about whether there was a match with similar items in memory.

2. METHODOOLOGY

The purpose of this study was to study the selected physical fitness variables between batsman bowler and all-rounder of inter college cricket players. To achieve the purpose of the study 90 inter collegiate cricket players from Govt degree college RS pura, Govt degree college Bishnaw, science college Jammu, MBS enginner college and SPMR commerce College of Jammu University were selected as subjects. The age group of subject was between 18 to 26 years. The criterion variables selected for this study were arm strength and leg explosive power. The selected criterion variables were measured by push-ups and standing broad jump tests respectively. In order to find out the differences on the selected physical fitness variables between batsman bowler and all-rounder of Jammu University inter college cricket players, one way analysis of variance was applied. The level of significance was fixed at 0.05 levels and whenever the 'F' ratio was found to be significant then Scheffe's post hoc test was applied to find out which paired means have got significant difference.

3. RESULTS

TABLE I
ANALYSIS OF VARIANCE OF ARM STRENGTH BETWEEN BATSMAN BOWLER AND ALL-ROUNDERS OF INTER COLLEGIATE CRICKET PLAYERS

Source of variance	SS	DF	MS	F	P
Between	83.267	2	41.633	0.577	0.564
Within	6274.833	87	72.125		

*Significant at 0.05

Table I shows that the 'p' value was greater than the 0.05 value and it is not significant at 0.05 level of confidence. It is clear that the analysis of variance of intercollegiate cricket players between batsman bowler and all-rounder of inter collegiate cricket players did not differ significantly on their arm strength. The arm strength means of intercollegiate cricket players between batsman bowler and all rounder of inter college cricket players was graphically illustrated in figure I.

FIGURE - 1
BAR DIAGRAM SHOWING THE MEAN VALUES OF ARM STRENGTH OF BATSMAN BOWLER AND ALL ROUNDERS OF INTER COLLEGIATE CRICKET PLAYERS

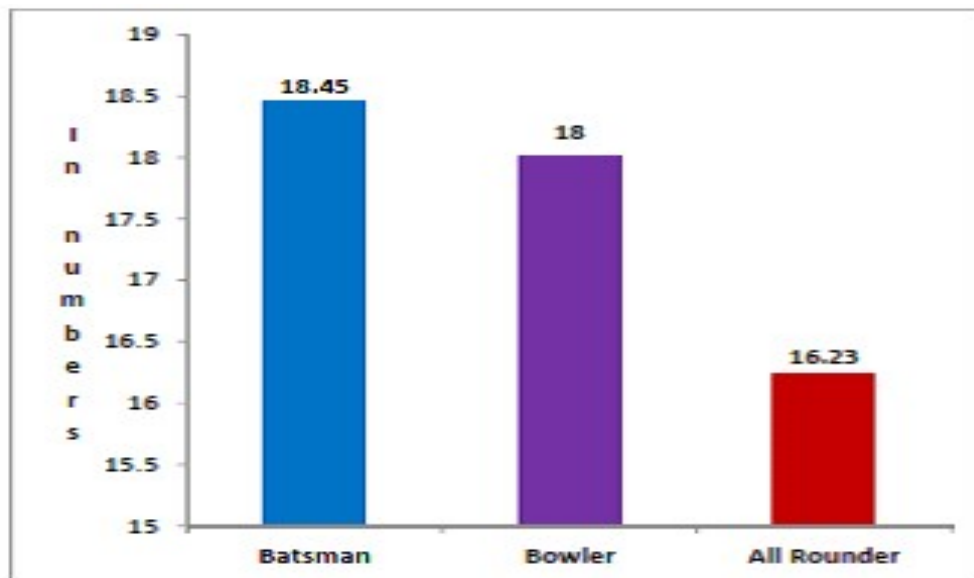


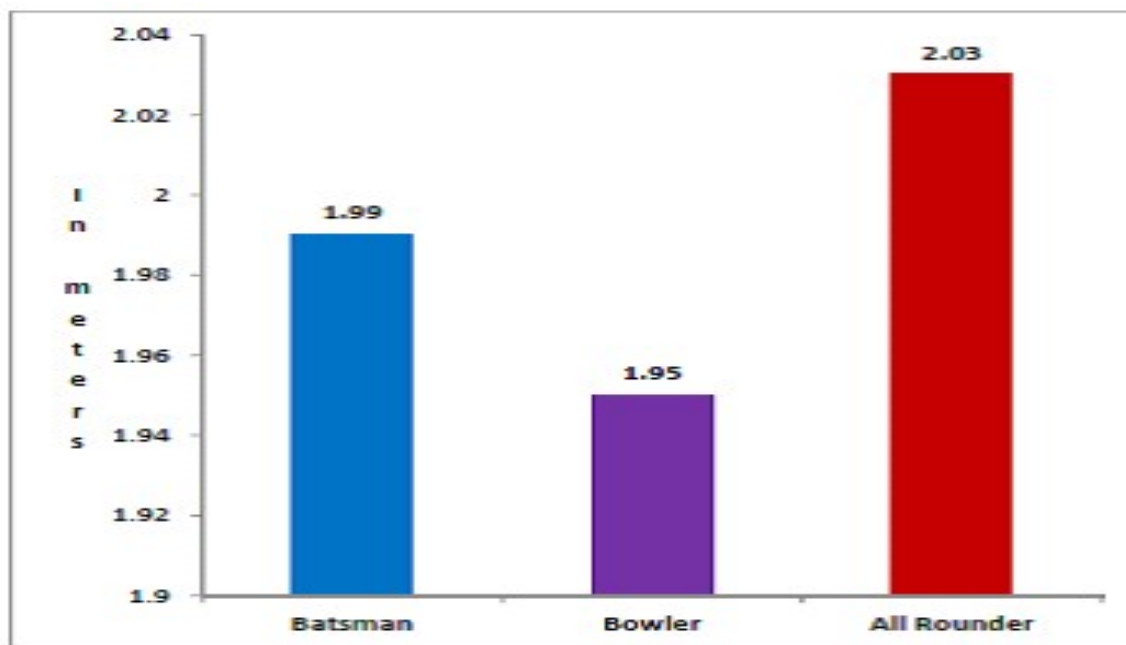
TABLE 2
ANALYSIS OF VARIANCE OF LEG EXPLOSIVE POWER BETWEEN BATSMAN BOWLER AND ALL ROUNDERS OF INTER COLLEGE CRICKET PLAYERS

Source of variance	SS	DF	MS	F	P
Between	0.103	2	0.051	0.979	0.380
Within	4.588	87	0.052		

*Significant at 0.05

Table 2 shows that the 'p' value was greater than the 0.05 value and it is not significant at 0.05 level of confidence. It is clear that the analysis of variance of intercollegiate cricket players between batsman bowler and all-rounder of inter college cricket players did not differ significantly on their leg explosive power. The leg explosive power means of intercollegiate cricket players between batsman bowler and all-rounder of inter collegiate cricket players was graphically illustrated in figure II.

FIGURE 2
BAR DIAGRAM SHOWING THAT THE MEAN VALUES OF LEG EXPLOSIVE POWER
BETWEEN BATSMAN BOWLER AND ALL- ROUNDERS OF INTER
COLLEGE CRICKET PLAYERS



4. DISCUSSION

The results of the study revealed that there was no significant difference found on Arm Strength of intercollegiate cricket players between various colleges of Jammu University. However when comparing the mean values of Arm Strength of the intercollegiate cricket players between batsman bowler and all-rounder of inter college cricket players the batsman are having better Arm Strength than the others.

The results of the study revealed that there was no significant difference found on Leg Explosive Power of inter-college cricket players between various colleges of Jammu University. However when comparing the mean values of Leg Explosive Power of the inter-college cricket players between batsman bowler and all-rounder of inter college cricket players the all-rounder are having better Leg Explosive Power than the others.

5. CONCLUSION

There was no significant difference found on arm strength among batsman bowler and all-rounder of inter college cricket players. However when comparing the mean values, the batsman were having better arm strength than the others.

There was no significant difference found on leg explosive power among batsman bowler and all-rounder of inter college cricket players. However when comparing the mean values, the all-rounder were having better Leg Explosive Power than the others

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**INFLUENCE OF PHYSICAL ACTIVITIES PROGRAMME ON
CARDIOVASCULAR ENDURANCE OF ALIPURDUAR
DISTRICT TRIBAL STUDENTS**

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ABSTRACT

The purpose of the study was find out the "Influence Of Physical Activities Programme On Cardiovascular Endurance Of Alipurduar District Tribal Students " To facilitate the study eighty (N=80) tribal school boys were selected randomly from Alipurduar district of West Bengal and their age ranged from 12 to 15 . The subject was divided into four groups each group twenty (n=20) subject were selected. The experiential Group I underwent the calisthenics exercise, group II Yogic exercise, group III Recreational and Traditional activates and group IV was control they did not participated any activity during the physical activities programme. The different packages of physical activates program was given 40 to 45 minutes for 12 week and four days per week.. The data was collected before (pretest) and after the experimental period of twelve weeks the post test was conducted in identical manner. The Cardiovascular Endurance test was measure by Harvard Step Test. For the purpose of statistical analysis the paired sample't' test and the Analysis of Covariance (ANCOVA) were used. Wherever the 'F' ratio for adjusted post test was found to be significant. Scheffe's post hoc test was used to determine the paired mean difference among the groups. The level of significance was fixed at 0.05 level of confidence.

Keywords: Tribal Student, Calisthenics exercise, Yogic exercise, Traditional and recreational exercise groups, Cardio-vascular endurance.

1. INTRODUCTION

Physical activity is essential for the development of wholesome personality of a child which would depend upon the opportunities provided for while some development of the mental, physical, social and spiritual aspects. All living being are instinctively active: they live because they move. Live is characterized by movement (**Kamlesh & Singh, 2006**). Hence a well organized and properly administered physical education programme for school children is very essential. Physical activity throughout the ages has been acclaimed for health and recreation. It provided fun and enjoyment. It also provided youthful exuberance and the elderly care. Physical activity and movements are as old as human existence. It played numerous roles from struggle for existence to struggle for excellence. The progress of the Nation lies in the hands of the people who are healthy and fit. The tribal community is the real asset from every aspect of the Nation. Tribal's in India constitute one of the most backward communities with regard to education. Poor literacy rate since independence has resulted in the lower ratio of tribal's in academic and higher education but they are found to maintain a good quality when it comes to the aspect of physical fitness. India is home for many tribal community spread in different states such as Arunachal Pradesh, Nagaland, Mizoram, Manipur, Meghalaya, Shikim, Jharkhand, Maharashtra, Madhya Pradesh, Chhattisgrah, Orissa, Tamilnadu, Andaman and Nicobar etc. Most of the tribes are concentrated in forest areas and their food habit, social culture and economic status are different from other people. Generally tribal people are engaged in agriculture, forestry and food gathering. They are very strong and fit to do their work actively for the purpose of survival.

The purpose of the study was to find out the influence of physical activities programme on Cardiovascular Endurance of Alipurduar District tribal student. This study will bring awareness about physical activities programme namely Calisthenics exercise, Yogic exercise, Recreational and traditional activities

2. METHODOLOGY

2.1 Selection of Subjects

To achieve this purpose, 80 tribal student were selected at random from Lalturam High School and Thathakur Panchanan Viddyapith High School in West Bengal. Their age ranged from 12 to 15 years. The selected subjects were randomly divided in to four groups three experimental group and one control group i.e. Experimental group 'A' (N=20), Experimental group 'B'(N=20), Experimental group 'C'(N=20), and Control group 'D' (N=20). Each group consists of twenty subjects.

2.2 Selection pf Variable

Cardiovascular Endurance

2.3 Training Programme

During the training period, the three experimental groups underwent their respective training programme, four days per week on different days for twelve weeks in addition to the regular physical activities programme. Group 'A' underwent Callisthenic exercise, Group 'B' underwent yogic exercise, Group 'C' underwent recreational and traditional activities. Every day the physical activities programme lasted for about 45 minutes including warm up and cool down exercises. Group 'D' was control group they did not involved in any specific training. After 12 weeks of training period the post test will be

conducted for both the groups. Hence, random group design is employed in this study. To analyze the data obtained from the variables of experimental groups and control groups.

2.4 Statistical Analysis

Paired sample 't' test and ANCOVA was applied as statistical technique. The test of significance was fixed at 0.05 level of confidence.

3. RESULTS

TABLE I
PAIRED'T' RATIO FOR CARDIOVASCULAR ENDURANCE FOR ALL THE FOUR GROUPS

Groups	Pre-test Mean	Post-test Mean	MD	t-value
Calisthenics group	85.35	89.30	10.11	13.69
Yogic exercise group	84.02	86.30	8.25	6.98
Recreational and Traditional activities group	85.79	88.85	6.13	18.82
Control Group	85.47	87.52	7.29	6.42

*Significant at 0.05 level, 't' 0.05 (19) =2.09

Table I shows that the Agility of all the three experimental groups namely Calisthenics exercise group, Yogic Exercise group, Recreational activities groups and control group improve significantly, yielding 't' value 13.69, 6.98, 18.82, and 6.42, respectively, The 't' value needed for significance at 0.05 level with (19) df is 2.09.

For finding the significance of differences between the means of Calisthenics exercise group, Yogic Exercise group, Recreational activities groups and control group analysis of covariance was applied for Agility. The value of 'F' ratio and means of three experimental groups and one control group are presented in Table 2

TABLE 2
ANALYSIS OF COVARIANCE FOR THE PRE, POST AND ADJUSTED POS-TESTS DATA ON CARDIOVASCULAR ENDURANCE OF EXPERIMENTAL AND CONTROL GROUP

Test		Callisthenic group	Yogic group	Traditional and recreational	Control Group	Source of variance	SS	df	MS	F- ratio
Pre-test	Mean	85.35	84.02	85.79	85.47	B	36.55	3	12.18	0.17
	SD	10.18	8.97	6.63	8.07	W	5572.57	76	73.32	
Post Test	Mean	89.30	86.30	88.85	87.52	B	110.664	3	36.89	0.56
	SD	10.11	8.25	6.14	7.28	W	4961.09	76	65.28	
Adjusted Post test		89.12	87.36	88.26	87.23	B	46.52	3	15.50	12.01
						W	96.80	75	1.29	

* Significant at 0.05 level.

F .05 (3, 76) =2.73, F .05 (3, 75) =2.73

Table 2 shows that the pre-test mean value of Callisthenic Exercise group, Yogic Exercise Group, Recreational and Traditional activities group and Control group are 85.35, 84.02, 85.79 and 85.47 respectively. The obtain 'F' ratio 0.17 for pre-test score was less than the table value, 2.73 for degrees of freedom 3, 76 required for significance at 0.05 level of confidence on Cardiovascular endurance. The post-test mean value of Callisthenic Exercise group, Yogic Exercise Group, Recreational and Traditional activities group and

Control group are 89.30, 86.30, 88.85 and 87.52 respectively. The obtain 'F' ratio 0.56 for post-test score was lesser than the table value, 2.73 for degrees of freedom 3,76 required for significance at 0.05 level of confidence on Agility. The adjusted post- test mean of Experimental and control group are 89.12, 87.36, 88.26 and 87.23 respectively. The obtain 'F' ratio of 12.01 for adjusted post-test means were greater than the table value of 2.73 for 3 & 75 required for significance at 0.05 level of confidence on Cardiovascular endurance. The result of the study indicates that there was a significant difference among the adjusted post-test means and experimental groups and control group on cardiovascular endurance. Since the obtained 'F' ratio value was significant, farther to find out the paired mean difference, the scheffe's test was employed and presented in Table 3.

TABLE 3
SCHEFFE'S POST HOC TEST FOR MEAN DIFFERENCE BETWEEN GROUPS ON
CARDIOVASCULAR ENDURANCE

Callisthenic group	Yogic group	Traditional group	Control Group	Mean Difference	C.I.
89.12	87.36			1.76	1.03
89.12		88.26		0.86	
89.12			87.23	1.89	
	87.36	88.26		0.90	
	87.36		87.23	0.13	
		88.26	87.23	1.03	

*Significant at 0.05 level

Table 3 Shows the paired mean differences among the three experimental groups namely calisthenics exercise, Yogic exercise group, recreational and traditional group. The confidence interval value at 0.05 levels is 1.03. The mean differences between Callisthenic exercise group and yogic group is 1.76, which is higher than the C.I. value. Therefore there is a significant difference between the callisthenic group and yogic exercise group. The mean difference between Calisthenics group and recreational and Traditional group is 0.86, which is lower than the C.I. value. Therefore there is no significant difference between the calisthenics exercise and recreational group. The mean difference between calisthenics exercise group and control group is 1.89, which is higher than the C.I. value. Therefore there is significant difference between the calisthenics exercise and control group. The mean difference between yogic exercise group and recreational and Traditional group is 0.90, which is lower than C.I. value. Therefore there is no significant difference between yogic 0.13, which is lower than the C.I. value. Therefore there is no significant difference between yogic exercise group and control group. The mean difference between recreational and traditional group and control group is 1.03, which is equal value of C.I. Therefore there is significant difference between the recreational and traditional group and control group.

4. DISCUSSION

In the hypothesis, It is hypothesized that there would be significant difference on Cardio-vascular endurance due to the different package of physical activities programme of Alipurduar District tribal students. The finding of the study on Cardio-vascular endurance reviled that the experimental groups namely Calisthenics exercise group, yogic exercise

group and Recreational and traditional activities groups had significantly improve after the twelve week physical activities programme. Beside the study indicated that there was a significant different between the callisthenic group and yogic exercise group, yogic exercise group and recreational and Traditional group, So in my study null hypothesis was rejected. A similar type of results were obtained in the work of Shrivastava (2016) studied the "effect of Pilates calisthenics and combine Pilates and calisthenics exercise on selected physical and physiological Variables of school boys." The result concluded after pre and post test Speed, cardiovascular fitness, co-ordination, Power, respiratory rate significantly improvement as compare to control group.

Rayat (2015) studied the "Effect of yoga on selected physical and physiological variables of Physical Education students." The intention of this study 40 male students were selected from B.P.Ed. and M.P.Ed. Students. All the subjects underwent yogic practice, weekly five days for a time of 12 weeks. Data were taken before and after the investigational periods. The collected data calculated by 't' test. The study found that 12-week yogic practice was significantly improved on speed, Explosive strength, agility and cardiovascular endurance. The twelve-week yogic practice improves vital capacity and peak flow rate of the Students.

Dubey (1986) attempted to explore the "Effect of Traditional and modern exercise on selected physical and physiological variables of wrestlers in India." The researcher had taken 165 subjects randomly from LNCPE Gwalior. The experimental group one was 'ancient' exercises like Dands, Baithaks, Yogic Exercises, and other experimental group had given modern training like weight training and isometric exercise. The control group did not participate any physical activities. Before and after ten-week experimental period data were collected on Lung capacity and respiratory rate. After analyzed the researcher had concluded that Ancient exercise had significantly improved when compare the other groups. All the supported study has significantly influence by the experimental training and my twelve week physical activities programme also significantly improve the Cardiovascular endurance

5. CONCLUSIONS

1. It was concluded that Calisthenics exercise group, Yogic exercise group, and Recreational and Traditional activities groups showed significant improvement on Cardiovascular Endurance when compare with the control group.
2. It was concluded that Calisthenics exercise group was better than other group

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A COMPARISON OF FLEXIBILITY AND MUSCULAR ENDURANCE BETWEEN MANIPURI AND TAMILNADU FOOTBALL PLAYERS IN ANNAMALAI UNIVERSITY

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ABSTRACT

Physical fitness is one of the most important components for every game and sports. The research indicates that physically fitness people can perform more work with less fatigue and tiredness. The central objectives of this studies to compare on Flexibility and muscular endurance between Manipuri and Tamil Nadu football players in Annamalai University. Each group fifteen (N=15) Manipuri and fifteen (N=15) Tamil Nadu football players were selected in randomly those who were studied various faculties in Annamalai University. The age group was 18 to 25 years. The purpose of the study flexibility and muscular endurance components were selected. Flexibility was measured by sit and reach test and muscular endurance was measured by sit-ups test. The level of confidence to the 't' ratio was fixed at 0.05 level for significance, which was considered enough for the purpose of the study. It was concluded after obtaining the results of the study that there is no any significant difference on speed and muscular endurance components among the Manipuri and Tamil Nadu football players.

Keywords : Flexibility, Muscular endurance, Manipuri and Tamil Nadu football players.

1. INTRODUCTION

Physical fitness is the one of the most important component for sports performances, The football game is one of the most interesting and strenuous game played by thousand people around the world, that requires running, speed, explosive strength, cardio-vascular endurance and agility are more important. In the game of football Flexibility and muscular endurance are the most important physical fitness components. Flexibility is the ability of a person to move the parts of the body through as wide a range of motion as possible without undue strain to the joints and its muscle attachments and the muscular endurance or stamina enables an individual to perform sustained work by a particular muscle group over a period of time. The muscular endurance may be defined as "the ability of muscle to maintain a certain level of tension or to repeat identical movements or pressures over the maximum period of time with one's maximal force". Both physical fitness variables are most important for the footballer's or any sports persons.

The study was delimited to Manipuri and Tamil Nadu football players. Players were from various faculties of Annamalai University. The study was confined to those in the age group of 18 to 25 years and each group fifteen players were selected randomly. The purpose of the study Flexibility and muscular endurance components were selected. The aim of this study was to compare the selected physical fitness variables between Manipuri and Tamil Nadu Football players.

2. METHODOLOGY

2.1 Selection of Subjects

To achieve the purpose of the study, fifteen Manipuri and fifteen Tamil Nadu mail football players were selected randomly those who were studied in Annamalai university, their Age ranged from 18 to 25 years.

2.2 Selection of Variables

The following variables of physical fitness were selected to conduct the present study:

1. Flexibility
2. Muscular Endurance

2.3 Testing Procedure

Before conducting the test, procedure was explained to the subject. . The flexibility was measured by sit and reach test and muscular endurance by bent knee sit-ups test.

2.4 Statistical Analysis

To compare the the flexibility and muscular endurance of Manipuri and Tamil Nadu Football players , 't' ratio was computed and the level of significant was set at .05. level.

3. RESULTS

To compare the flexibility and muscular endurance between between Manipuri and Tamil Nadu football players, mean, Sd and t-ratio were computed and data pertaining to this, has been presented in Table 1 and 2 .

TABLE 1
MEAN STANDARD DEVIATION AND 't' RATIO ON SIT AND REACH TEST OF MANIPURI AND TAMILNADU FOOTBALL PLAYERS .

S.NO.	Group	Mean \pm SD	MD	σ DM	t-ratio
1.	Manipuri	22.73 \pm 7.73	1.40	2.62	0.53
2.	Tamil Nadu	21.33 \pm 6.01			

Insignificant at 0.05 level
 $t_{.05}(28) = 2.04$.

Table - I indicates that the mean, standard deviation and 't' ratio of Manipuri and Tamil Nadu football players. The mean and standard deviation value were 22.73 ± 7.73 for Manipuri football player and 21.33 ± 6.01 for Tamil Nadu football players respectively and the 't' ratio for these values was .533 The obtain 't' ratio for sit and reach test was found insignificant at 0.05 level of confidence. Since this values were lower than the required table values of 2.04 the degree of freedom 28.

The result of the study shows that there was no significant difference that exist between Manipuri and Tamil Nadu football players on sit and reach test. The mean values on sit and reach test of Manipuri and Tamil Nadu football player were graphically presented in figure- I

TABLE 2
MEAN, STANDARD DEVIATION AND 't' RATIO ON MUSCULAR ENDURANCE OF MANIPUR AND TAMILNADU FOOTBALL PLAYERS.

S.NO.	Group	Mean \pm SD	MD	σ DM	t-ratio
1.	Manipuri	36.20 \pm 6.82	2.47	2.39	1.03
2.	Tamil Nadu	33.73 \pm 6.26			

Insignificant at 0.05 level
 $t_{.05}(28) = 2.04$.

Table 2 indicates that the mean, standard deviation and 't' ratio of Muscular endurance of Manipuri and Tamil Nadu football players. The mean and standard deviation value were 36.20 ± 6.82 for Manipuri football player and 33.73 ± 6.26 for Tamil Nadu football players respectively and the 't' ratio for these values was 1.03 The obtain 't' ratio for Muscular endurance was found insignificant at 0.05 level of confidence. Since this values were lower than the required table values of 2.04 the degree of freedom 28. The result of the study shows that there was no significant difference that exists between Manipuri and Tamil Nadu Football players on Muscular endurance. The mean values on muscular endurance of Manipuri and Tamil Nadu Football player were graphically presented in figure 2

4. DISCUSSION

The flexibility and muscular endurance components are selected for comparison Manipuri and Tamilnadu Football players. The findings from statistical analysis have reveals and established that flexibility and muscular endurance component of Manipuri and Tamilnadu football players are same, there is no significant different between Manipuri and Tamilnadu football players on flexibility and muscular endurance. Generally Manipuri football players are more fitness than others, because of their environmental and geographical condition, but here the study shown there is no significant different in physical fitness level. Because here may be some another factors are effect of Manipuri football players, Tamilnadu's environment condition and food is something different from Manipuri so it may be effect on flexibility and muscular endurance. Other hand Tamilnadu football player's practice and training schedule is better than Manipuri Football players those are studying in Annamalai University. The research shows that short distance runner are more energetic and flexibility on the other hand shot put, Discus thrower and Javelin

throwers have more shoulder strength in comparison to other athletes (**Nelson & Johnson 2007**). **Lakshmi Narayan(2015)** showed that in respect of Modification sit and reach test there was no significant difference found in Flexibility among the District Level Kabaddi Players And Gymnasts. A similar type of results were obtained in the work of **Kumar and Singh, (2005)** conducted a “Comparative study of physical fitness components of rural and urban female students of Delhi University Delhi.” The results of the present study confirm that female rural students are comparatively better than urban female students of Delhi University, Delhi. Rural female students are superior to urban female students in Strength, Endurance and Speed whereas urban female students are superior to rural female students in Agility and Flexibility. This shows that regular energetic activity produces physical fitness improvements. Village life style is more active in nature than the life in urban areas which produced high level of physical and physiological functioning in rural residents

5. CONCLUSION

It was concluded after obtaining the results of the study that there is no any significant difference, which exists on selected physical fitness variable on flexibility and muscular endurance among the Manipuri and Tamil Nadu football players.

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**ASSESSMENT OF PERCEIVED PURPOSE OF SPORT OF
INTER-UNIVERSITY LEVEL MALE CRICKET
PLAYERS**

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ABSTRACT

The purpose of study was to assess and analyze the perceived purpose of sport among Inter-University level male cricket players. A purposive sample of three hundred and fifty inter-university level male cricket players representing their respective university teams in west zone cricket tournament held at Bhopal (M.P.), were selected as the subject of the study. Subjects perceived purpose of sports was assessed by a 46 item Purpose of Sport Questionnaire developed by Duda (1989). To determine the significance of difference among the scores on different sub factors of perceived purpose of sport of cricket players, mean, SD and Analysis of Variance were computed. He revealed that the inter-university level male cricket players gave more importance to physically active life style, function of sports participation and improvement in an individual's co-operating skills and desire for personal mastery among the purpose of participation in cricket should be serve.

Keywords: Males, Cricketer, Perception, social status, cooperation, life style

1. INTRODUCTION

Success in competitive sports place high psycho-physical demands on the participants. They have to be physically fit, technically sound and tactically prepared to have a firm grip over the competitive situation. However, their psychological aliveness to the situation has been described by many to be of paramount importance. At the time of competitive struggle it is the psyche of the player which moves them to use their physically fitness, technical and tactical preparedness at its maximum (Kamlesh, 1998).

Recent cognitive theories of achievement motivation have under scored the relevance of goal perspective to our understanding of behaviours in achievement contexts. Although different theories have different labels; this live of research is primarily concerned with the social, psychological and behavioural antecedents and consequences of goal perspectives, namely task-orientation and an ego-orientation. It is assumed that these two orientations reflect the criteria of individuals use to subjectively define success and failure in achievement setting, in and the perceived legitimacy of aggression. Duda, Olson and Templing⁷ concluded that male and female high school basketball player's with a low task and high ego-orientation endorsed cheating behaviours and unsportmen like play. Also a high ego orientation was positively related to perceiving acts of aggressions as more legitimate. In competitive level and goal orientation, they reported that ego-oriented athletes had motives emphasizing competition and status, whereas task-oriented athletes emphasized skill development, fitness affiliation, team membership and competition (Carpenter and Yates, 1997).

The different people have different reasons for their sports engagement, the perceived values and benefits of sport participation can be viewed as being materialistic and individualistic (e.g., fame and fortune), intrinsic to the activity itself (e.g., becoming physical fit) and/ or perception that the purpose of education /sports were to increase opportunities to acquire wealth and enhance one's social status.

The importance placed on skill mastery and personal improvement in sport (task orientation) positively related to the beliefs that sport should enhance self-esteem and teach people to try their test, cooperate, and be good citizens. Ego orientation was a positive predictor of the view that sport involvement should enhance one's self-esteem and social status (Duda, 1989).

Adolescents with a task orientation are more likely to have high intrinsic motivation and engage in physical activity to cooperate with others, have fun, experience satisfaction, or strive for personal improvement Gonçalves, et. al., (2010). This type of motivation is associated with increased long-term engagement with physical activity (Jaakkola, Ntoumanis, and Liukkonen, 2016)

An ego orientation are more likely to set goals which relate to attaining social status, achieving recognition, or increasing economic wealth etc. All of these are related to a high risk of perceiving failure which can often lead to dropout from physical activity (Berghe, et. al., 2013). Achievement goal theory has been studied widely in the context of the promotion of healthy lifestyles in physical education (Fern Andez-Rio, and Wang, 2010).

The purpose of study was to assess and analyze the perceived purpose of sport among Inter-University level male cricket players.

2. METHODOLOGY

2.1 Selection of Subjects

A purposive sample of three hundred and fifty inter-university level male cricket players representing their respective university teams in west zone cricket tournament held at Bhopal (M.P.), were selected as the subject of the study. The age of the subject ranged between 17 to 25 years.

2.2 Selection of Variable

Keeping in view the importance of different psychological variable on playing performance, feasibility of collection of data, legitimate time and cost involved in the study, the Perceived purpose of sports has been selected.

2.2 Instrumentation

Subjects perceived purpose of sports was assessed by a 46 item Purpose of Sport Questionnaire developed by Duda (1989). The players were asked to respond to the modified stem "A very important thing cricket should do" on a 5-point likert scale (1 = strongly disagree, 5 = strongly agree). The questionnaire consisted of seven sub-factors labeled as 1. Mastery/Co-operation, 2. Physical active life-style, 3. Good citizen, 4. Competitiveness, 5. High status career, 6. Self-esteem and 7, Social status. The scores for each factor was divided by the no. of items for the factor to obtain factor score for that factor.

2.3 Statistical Analysis

To assess the status of inter-university level male cricket players. Descriptive statistics were computed, F-ratio (Clarke and Clarke, 1972) was used to determine the significance of difference between factors and sub-factors perceived purpose of sports. Which in case of significant F-ratio was followed by Scheffe's test of Post-hoc analysis (Sheehan, 1971 and Clarke & Clarke, 1972).

3. RESULTS

To determine the significance of difference among the scores on different sub factors of perceived purpose of sport of cricket players, mean, SD and Analysis of Variance were computed. and data pertaining to this, has been presented in Table 1 and 2.

TABLE 1
ANALYSIS OF VARIANCE FOR PURPOSE OF SPORTS AS PERCEIVED BY
INTERUNIVERSITY LEVEL MALE CRICKET PLAYERS

Source of Variance	Sum of squares	df	Mean Square	F-Value
Between Groups	110.87	6	18.48	29.52*
Within Groups	1529.40	2443	0.63	

* Significant at .05 level, $F_{.05}(6, 2443) = 2.09$

Table 1 indicated that inter-university level male cricket players differ significantly in their perception of various purposes of sports, as the obtained F-value of 29.52 was higher than the required F-value of 2.09.

As the obtained F-ratio on purposes of sports was found significant, the Scheffe's Test of Post-hoc Comparisons was applied to study the significance of differences between the ordered paired means of male cricket players and data pertaining to this, has been depicted in Figure 1. and presented in Table 2.

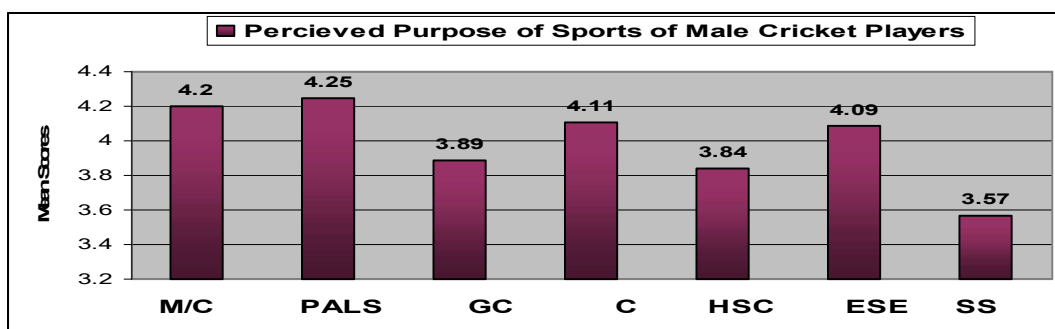


Figure 1: Mean Scores of Sub-Factors of Perceived Purpose of Sports of Inter-university level Male Cricket Players.

TABLE 2

SIGNIFINCE OF DIFFERENCE BETWEEN ORDERED PARED MENS ON SUB-FACTORS OF PERCIEVED PURPOSE OF SPORTS

Mastery/ Cooperation	Physically Active Life Style	Good Citizen	Competitiveness	High Status Career	Enhance Self-Esteem	Social Status	MD	CI
4.20	4.25	-	-	-	-	-	0.05	0.22
4.20	-	3.89	-	-	-	-	0.31*	
4.20	-	-	4.11	-	-	-	0.09	
4.20	-	-	-	3.84	-	-	0.36*	
4.20	-	-	-	-	4.09	-	0.11	
4.20	-	-	-	-	-	3.57	0.63*	
-	4.25	3.89	-	-	-	-	0.36*	
-	4.25	-	4.11	-	-	-	0.14	
-	4.25	-	-	3.84	-	-	0.41*	
-	4.25	-	-	-	4.09	-	0.16	
-	4.25	-	-	-	-	3.57	0.68*	
-	-	3.89	4.11	-	-	-	0.22*	
-	-	3.89	-	3.84	-	-	0.05	
-	-	3.89	-	-	4.09	-	0.02	
-	-	3.89	-	-	-	3.57	0.32*	
-	-	-	4.11	3.84	-	-	0.27*	
-	-	-	4.11	-	4.09	-	0.02	
-	-	-	4.11	-	-	3.57	0.54*	
-	-	-	-	3.84	4.09	-	0.25*	
-	-	-	-	3.84	-	3.57	0.27*	
-	-	-	-	-	4.09	3.57	0.52*	

*Significant at .05 level

Table 2 indicates that there were significant differences between mean scores of mastery/cooperation –good citizen followed by high status career and social status; between physically active life style –good citizen followed by high status career and social status; between good citizen- competitiveness followed by social status; between competitiveness- high status career followed by social status;; between high status career-

enhance self esteem followed by social status and between enhance self esteem- social status, as the mean differences of 0.31, 0.36, 0.63, 0.36, 0.41, 0.68, 0.22, 0.32, 0.27, 0.54, 0.25, 0.27 and 0.52 were more than the C.I. of 0.22. Where as the mean differences between mastery/cooperation –physically active life style (0.05) followed by competitiveness (0.09), enhance self esteem (0.16); between good citizen -high status career (0.05) followed by enhance self esteem (0.02); between competitiveness- enhance self esteem(0.02) were insignificant, as they were less than the CI of 0.22.

4. DISCUSSION

The perceived values and benefits of sports participation can be viewed as being materialistic and individualistic e.g. fame and fortune. Where as externally controlled perspective negatively related to the competitiveness, mastery/co-operation, physically active life style and good citizen functions of sport.

The inter-university level male cricket players perceived the materialistic and individualistic values and benefits of the sports more important than the development of the social responsibility and intrinsic aspect of the sport participation e.g. becoming physically fit. This can be attributed to the socio-psychological conditions prevailing in the middle and higher middle class Indian society and reflects this wider purpose of participation in competitive cricket.

The more importance being given to the competitiveness is also congruent with the literature on sports attitude and values (i.e. Males are higher in aggressive tendencies and lower in sportsmanship) they believe that major purpose of athletics was to enhance the competitive spirit and accentuate the importance of winning at all cost, further the success and prestige associated with cricket involvement may be a major factor whatever contribution it makes to present and future career achievement.

5. CONCLUSION

The inter-university level male cricket players gave more importance to physically active life style, function of sports participation and improvement in an individual's co-operating skills and desire for personal mastery among the purpose of participation in cricket should be serve. The inter-university level male cricket players gives more importance to physically active life style followed by mastery/cooperation, competitiveness and enhance self esteem which was considered equally important; promote good citizenship should enhance a person's future career.

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COMPARATIVE STUDY OF SELECTED PHYSIOLOGICAL PARAMETERS OF MALE AND FEMALE GYMNASTS OF INDIA

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ABSTRACT

Aim: The purpose of the study was to compare the selected physiological parameters of male and female gymnasts of India. **Subjects:** The subjects of the study were sixty inter-university level male (N=30) and female gymnasts (N=30) belong to different cultural background of India. **Variables:** The physiological parameters i.e. Heart rate, Blood pressure (Systolic and Diastolic) and gymnastic performance scores in competition, have been selected for the purpose of present investigation. **Criterion measures:** Blood pressure (systolic and diastolic) and the heart rate was recorded. Performances scores of each gymnasts was obtained from the record or the interuniversity competition were chosen as the criterion measures for the study. **Instrumentation:** Heart Rate was measured by using stethoscope in resting condition prior to the competitions and within the 5 minutes after completion of the event with the help of a physician. Blood Pressure was recorded (systolic and diastolic B. P.) in resting and within 5 minutes after completion of event through a sphygmomanometer by the physician. **Statistical Analysis:** To assess the physiological variables of Inter-university level male and female Gymnasts, mean and standard deviation t-ratio and Persons product moment correlation were computed. **Results:** Significant differences were observed between pre-test and post-test of all selected physiological parameters for inter-university level male gymnasts. Dissimilarity was found between pre-test and post-test heart rate and diastolic blood pressure and similarity in systolic blood pressure of inter-university level female gymnasts. Dissimilarity in pre-test systolic blood pressure and similarity pre-test heart rate and pre-test diastolic blood pressure existed among inter-university level male and female gymnasts. Similarity existed among inter-university level male and female gymnasts in post-test heart rate, systolic and diastolic blood pressure. Similar correlations existed between pre-test and posttest heart rate - performance score followed by systolic blood pressure and diastolic blood pressure of inter-university level male and female gymnasts, **Conclusion:** Significant differences were observed among male and female gymnasts of India in their physiological parameters. But there was no effect of physiological parameters on competitive performance of Indian gymnasts.

Keywords: Males, Females, Heart rate, Blood Pressure, Performance, Gymnastic competition

1. INTRODUCTION

Gymnastics is one of the most popular sports of the Olympic Games. Athletes, with or without the accompaniment of music and only with their body or with the use of apparatus, perform a series of exercises where art and sport coexist, thereby attracting millions of fans. The program of the Olympic Games includes artistic gymnastics for men and women, rhythmic gymnastics and trampoline individual for men and women. (Mohammed, 1982).

The heart rate is expressed as the number of cardiac cycles per minute and is one of the most commonly used physiological indicators in sport and exercise sciences. From the late 19th century the counting of the heart rate is extendedly used in coaching for the evaluation of the athletes' cardio-respiratory fitness.

The heart rate is the number of times, the heart beats per minute": Usually the hearth beats between 60 to 80 times per minutes in untrained men & women but the heart rate in generally much lower (40 to^5 beats per minutes) in highly trained endurance athlete (Fox, 1984).

The heart rate is an important component of the contemporary training which defines the intensity, the volume and the recovery periods of the exercise (Tanaka, Monahan and Seals, 2001). The increased heart rate is the result of the activation of the sympathetic system while simultaneously the parasympathetic system is de-activated (Glenn, 2003).

Heart rate (HR) has been shown to be a good indicator of exercise intensity (Chamari et.al., 1995 & 2004) in both endurance sports and prolonged efforts including intermittent intense exercise (Galy, et.al., 2003; Gilman and wells, 1993; Gilman,1996; Huo, et.al., 2000; Londeere, et. al., 1995 and Mujika, et. al., 2006).

Galy, et.al., (2014) showed a slight decrease in fourth-quarter HR compared with the first quarter, with the mean four-quarter HR equal to $79.9 \pm 4.2\%$ of HR_{max} . The decline in HR is significantly linked to $V.O_2max$. As water polo game HR seems to be correlated with the classic physiological variables.

Mohammed, and Joshi (2015) indicated the marked increase in pulse, systolic blood pressure and decreases in diastolic blood pressure, temperature and vital capacity in post measurement after performance on trampoline.

The heart rate is increased and the heart pumps more forcefully with each beat. The Blood flow to some parts of the body is increased, while it is decreased in others. Blood pressure is increased muscular tension is increased throughout the body preparing the individual for rapid activation of muscle strength and power

The heart rate simulate the match conditions. The footwork exercises with Forehand and Backhand strokes in table tennis players recorded the higher heart rate i.e. 190-210 b.min-1 (Michail, et.al., 2014).

The heart rates could be elevated to 80- 85% of the player's PMHR during a thirty minute game of badminton and the more skilful players had significantly greater stress placed on their cardiovascular system as reflected by heart rate (Docherty (1978).

Blood Pressure is the lateral pressure exerted by the blood on the wall of the arteries. It is two types: 1. Systolic Blood Pressure - It is the pressure recorded during ventricular contraction. 2. Diastolic Blood Pressure - It is the minimum pressure recorded during ventricular relaxation (Khanna &.Jayprakash, 1990).

Monitoring the pulse, blood pressure and respiratory rate are benefit in making training effective and influential, there certain points are taken into consideration before using this rate as the level in the evaluation of training and that this rate index for the effort of athletes and can be used to evaluate the training, the pulse is most important measurements in built the training programs, there are factors effect on pulse such as sex, age, body position, temperature, agitation psychological, physical exertion. (Mowaffaq, 1990 and Amira, 2007).

Exercise increases blood pressure and pulse rate with more rigorous exercise having a larger effect both immediately and 30 minutes after the exercise. (Roth & Roth, 2005).

Radial Resting pulse interval was highly correlated with systolic blood pressure during static periods, and moderately correlated with diastolic blood pressure during static periods, correlations of radial Resting pulse interval with systolic blood pressure and diastolic blood pressure during exercise and rest separately (Marie et al 2006).

2. METHODOLOGY

2.1 Selection of Subjects

The subjects of the study were sixty inter-university level male (N=30) and female gymnasts (N=30) belong to different cultural background of India and who represented their respective university teams in All India Inter-university Gymnastics Championships held at Amritsar (Punjab).

2.2 Selection of Variables

Keeping in view, the importance of the selected physiological variables for Gymnasts, feasibility of collection of data, legitimate time and cost involved in this study, the following variables have been selected:

1. Physiological Variables : Heart Rate, Blood pressure (Independent variables)
2. The performances scores of male and female university gymnasts serves as a dependent variable.

2.3 Criterion measures

Blood pressure (systolic and diastolic) and the heart rate was recorded. Performances scores of each gymnasts was obtained from the record or the interuniversity competition were chosen as the criterion measures for the study.

2.4 Instrumentation

Heart Rate was measured by using stethoscope in resting condition prior to the competitions and within the 5 minutes after completion of the event with the help of a physician. Blood Pressure was recorded (systolic and diastolic B. P.) in resting and within 5 minutes after completion of event through a sphygmomanometer by the physician

2.4 Statistical Analysis

To assess the physiological variables of Inter-university level male and female Gymnasts, mean and standard deviation (Clarke & Clarke, 1974) were computed.. In order to find out the significance of differences between Inter-university level male and female Gymnasts in on physiological variables, mean, SD, and t-ratio (Rothstein, 1985) was computed. The Persons product moment correlation was applied to find out the relationship between performance scores and physiological variables . To check the obtained t-ratio, the level of significance was set at .05 level.

3. RESULTS

To find out the significance difference between Inter-university level male and female Gymnasts in their physiological variables , mean, standard deviation, t-ratio and F-ratio were computed.. The Persons product moment correlation was applied to find out the relationship between performance scores of gymnasts and physiological variables and data pertaining to this has been presented in Table 1 to 7 and depicted in figure 1 to 3.

TABLE 1
DESCRIPTIVE STATISTICS OF SELECTED PHYSIOLOGICAL VARIABLES OF MALE AND FEMALE GYMNASTS OF INTER-UNIVERSITY LEVEL

S. No	Physiological Variables	Type of Test	Male Gymnasts (N=30)		Female Gymnasts (N=30)	
			M	SD	M	SD
1.	Heart rate	Pre-test	69.09	2.63	68.14	2.91
		Post-test	124.01	19.56	120.44	10.17
2.	Systolic Blood pressure	Pre-test	120.05	7.11	109.12	9.37
		Post-test	109.24	11.08	105.51	11.04
3.	Diastolic blood Pressure	Pre-test	79.22	5.79	78.00	5.77
		Post-test	71.88	9.22	69.33	6.43

The mean scores of pre-test and post-test of selected physiological variables i.e. heart rate, systolic and diastolic blood pressure as measured in male and female Gymnasts of inter-university level have been depicted in figures 1to 6 .

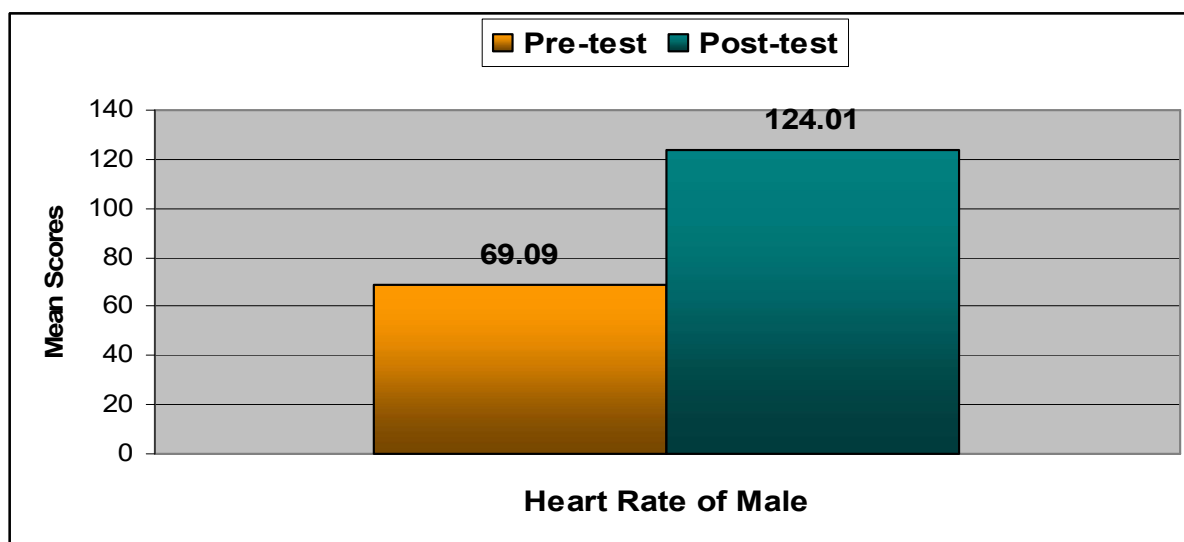


Fig. 1: Mean Scores of Pre-test and Post-test of Heart Rate of Inter-university Level Male Gymnasts.

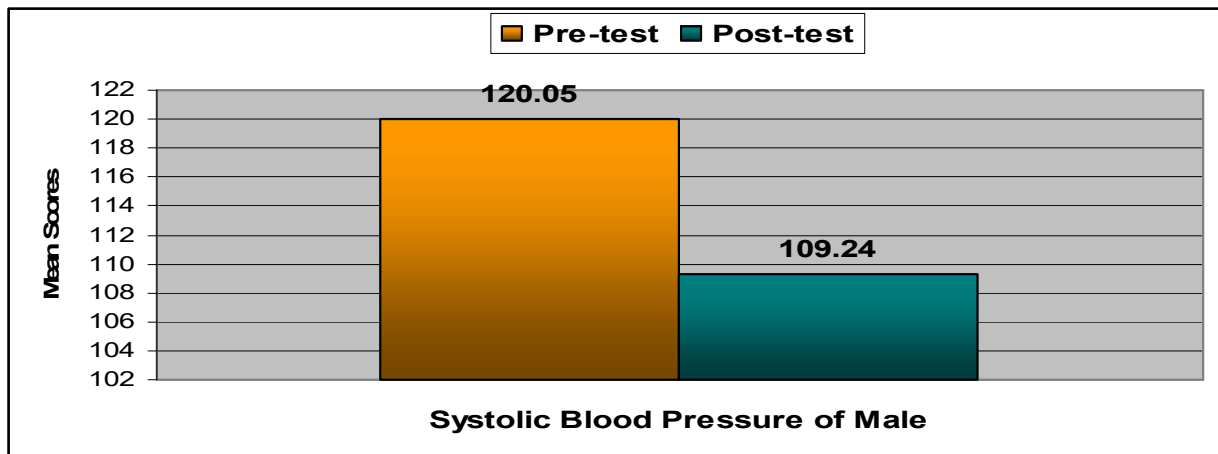


Fig. 2: Mean Scores of Pre-test and Post-test of Systolic Blood Pressure of Inter-university Level Male Gymnasts.

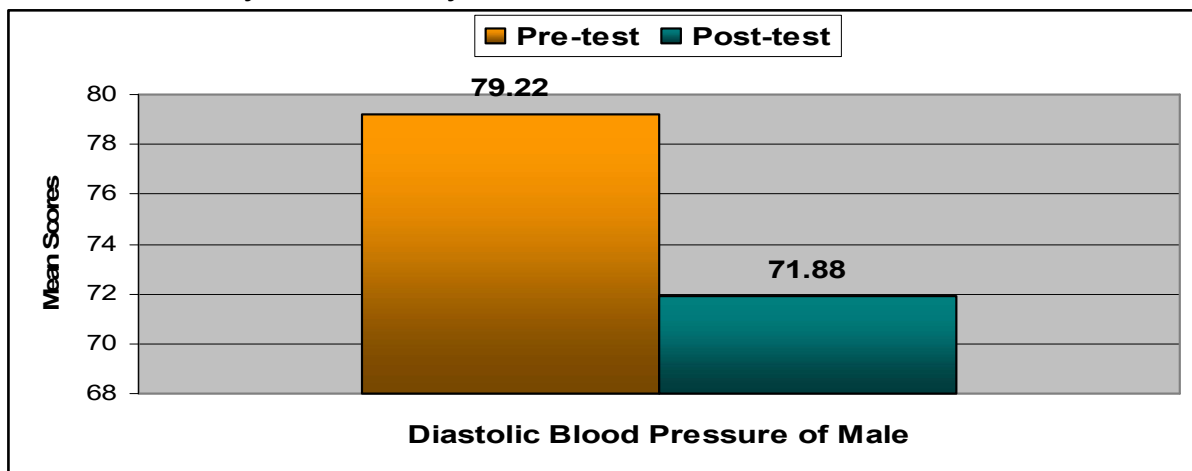


Fig. 3: Mean Scores of Pre-test and Post-test of Diastolic Blood Pressure of Inter-university Level Male Gymnasts.

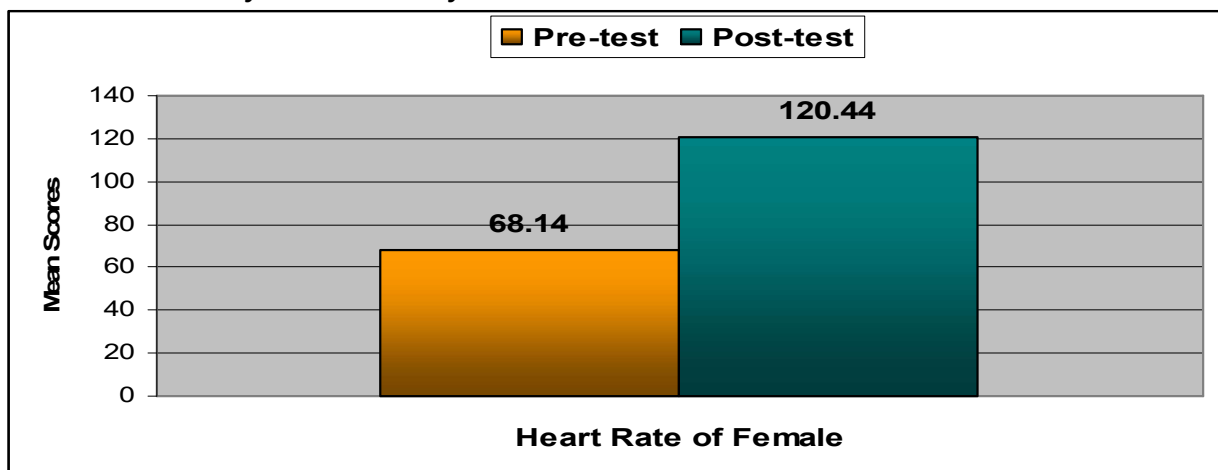


Fig. 4: Mean Scores of Pre-test and Post-test of Heart Rate of Inter-university Level Female Gymnasts.

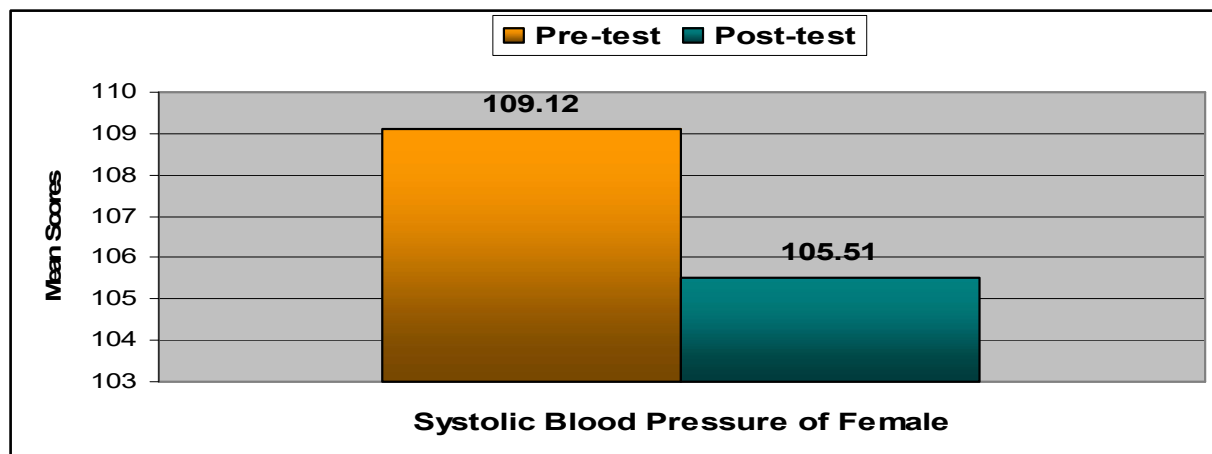


Fig. 5: Mean Scores of Pre-test and Post-test of Systolic Blood Pressure of Inter-university Level Female Gymnasts.

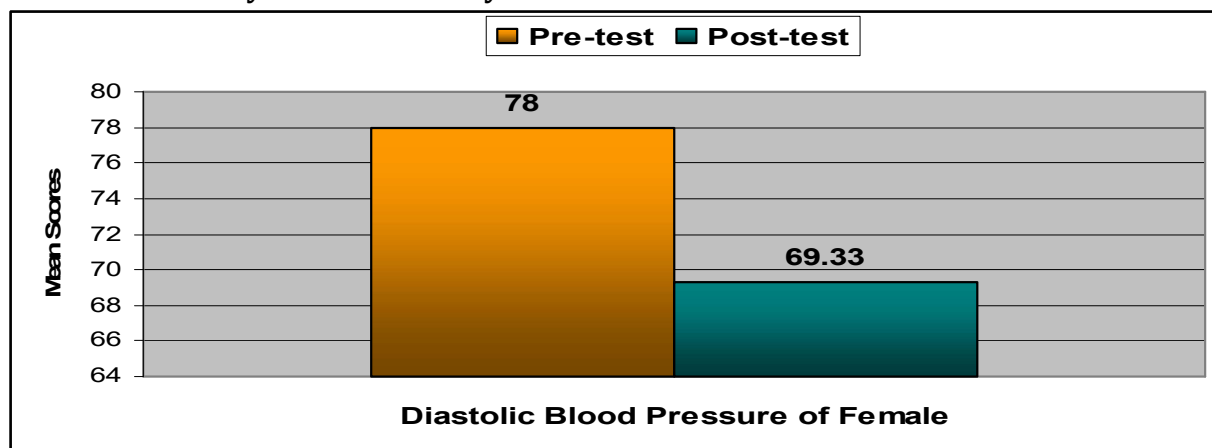


Fig. 6: Mean Scores of Pre-test and Post-test of Diastolic Blood Pressure of Inter-university Level Female Gymnasts.

TABLE 2
SIGNIFICANCE OF DIFFERENCE BETWEEN MEAN SCORES OF PRE-TEST AND POST-TEST OF PHYSIOLOGICAL VARIABLES OF MALE GYMNASTS OF INTER-UNIVERSITY LEVEL

S. No	Physiological Variables	Type of Test	Mean	MD	σ DM	t-ratio
1.	Heart rate	Pre-test	69.09	54.92	3.48	15.78*
		Post-test	124.01			
2.	Systolic Blood pressure	Pre-test	120.05	10.81	3.54	3.05*
		Post-test	109.24			
3.	Diastolic blood Pressure	Pre-test	79.22	7.34	2.26	3.24*
		Post-test	71.88			

*Significant at .05 level, $t_{.05(58)} = 2.00$

It is evident from Table 2, that the statistically significant differences were found between pre-test and post-test of heart rate, systolic Blood pressure and diastolic blood pressure of inter-university level male gymnasts respectively, as the

obtained t-values of 15.78, 3.05 and 3.24 respectively were higher than the required t-value of $t_{.05(58)} = 2.00$.

TABLE 3
SIGNIFICANCE OF DIFFERENCE BETWEEN MEAN SCORES OF PRE-TEST AND POST-TEST OF PHYSIOLOGICAL VARIABLES OF FEMALE GYMNASTS OF INTER-UNIVERSITY LEVEL

S. No	Physiological Variables	Type of Test	Mean	MD	σ_{DM}	t-ratio
1.	Heart rate	Pre-test Post-test	68.14 120.44	55.30	4.95	11.17*
2.	Systolic Blood pressure	Pre-test Post-test	109.12 105.51	3.61	3.93	0.92
3.	Diastolic blood Pressure	Pre-test Post-test	78.00 69.33	8.67	2.06	4.21*

*Significant at .05 level
 $t_{.05(58)} = 2.00$

It is evident from Table 3, that the statistically significant differences were found between pre-test and post-test of heart rate and diastolic blood pressure of inter-university level female gymnasts, as the obtained t-value of 11.17 and 4.21 respectively were higher than the required t-value of $t_{.05(60)} = 2.00$. But insignificant differences existed between pre-test and post-test systolic blood pressure of inter-university level female gymnasts, as the obtained t-value of 0.92 was less than the required t-value of $t_{.05(58)} = 2.00$.

TABELE 4
SIGNIFICANCE OF DIFFERENCE BETWEEN MEAN SCORES OF PRE-TEST OF PHYSIOLOGICAL VARIABLES OF MALE AND FEMALE GYMNASTS OF INTER-UNIVERSITY LEVEL

Physiological Variables	Sex	Mean	MD	σ_{DM}	t-ratio
Heart rate	Male	69.09		0.611	1.55
	Female	68.14			
Systolic Blood pressure	Male	120.05		3.01	3.63*
	Female	109.12			
Diastolic blood Pressure	Male	79.22		1.85	0.66
	Female	78.00			

*Significant at .05 level
 $t_{.05(58)} = 2.00$

From Table 4, It is evident that the statistically significant differences existed among inter-university level male and female gymnasts in pre-test systolic blood pressure, as the obtained t-value of 3.63 was higher than the required $t_{.05(58)} = 2.00$. But insignificant differences existed among inter-university level male and female gymnasts in pre-test heart rate and diastolic blood pressure, as the obtained t-values of 1.55 and 0.66 respectively were lesser than the required $t_{.05(58)} = 2.00$.

TABELE 5
SIGNIFICANCE OF DIFFERENCE BETWEEN MEAN SCORES OF POST-TEST OF
PHYSIOLOGICAL VARIABLES OF MALE AND FEMALE GYMNASTS OF
INTER-UNIVERSITY LEVEL

Physiological Variables	Sex	Mean	MD	σ DM	t-ratio
Heart rate	Male	124.01	4.43	4.54	0.97
	Female	120.44			
Systolic Blood pressure	Male	109.24	3.73	4.34	0.86
	Female	105.51			
Diastolic blood Pressure	Male	71.88	2.55	2.45	1.04
	Female	69.33			

Insignificant at .05 level
 $t_{.05(58)} = 2.00$

From Table 5, It is evident that the statistically insignificant differences existed among inter-university level male and female gymnasts in post-test heart rate, systolic and diastolic blood pressure, as the obtained t-value of 0.97, 0.86 and 1.04 respectively were lesser than the required $t_{.05(58)} = 2.00$.

TABLE 6
RELATIONSHIP BETWEEN PRE-TEST OF PHYSIOLOGICAL VARIABLES AND
COMPETITIVE PERFORMANCE SCORE OF MALE AND FEMALE
GYMNASTS OF INTER-UNIVERSITY LEVEL

Variables correlated	Male Gymnasts	Female Gymnasts
Heart rate V/S Performance Score	.112	.205
Systolic B. P. V/S Performance Score	.219	-.281
Diastolic B. P. V/S Performance Score	-.098	.011

Insignificant at .05 level, $r_{.05(28)} = .349$ (Males)
 Insignificant at .05 level, $r_{.05(28)} = .349$ (Females)

Table 6 indicates that insignificant correlation existed between pre-test heart rate - performance score followed by systolic blood pressure and diastolic blood pressure of inter-university level male gymnasts, as the obtained Pearson's Product Moment Correlation Coefficients r of .112, .219 and -.098 respectively were lesser than the required $r_{.05(28)} = .349$. In case of female gymnasts of inter-university level, insignificant correlation also existed between pre-test heart rate - performance score followed by systolic blood pressure and diastolic blood pressure, as the obtained Pearson's Product Moment Correlation Coefficients r of .205, -.281 and .011 respectively were lesser than the required $r_{.05(29)} = .349$.

TABLE 7
RELATIONSHIP BETWEEN POST-TEST OF PHYSIOLOGICAL VARIABLES AND
COMPETITIVE PERFORMANCE SCORE OF MALE AND FEMALE
GYMNASTS OF INTER-UNIVERSITY LEVEL

Variables correlated	Male Gymnasts	Female Gymnasts
Heart rate V/S Performance Score	.027	.033
Systolic B. P. V/S Performance Score	.128	-.021
Diastolic B. P. V/S Performance Score	.045	.039

Insignificant at .05 level, $t_{.05} (28) = .349$ (Males)

Insignificant at .05 level, $t_{.05} (28) = .349$ (Females)

Table 7 indicates that insignificant correlation existed between post-test heart rate - performance score followed by systolic blood pressure and diastolic blood pressure of inter-university level male gymnasts, as the obtained Pearson's Product Moment Correlation Coefficients r of .027, .128 and .045 respectively were lesser than the required $r_{.05} (28) = .349$. In case of female gymnasts of inter-university level, insignificant correlation also existed between post-test heart rate - performance score followed by systolic blood pressure and diastolic blood pressure, as the obtained Pearson's Product Moment Correlation Coefficients r of .033, -.021 and .039 respectively were lesser than the required $r_{.05} (29) = .349$.

4. DISCUSSION

To find out the significance difference between Inter-university level male and female Gymnasts in their physiological variables, mean, standard deviation, and t -ratio were computed. The Persons product moment correlation was applied to find out the relationship between performance scores of gymnasts and physiological variables.

Findings of descriptive data of All India Interuniversity level male and female gymnasts on selected physiological variables indicated that male gymnasts were found to have more on heart rate, systolic blood pressure and diastolic blood pressure before and after the competition. than their counter parts.

When male gymnasts of All India Inter-university level were compared separately between pre-test and post-test on physiological variables, produced significant differences on heart rate, systolic blood pressure and diastolic blood pressure. In case of female gymnasts, they had significant differences between pre-test and post-test on heart rate and diastolic blood pressure. But they did not have significant difference between pre-test and post-test on systolic blood pressure.

When the All India Inter-university level male and female gymnasts were compared together on pre-test of physiological variables, t -ratio indicated the significant difference between inter-university level male and female gymnasts in their systolic blood pressure. But they did not differ significantly in their pre-test of heart rate and diastolic blood pressure. When both sex gymnasts were compared together on post-test of physiological variables, t -ratio indicated the insignificant difference between All India Inter-university level male and female gymnasts in their heart rate, systolic blood pressure and diastolic blood pressure.

To see, whether male and female gymnasts of All India Inter-university level taken independently have any correlation on pretest and posttest between performance score and selected physiological variables, it was found that male and female gymnasts

produced insignificant correlation between performance score and heart rate followed by systolic and diastolic blood pressure.

Co-relational data of male gymnasts of All India Interuniversity level on pre-test indicated insignificant and negative correlation between diastolic blood pressure and gymnastic performance. In case of female gymnasts of All India Interuniversity level on pre-test indicated insignificant and negative correlation between systolic blood pressure and gymnastic performance. Co-relational data of female gymnasts of All India Interuniversity level on post-test indicated insignificant and negative correlation between diastolic blood pressure and gymnastic performance only. They had also insignificant and positive correlation between heart rate and gymnastic performance followed by diastolic blood pressure. In case of male gymnasts of All India Interuniversity level on posttest.

5. CONCLUSIONS

1. Significant differences were observed between pre-test and post-test of selected physiological parameters for inter-university level male gymnasts respectively.
2. Dissimilarity was found between pre-test and post-test heart rate and diastolic blood pressure and similarity in systolic blood pressure of inter-university level female gymnasts.
3. Statistically significant differences existed among inter-university level male and female gymnasts in pre-test systolic blood pressure.
4. Similarity existed among inter-university level male and female gymnasts in pre-test heart rate and diastolic blood pressure,
5. Similarity existed among inter-university level male and female gymnasts in post-test heart rate, systolic and diastolic blood pressure.
6. Similar correlations existed between pre-test and posttest heart rate - performance score followed by systolic blood pressure and diastolic blood pressure of inter-university level male and female gymnasts,

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A STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAMME ON KNOWLEDGE REGARDING INFANTS CARE AMONG POST-NATAL MOTHERS IN SELECTED ANGANWADI'S OF JABALPUR CITY

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ABSTRACT

The objective of the present study was to assess the effectiveness of video assisted teaching program on knowledge regarding infants care among post-natal mothers in selected Anganwadi's of Jabalpur. A quantitative approach was used for the research, The research design adopted in this study was pre experimental one pretest and post-test design. 30 postnatal mothers who fulfilled the inclusion criteria were considered as the sample of the study. A 15 min. video assisted teaching program was developed by the researcher covering the contents to provide knowledge regarding infants care. Results revealed that mothers were having inadequate knowledge before administration of VAP, 86.67% mother were having inadequate knowledge, where as after administration of VAP 56% mothers knowledge was enhanced. T-test revealed the significance of difference between pre and post test scores, where obtained 't' value 8.71 (df=29) was much higher than the required level of significance. Present study outcome shows the need for a better revamped awareness and education program coupled with effective health care delivery system to improve the level of knowledge among mothers on new born care, in achieving better health indicators as far as medical services are concerned.

Keywords: Effectiveness, Video assisted teaching program (VATP), practices, postnatal care

1. INTRODUCTION

The healthy newborn infants born at term, between 38 to 40 weeks, cries immediately after birth, establishes independent rhythmic respiration quickly adapts with the extra uterine environment has an average birth weight and no congenital anomalies.

According to WHO report, the global birth rate is 27.3 per 1000 populations in Nepal crude birth rate is 34 per 1000 and 13 death occur in 100 live birth. Two third of all deaths in first year occur in the neonatal period. In India is reported that 50-60% of all neonatal deaths occur within the first month of life of these , more than half may die during the first week of life. Most of the deaths are due to birth asphyxia, hypothermia, and infections which are preventable if the quality of care is maintained. World wide, about eight newborn babies die every minute. Every year more than four millions babies die during first week of life due to inadequate care by mothers / caregivers.

Postnatal care means "Care after the Birth" during the postnatal period which aims to promote the well being of both the mother and child .Giving birth is both exhausting & emotional. After the birth the mother feels tired & due to hormonal changes become very emotional. (Devi, 2016). The healthy newborn infants born at term, between 38 to 40 weeks, cries immediately after birth, establishes independent rhythmic respiration quickly adapts with the extra uterine environment has an average birth weight and no congenital anomalies (Namrata, 2006).

Strauss RS (2014) conducted a retrospective study on their cord of 10,696 mothers and found that low maternal weight gain in the second or third trimester increases the risk for intrauterine growth retardation. It was found that more than 50% of the mother's who had a poor weight gain during the last trimesters delivered babies with IUGR. Maaløe (2016) has published in the bulletin of the World health Organization that in India the still birth rate was 39 per 10,000 birth in the year 2000. The author suggests that most of these deaths can be prevented by identifying fetal compromise early. Teaching the mother to recognize it with the help of fetal monitoring kick count will help a lot. These studies stress on the need for an effective educational package for the mothers to know more on antenatal care and preparation for labour.

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2. METHODOLOGY

2.1 Research approach

A quantitative approach was used for assessing the effectiveness of Video assisted teaching program (VATP) on knowledge regarding infants care among postnatal mothers in a selected Anganwadi in Jabalpur city.

2.2 Research Design

The research design adopted in this study was pre experimental one pretest and post-test design.

2.3 Selection of Variable

Independent variables are video assisted teaching programme on infants care. and Dependent variables: are Knowledge of the postnatal mothers on infants care. Demographic profile of postnatal mothers include age, sex, qualifications, religion, area of residence ,types of family, education status of mothers, occupation.

2.4 Setting of the study

The setting of the study was set to Govt. Hospitals in Jabalpur with the post natal mothers strength of 30.the setting was chosen on the basis of feasibility in terms of availability of adequate samples and the cooperation extended by the management.

2.5 Sample size

The size was 30 postnatal mothers who were fulfilling the inclusion criteria.

2.6 Sampling technique

Non-probability sampling (convenience sampling) technique was used to select the samples.

2.7 Tool used

The tools consist of a structured knowledge questionnaire it is divided into 2 parts **Part A** consist of 8 items related to demographic variables and **Part 2:** consist of items related to the knowledge on infants care it consist of 30 items

2.8 Data Analysis

Data analysis was done using descriptive statistic i.e.. frequency, percentage, mean and standard deviation and inferential statistics 't' test was computed to find out the significance of difference among the pre and post test scores.. The chi- square test was used to find out the association between demographic variables with knowledge scores.

3. RESULTS

TABLE 1
PRE TEST KNOWLEDGE SCORES ON KNOWLEDGE REGARDING INFANTS CARE AMONG POSTNATAL MOTHERS. (N=30)

Level Of Knowledge	Count	Percent
Adequate	0	0.00%
Moderate	4	13.33%
Inadequate	26	86.67%

Data depicted in above graphical presentation shows pre-test score regarding infants care among postnatal mothers in selected anganwadi's, data revealed that 86.67% subjects had inadequate knowledge, 13.33% subjects had moderate knowledge whereas none of the respondents has adequate knowledge.

TABLE 2
COMPARATIVE ANALYSIS OF KNOWLEDGE SCORES BETWEEN PRE-TEST AND POST-TEST

Pre Test		Post Test		Mean Difference	df	't' Value	p Value
Mean	SD	Mean	SD				
8.73	1.91	16.56	4.85	7.83	29	8.71*	<0.000

* Significant at level 0.05 level

To find out the significance of the difference t test was computed on the obtained data. The data in table 11 on pre test and post test mean scores concerning to the knowledge regarding infants care among postnatal mothers. From selected anganwadi's

were presented. The knowledge score of pre test had mean value 8.73 and SD 1.91 whereas post test had mean value 16.56 and SD 4.85. To compare the pre and post test mean scores paired t test was computed and the results indicated significant difference among the group as the obtained 't' value 8.71 (df=29) was much higher than the required level of significance therefore null hypothesis was rejected.

4. DISCUSSION

Obtained results revealed that 86.67% of the mothers had inadequate knowledge regarding the infant care, after administration of STP, increase in knowledge was observed. Results indicated inadequate level of knowledge among mothers on infant care may be due to almost half of the mothers taken in the study were prime which means they lack of experience as well as knowledge too, STP, educational programmes and guidance from elder family members may enhance the knowledge of such mothers who lack knowledge regarding infant care.

5.. CONCLUSION

This study concludes with an estimation of inadequate level of knowledge on essential newborn care with the participants included in the study. Participants had a low level of knowledge on infant care. It was found that the knowledge level is low and there no association among knowledge and demographic conditions.. This study indicates the requirement of an awareness programme on infant care a programme that contains all the components of essential newborn care available to all the people irrespective of their socio-economical status. Present study outcome shows the need for a better revamped awareness and education program coupled with effective health care delivery system to improve the level of knowledge among mothers on new born care, in achieving better health indicators as far as medical services are concerned.

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GENDER INEQUALITY IN SPORTS: A STUDENT'S PERSPECTIVE

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ABSTRACT

In the so called "equal" and "modern" world, the 21st century offers equal opportunity to everyone. We all are free to choose our careers, our hobbies and our lifestyle. Society, religion or other environmental factors are all supportive and motivates us to pursue our dreams. Sounds perfect! But does this perfect world exist? The answer is NO! We are influenced by society and its norms in this 21st century too. Though the culture has changed over years, we can't claim that we have attained equality. In this paper, the focus remains on gender inequality which prevails in the area of sports. Women have proved their ability and competence in all walks of life but still the world is partial to them at all levels, may it be education, jobs, promotion or even games. Several researches have been conducted proving that gender inequality exists in the field of sports wherein the girls face more challenges than the boys. Few decades back, girls were not deemed fit for certain sports like wrestling, baseball, basketball etc. Over the period, society changed, its thinking has changed, girls were allowed to bring in changes in their clothing and they started taking up sports which were not considered "girls type". The journey has been long but can we say that equality has been achieved? Does society supports the girls and boys equally to pursue their passion at any point of their life? The paper attempts to find out the journey of females in sports and also to provide an insight about what the youth thinks about gender discrimination in sports. Primary data is collected online through structured questionnaires from students across different colleges and institutions. The paper explores the perception of girls and boys who are actually part of the sports community regarding the gender inequality in sports. The survey reveals that society acts as the main hindrance for the girls pursuing sports. Even family support is not given to girls as much as it is given to the boys. While urban and rural girls participate equally in sports and fitness, rural girls who quit sports, are more likely to have problems with transportation or inadequate funds. The paper ends with recommendations to improve the current status.

Keywords: Fitness, Gender inequality, Sports

1. INTRODUCTION

Physical education plays vital role in shaping one's personality. It can help increase one's self confidence, acquire new skills and develop a positive relationship. However, like other areas, even sports is been discriminated on the basis of gender. Women's participation in sports has a long history. Though women have proved themselves in various sports, the history is marked by discrimination. Few notable achievements by female athletes, who overcame all the barriers are listed below:

1. Helene Madison of the United States of America, was the first woman to win the 10-yard freestyle in one minute at the 1932 Olympics,
2. Maria-Teresa de Filippis of Italy, became the first woman to compete in a European Grand Prix auto race in 1958,
3. Tegla Loroupe of Kenya, in 1994 became the first African woman to win a major marathon.

Despite such achievements, even today the women are often perceived as being too weak for sport, particularly endurance sports like marathons and weightlifting. Many still believe that sports can be harmful for women's health, particularly for their reproductive health. Unfortunately, even today gender inequality in sports is a neglected area.

Ahmad (2015) focused on gender inequality in sports. He discussed the problems and solutions on the basis of primary survey which used questionnaire having open ended questions from 70 respondents. He discussed about various constraints- social, economic, religious, psychological, which hampers the participation of women in sports. **Deshpande (2016)** discussed about gender discrimination in sports and suggested measures to overcome it. Media, parents, society plays a vital role in ensuring equal participation of girls and boys in sports. **Garg, Kumar and Rani (2013)**, explored the contribution of women in sports in Maharshi Dayanand University, Haryana using a sample size of 200 female students .The investigation found that family encourages students to participate in Sports; players are trained by Professional coaches; the teachers does not encourage the players; Players feel insecure at ground and at times need to face casting nepotism. **Gayathamma (2015)** described the Sports participation of Women. Need for an inclusive policy for women sport, advocates building a sport system that provides quality sport experiences wherein women are actively engaged. The females should have meaningful opportunities to get involved and to develop in sport according to their interests, abilities, talents and choices, throughout their life. **Gupta (2013)** explored the connection between Indian nationalism and cricket, and how it contributes to and flows from gender inequality in his work 'Bowled Out of the Game: Nationalism and Gender Equality in Indian Cricket'. It argues that men's cricket constructs a gendered nationalism, further contributing to gender inequality in sports and in society, whereas inclusion of women in cricket can help shape a more inclusive nationalism and promote equality. It examines the Indian law on gender equality in sports and other approaches that may promote equality in cricket. Arguing against a single approach based on one feminist theory, the article proposes a pragmatic hybrid approach incorporating both sex segregation and integration in cricket. **Senne (2016)** examined the Gender Equity and Female Participation in Sport'. He indicated that however, women still faced gender equity issues, as there is the perception and socially conditioned notion that women should not participate in masculine sports because it makes them appear lesbian and causes them to be ridiculed. However, women athletes that are perceived as beautiful and graceful, are able to get media coverage, but not for their actual athletic abilities, only their appearance. Women in sport: gender stereotypes in the past and present", He recommended for increasing female participation in sports through equal reward system and free Fun Day for females to try the sport of hockey, and personal experiences with gender and sports while been involved in gymnastics.

1.1 Constraints in Women Sports

Several researchers have discussed about the constraints faced by women in sports which are given below:

1.1.1 Physical Constraints

Physical constraints refer to the morphological feature adaptations to particular sports. It deals with the physical fitness parameters. Any failure in any of these required parameters may impact the performance in sports. These may be heavy musculature of limbs, Improper posture/ postural deformity etc.

1.1.2 Physiological Constraints

Physiological constraints refer to the organ functions ultimately resulted in the system coordination. Any dysfunction of the organs like low level of RBC, low percentage of Haemoglobin, weak lungs, body fat, menstrual disorders etc., results in reduction of sports performance.

1.1.3 Economic Constraints

Economic constraints are considered most critical factor that hinders women participation in sports. Lack of training, kits, qualified coaches, infrastructure, gadgets etc affects the participation. Non-availability of training halls, indoor stadiums or constructed play environment to undergo training are the reasons which hinders women in pursuing sports.

1.1.4 Social Constraints

Society has a major impact over our behaviour in all the aspects. Social constraints refers to the behavior in the sports society. Lack of support from family, friends, unsafe environment, lack of safe transportation due to more vehicle motor movement etc. acts as hindrance in participation of women in sports. Many females drop out of a sport programme once they reach their ideal weight or stop playing out of the fear that it will make them less feminine. Family responsibilities is also one of the cause that women are not able to participate in sports. **Czisma et al. (1988)** were among the first to suggest these phenomena might result in female athletes experiencing a sense of conflict between personal gender values and societal expectations of femininity.

1.1.5 Individual Constraints

A girl's participation in sport also depends on her perceptions about body image. **Gill D. (1995)**, a sport psychologist, says 'females are generally more negative about their bodies and are concerned with physical beauty and maintaining an ideal, thin shape (as identified by media and societal images) while sport demands strength, power, endurance, speed and many other things.

1.1.6 Religious Constraints

Religious constraints avail in those societies who are fundamentalist and have hard religious beliefs. Females are afraid as society may blame and curse them for going beyond the boundaries of their religion. This might be the cause that most of the women are not able to show their talent.

1.2 Women Status in America

Even after winning at national & international levels, male sports receive more recognition in the sports they play, they get more playing opportunities, receive higher remuneration, and attracting extra media coverage. Researches show that in most North American families, young girls are not discouraged from playing sports but may be treated differently than their brothers in at least 3 respects:-

- 1.. As compared to boys, girls give less importance to sports and to the fact that sports achievements can also be rewarding.
2. Fathers spend considerably less time in shared physical exercises and activities with daughters than with sons.
3. The play time of girls is more likely to be regulated and controlled by parents.

1.3 Women Status in India

Gender discrimination exists in sports in India and many commercial cinemas have been lately made on the struggles and success of female sportswomen. The Report Of The Sports Authority In India - **Ministry Of Youth Affairs & Sports 2013 & 2014** states that gender dimension within sport policies remains marginal and even insufficient.

Over the years many policies have been introduced to increase the participation of women in sports. Several competitions are held at district, state and national levels under the scheme of National Championship for Women, presently merged with the scheme of Panchayat Yuva Krida Aur Khel Abhiyan (PYKKA) now revised as Rajiv Gandhi Khel Abhiyan (RGKA). The following sports competitions are conducted annually with 100% central assistance at Block, District, State and National level;

1. Rural Competitions
2. Women Competitions
3. North East Games
4. Competitions in Left Wing Extremism affected Areas.

The year-wise details of women participation under w. e. f. 01.02.2014, are shown below:

TABLE 1
WOMEN PARTICIPATION IN INDIA

S. No.	Year	No. of Women Participation
1	2008-09	2,49,190
2	2009-10	8,73,842
3	2010-11	18,93,833
4	2011-12	12,09,523
5	2012-13	19,91,661
6	2013-14	10,65,409
7	2014-15 (RGKA)	12,83,386

However, apart from the constraints and policy flaws, India has produced some world class sports women, who have been making news around the globe. Like, Saina Nehwal became the first to win a badminton bronze for India at the Olympics and also won the China Open. Sania Mirza is probably India's best known female sportsperson and she has many achievements to her credit like she entered in top 5 in doubles, won US Open Mixed doubles, gold in mixed doubles in Asian Games. Mary Kom is the only woman boxer in the world to have won a medal in all 6 world championships of the sporting event. She has won Bronze at the Olympics and gold at the 2014 Asian Games. Dipika Pallikal is the first Indian woman to break into the top 10 of the official Women's Squash World rankings.

The main objective is to promote the integration of gender issues within the policies of sport and to raise awareness regarding importance of guaranteeing a safe and healthy environment for women involved in sport.

The aims to study was to understand the status of women in sports. It tries to explore the level of gender inequality that exists in sports and suggest ways to overcome it. Perception of young players are also included to gain better insight of this issue.

2. METHODOLOGY

2.1 Selection of Subjects

A total of 102 subjects (Females= 37) and (Males=65) students involved in sports studying in various under-graduate and post-graduate college in various states i.e. Delhi, Uttar Pradesh, Maharashtra, Haryana, Gujarat, Tamil Nadu and Bihar were selected for the purpose of study. . 34% of the subjects have played at college level, 17% at district level, 15% at state level, and 14% at national level and rest of subjects from school level.

2.2 Sources of Data

The data was collected from primary as well as secondary sources. Articles collected from various journals, website and internet are used to understand the critical issue.

2.3 Instrumentation

Online questionnaire was used with closed ended questions, The likert and binomial scale was used to collect data regarding perception of undergraduate students across different states regarding gender discrimination in sports. questionnaire was circulated online via e-mails and social media platforms.

3. FINDINGS

A total of 102 responses were received out. A total of 102 responses were received out of which 37 were female and 65 male students. Descriptive statistics was employed on received responses and data pertaining to this, has been presented in Table 2

TABLE 2- MEAN VALUES FOR RESPONSES

S. NO.	Responses	Female	Male	Total
1	Females are still considered as the weaker sex.	3.89	3.05	3.35
2	Females enjoy equal rights in 21st century.	2.62	3.68	3.29
3	Sports are divided on the basis of gender.	3.46	3.15	3.26
4	Gender discrimination exists in sports.	3.73	3.40	3.52
5	Female athletes face negative comments due to their physical outlook.	3.81	3.62	3.69
6	Society stereotypes acts as demonstrators for females to enter sports.	4.16	3.89	3.99
7	Society extends equal support to male and female sportsperson.	2.30	2.88	2.67
8	Women have equal acceptance in aggressive sports as men at National level.	2.62	3.22	3.00
9	Women have equal acceptance in aggressive sports as men at International level.	3.22	3.52	3.41
10	Economic status acts as criteria in selection.	3.43	3.43	3.43
11	Status of women is secondary to males in sports.	3.68	3.28	3.42

4. DISCUSSION

Society support to women is poor and has received the lowest score. Females believe that they are not given equal importance in aggressive sports at National level. Females also differ from male respondents that they enjoy equal rights in 21st century. Respondents agree that sports also is discriminated on the basis of gender.

The awareness level regarding knowledge of legislations in India and at International level amongst the respondents is quite high. Friends support acts as biggest supports for pursuing sports.

5. RECOMMENDATIONS

Participation in sports helps women in many diverse aspects and keeps them fit and healthy and enhance their cognitive abilities as well endurance. Not only as a career, but indulgence in sports on regular basis helps women to fight diseases such as stress, obesity, hypertension, diabetes, hormonal dysfunction etc. Based on review of literature and the primary survey, it is clear that females do not receive equal opportunities as their male counterparts in sports. Society acts as the main hindrance in supporting the girls to pursue sports. Even family support is not given to girls as much as it is given to the boys. While urban and rural girls participate equally in sports and fitness, rural girls who quit sports, are more likely to have problems with transportation or inadequate funds. In addition, more rural girls than urban girls feel boys make fun of girls who play sports. In order to achieve equality, following steps are to be taken:

1. Promote importance of sports at school and college level. It is necessary that we encourage girls as much as boys are promoted to participate in all kinds of sports without any discrimination. Sports should be a subject mandatory for all courses. This will ensure that all the students are physically fit and also it will help them to develop respect for sports.
2. The games must not be divided on the basis of gender. Women have proved themselves capable of playing all kinds of games.
3. More research should be taken and discussions must take place at national level in order to understand the issues and ways to overcome them.
4. Media plays an important role in shaping the society. Movies, documentaries, interviews, discussions with people regarding sports will create the much needed awareness and bring a change in the perception of society. Movies like Mary kom, Dangal, Chak De have brought up the case in favour of girls. They show the positive side of family who support their girls in pursuing the sports they dream. It also brings out the challenges faced by females and their struggle to win despite the hurdles. We need more such movies and discussions which helps society to change their perception and so that sports are not divided on the basis of gender.
5. More female coaches are needed to train more female athletes. For this again we need promotion at school and college level so that young people pursue sports as career option. Access to well designed courses and lucrative remuneration is needed to attract and retain the talent.
6. Support should be provided from family, friends and peers to help females overcome psychological barriers which prevents them to take up sports. Counseling sessions should be provided in case they develop negative perception about their athletic body.
7. Hobby clubs can be established which can motivate young girls to take up sports like golf, hockey or anything which is divided on the basis of gender. Promoting them to experiment with sports of their choice at young age will make them confident about selecting their game.

8. Financial support is essential for helping the talent to nurture. Proper kits, coaches, equipments should be provided in schools, colleges to motivate and retain the young talent.

Participation of females in the sports committees and governing bodies can also act as a positive move. The introduction of quotas in view to assuring the participation of women in ruling bodies can be an efficient way to eradicate this discrimination

6. CONCLUSION

Though the 21st century is believed to be an equal world for the males as well as females, a world without discrimination is far from reality. Whether in academics, business or sports, women have not received equal status as compared to their male counterparts despite being capable and talented. The primary survey reveals that the students who are involved in sports also believe that gender discrimination exists in sports and society acts as the major barrier in participation of females in sports. Women inclusion in all types of sports can ensure proper propagation, proliferation & rejuvenation of sport. Swami Vivekanand once said "It is impossible to recollect about the welfare of the world unless the condition of women is improved. It is unacceptable for a birdie to fly on only one wing." Keeping this in mind, the countries around the globe should unite to promote women to participate in sports in order to ensure physical fitness as well as give them an equal chance to pursue their dreams.

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EFFECTIVENESS OF EXERCISE THERAPY TO REDUCE PAIN ON LUMBAR HYPER LORDOSIS MIDDLE AGED WOMEN.

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ABSTRACT

Importance of this article is knowing about human back and lumbar spine. This article answer to important questions such as what is lordosis deformity? How lordosis deformity is happening? What is exercise therapy and William exercise? How William exercise effect on pain in lordosis deformity. The peruse of this study was to assess the effect of exercise therapy for reduce pain in lower back. The data were considered in relation to recommended levels of exercise therapy can be effective helping to reduce pain in middle aged women who had hyper lordosis deformity. level of participation in twelve week William exercises were explored. The participants in this study were 20 middle ages women.10 were experimental group (affected by hyper lordosis deformity with lower back pain) and 10 were control group (affected by hyper lordosis with lower back pain). The sample was collected through non- random sampling method. Mc gill questioner pain was used to measure participants (only experimental group). Through the spss software the following results were concluded. The result showed experimental group that did William exercises have significantly pain reduction. Pain Rating Index 0 = no pain, Pain-free , 1 = mild, Pain is very mild, barely noticeable , 2 = moderate, it can't be ignored for more than a few minutes , 3 = severe, pain that dominates your senses and significantly limits your ability to perform normal daily activities.

Keywords: William exercise, hyper lordosis, lower back pain

1. INTRODUCTION

The human spine is formed by a series of curves from the head down to the coccyx (tail bone). When viewed from the side, an adult spine has a natural S-shaped curve. Inappropriate physical movements or long-term undesirable situations People cause abnormalities Leading to disturbances in different systems of the body, including the musculoskeletal system and numerous complications such as pain and deformity. Muscle pain can involve a small area or your whole body, ranging from mild to excruciating. Muscle pain is the achy, sore pain that increases with movement or with pressure on the affected muscle (Lisa and Kemper2018). One of the most important parts of the spine which, if it is abnormal can Interrupts the body in a standing position. The excessive normalization of the lumbar vertebrae is called lordosis. Hyper Lordosis is a condition where there is an increased inner curvature of the spine. If this spinal curvature increases more than 60 degrees, then it puts a lot of pressure or strain on the other regions of the spine resulting in pain. if the lordosis is mild, then treatment is usually not required. If the patient is experiencing symptoms or discomfort, then the patient can enroll in a physical therapy program where exercises can be done, under the guidance of a therapist, in order to strengthen the muscles and to increase the range of motion (Stephanie, Anthony, and Stuart 2013).

Physical therapy and back exercises to treat back pain in the lower spine usually focus on strengthening the flexor, extensor and oblique muscles to help reinforce support of the spine. In order to reduce pain, the lumbar lordosis in people with lordosis angle there are many different therapeutic protocols that are one of them use of corrective exercises. But so far no one has investigated the impact of Williams' exercises on Hyper lordosis. One of the primary modalities in the management of back pain is exercise. While various forms of exercise have been used for many years. This set of six exercises dominated the back pain world for many years. In general, Williams felt that back pain was the result of the lumbar lordosis. In fact, Williams "first commandment for back and leg pain sufferers" was, "Always sit, stand, walk and lie in a way that reduces the lumbar lordosis to a minimum (Ko, et.al., 2018).

Many therapists believe that having a "normal" spinal curve is associated with less or no back pain. Thus, people with too much or too little lordosis are at a higher risk of getting low back pain. Postural changes are sometimes a risk factor for low back pain. Abnormal posture creates a strain on ligaments and muscles that indirectly affects the curvature of the lumbar spine. Any changes in the curves of the spine will cause some muscles to stretch and some muscles to shorten, contributing to instabilities in the spine. This instability leads to chronic tension in certain muscle groups and increased strain on joints. Abdominal muscles being weaker than the muscles in the lumbar spine and the hamstring muscles, there is an imbalance which results in the pelvis being pulled forward of the body, creating the exaggerated arch or "swayback" in the spine (Morrison, and Gabbey, 2016).

Therapists measure the pain in patient with MGill test. Magill pain questionnaire: The McGill Pain Questionnaire can be used to evaluate a person experiencing significant pain. It can be used to monitor the pain over time and to determine the effectiveness of any intervention.

The aim of the present study was to Effectiveness of exercise therapy to reduce pain on lumbar hyper lordosis. William exercise has been shown positively influence of lumbar lordosis pain. This effect was measured in sample of middle aged women in two experimental and control group. It was hypothesized that 12-week Williams exercises no effect on pain in hyper lordosis of Iranian middle aged women. It was **also** hypothesized that there is no difference between experimental group and control group.

2. METHODOLOGY

2.1 Sample

In the present study selected twenty samples, who affected by hyper-lordosis as the experimental group (10 member) and control group (10 member). From women employed in the oil industry, three are in high-ranking positions (over-grade) and eight in high-ranking positions (GRID), and 350 in the headquarters and presidency. 120 women are working in the Isfahan Refinery 38 of them which have hyper lordosis. twenty samples were identified among population.

2.2 Description of Questionnaire

A short form of the McGill Pain Questionnaire (SF-MPQ) has been developed. The main component of the SF-MPQ consists of 15 descriptors (11 sensory; 4 affective) which are rated on an intensity scale as 0 = none, 1= mild, 2 = moderate or 3 = severe. Three pain scores are derived from the sum of the intensity rank values of the words chosen for sensory, affective and total descriptors. The SF-MPQ also includes the Present Pain Intensity (PPI) index of the standard MPQ and a visual analogue scale (VAS). The SF-MPQ scores obtained from patients in post-surgical and obstetrical wards and physiotherapy and dental departments were compared to the scores obtained with the standard MPQ

2.3 Data collection

Patients with hyper lordosis were identified in the clinic under the supervision of the physician. Subjects with Hyper lordosis were all with back pain, (muscle pain) that had previously been diagnosed by a doctor.

2.4 Statistical method

To assess the effectiveness of exercise therapy to reduce pain on lumbar hyper lordosis middle aged women of experimental and control groups, the raw data was collected with the help of 15 questions. From the obtained raw scores, Mean, SD and ANOVA. Were calculated by using SPSS . 22

3. RESULTS

To examine the Effectiveness of William exercise to reduce pain among experimental and control groups, Mean, SD and ANOVA. were calculated and data pertaining to this has been presented in Table 1 to 30 .

Time allocated	In first month six exercises the time which allocated is 40 sec and the time for one day is about an hour and twenty minutes.
	In second month of six exercises the time which allocated is 40 sec and the time for one day is about an hour and twenty minutes.
	In third month of six exercises the time which allocated is 40 sec and the time for one day is about an hour and twenty minutes.
Organization based on sets (for three times a week)	six exercises of the first month include one set
	six exercises of the second month include one set
	six exercises of the third month include one set
Intensity	The intensity of the first month during one months is the 40%
	The intensity of the second month during one months is the 70%
	The intensity of the third month during one months is the 100%

exercise	Type of exercise	Time allocated for performance	Repetition	Time allocated for rest between each exercises
Exercise no.1 posterior pelvic tilt	Strength exercise	40 second	Depend on ability	2 and half minutes
Exercise no.2 single knee to chest stretch	Strength exercise	40 second	Depend on ability	2 and half minutes
Exercise no.3 double knee to chest	Strength exercise	40 second	Depend on ability	2 and half minutes
Exercise no.4 standing lumbar flexion	Endurance exercise	40 second	Depend on ability	2 and half minutes
Exercise no.5 partial sit-up	Endurance exercise	40 second	Depend on ability	2 and half minutes
Exercise no.6 partial diagonal sit-up	Endurance exercise	40 second	Depend on ability	2 and half minutes

TABLE 1

DESCRIPTIVE STATISTICS OF THROBBING PAIN DURING PRE, 1- MONTH, 2- MONTHS AND 3 -MONTHS DURATION OF EXPERIMENTAL AND CONTROL GROUP

Group	Duration								Change
	Pre test		One month		2 months		3 months		
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	
Experimental (N=10)	2.80	0.632	2.30	0.483	1.30	0.674	0.40	0.699	2.40
Control (N=10)	2.80	0.422	2.70	0.483	2.70	0.483	2.70	0.483	0.10
Total (N=20)	2.80	0.523	2.50	0.512	2.00	0.917	1.55	1.316	1.25

Table 1 reveals that experimental group had a gain of 2.40 degrees change from pretest to 3 months (pre 2.80; post 0.40) in throbbing pain. In case of control group which had gained only 0.10 degrees (pre 2.80; post 2.70) in case of throbbing pain.. Irrespective of the groups on the whole, an increase of 1.25 degree change from pre to 3 months observed (pre 28.00; 3 months 1.55).

TABLE 2
REPEATED MEASURE ANOVA ON THROBBING PAIN DURING PRE, ONE MONTH, 2 MONTHS AND 3 MONTHS DURATION

Source of Variance	Sum of Squares	df	Mean Square	F-ratio
Change	18.238	3	6.079	50.699
Change * Group	16.038	3	5.346	44.583
Error(Change)	6.475	54	.120	

Significant at .05 level, $F_{.05}(3, 54) = 2.79$

Table 2 reveals that there was significant increase in mean degree values ($F=50.699$; $p=.001$) in case of throbbing pain,. However, when group wise comparison was made, again repeated measure ANOVA revealed a significant difference between the experimental and control groups ($F=44.583$; $p=.001$).

TABLE 3
DESCRIPTIVE STATISTICS OF SHOOTING PAIN DURING PRE, 1- MONTH, 2- MONTHS AND 3 -MONTHS DURATION OF EXPERIMENTAL AND CONTROL GROUP

Group	Duration								Change
	Pre test		One month		2 months		3 months		
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	
Experimental (N=10)	2.00	.000	1.80	.422	1.10	.316	.40	.516	1.60
Control (N=10)	1.90	.316	1.10	.316	1.10	.316	1.10	.316	0.80
Total (N=20)	1.95	.223	1.45	.510	1.10	.307	.75	.550	1.20

Table 3 reveals that experimental group had a gain of 1.60 degrees change from pretest to 3 months (pre 2.00; post 0.40) in shooting pain. In case of control group which had gained only 0.80 degrees (pre 1.10; post 2.70) in case of shooting pain.. Irrespective of the groups on the whole, an increase of 1.2 degree change from pre to 3 months observed (pre 1.95; 3 months 0.75).

TABLE 4
REPEATED MEASURE ANOVA ON SHOOTING PAIN DURING PRE, ONE MONTH, 2 MONTHS AND 3 MONTHS DURATION

Source of Variance	Sum of Squares	df	Mean Square	F-ratio
Change	15.737	3	5.246	69.515
Change * Group	4.938	3	1.646	21.810
Error(Change)	4.075	54	.075	

Significant at .05 level, $F_{.05}(3, 54) = 2.79$

Table 4 reveals that there was significant increase in mean degree values ($F=69.515$; $p=.001$) in case of shooting pain,. However, when group wise comparison was made, again repeated measure ANOVA revealed a significant difference between the experimental and control groups ($F=21.810$; $p=.001$).

TABLE 5
DESCRIPTIVE STATISTICS OF STABBING PAIN DURING PRE, 1- MONTH, 2- MONTHS AND 3 -MONTHS DURATION OF EXPERIMENTAL AND CONTROL GROUP

Group	Duration								Change
	Pre test		One month		2 months		3 months		
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	
Experimental (N=10)	2.00	.000	1.80	.422	1.00	.000	.70	.483	1.30
Control (N=10)	1.70	.483	1.70	.483	.90	.738	.90	.738	0.80
Total (N=20)	1.85	.366	1.75	.444	.95	.510	.80	.616	1.05

Table 5 reveals that experimental group had a gain of 1.30 degrees change from pretest to 3 months (pre 2.00; post 0.70) in stabbing pain. In case of control group which had gained only 0.80 degrees (pre 1.70; post 0.90) in case of stabbing pain.. Irrespective of the groups on the whole, an increase of 1.05 degree change from pre to 3 months observed (pre 1.85; 3 months 0.80).

TABLE 6
REPEATED MEASURE ANOVA ON STABBING PAIN DURING PRE, ONE MONTH, 2 MONTHS AND 3 MONTHS DURATION

Source of Variance	Sum of Squares	df	Mean Square	F-ratio
Change	17.438	3	5.813	75.180
Change * Group	.638	3	.213	2.749
Error(Change)	4.175	54	.077	

Significant at .05 level, $F_{05}(3, 54) = 2.79$

Table 6 reveals that there was significant increase in mean degree values ($F=75.180$; $p=.001$) in case of stabbing pain . However, when group wise comparison was made, again repeated measure ANOVA revealed a insignificant difference between the experimental and control groups ($F=2.749$; $p=.001$).

TABLE 7
DESCRIPTIVE STATISTICS OF SHARP PAIN DURING PRE, 1- MONTH, 2- MONTHS AND 3 -MONTHS DURATION OF EXPERIMENTAL AND CONTROL GROUP

Group	Duration								Change
	Pre test		One month		2 months		3 months		
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	
Experimental (N=10)	1.80	.422	1.80	.422	.80	.632	.50	.527	1.30
Control (N=10)	1.70	.483	1.70	.483	1.70	.483	.90	.737	0.80
Total (N=20)	1.75	.444	1.75	.444	1.25	.716	.70	.656	1.05

Table 7 reveals that experimental group had a gain of 1.30 degrees change from pretest to 3 months (pre 1.80; post 0.50) in sharp pain. In case of control group which had gained only 0.80 degrees (pre 1.70; post 0.90) in case of sharp pain.. Irrespective of the groups on the whole, an increase of 1.05 degree change from pre to 3 months observed (pre 1.75; 3 months 0.70).

TABLE 8
REPEATED MEASURE ANOVA ON SHARP PAIN DURING PRE, ONE MONTH, 2 MONTHS AND 3 MONTHS DURATION

Source of Variance	Sum of Squares	df	Mean Square	F-ratio
Change	13.638	3	4.546	46.536
Change * Group	2.838	3	.946	9.682
Error(Change)	5.275	54	.098	

Significant at .05 level, $F_{.05}(3, 54) = 2.79$

Table 8 reveals that there was significant increase in mean degree values ($F=46.536$; $p=.001$) in case of sharp pain. However, when group wise comparison was made, again repeated measure ANOVA revealed a significant difference between the experimental and control groups ($F=9.682$; $p=.001$).

TABLE 9
DESCRIPTIVE STATISTICS OF CRAMPING PAIN DURING PRE, 1- MONTH, 2- MONTHS AND 3 -MONTHS DURATION OF EXPERIMENTAL AND CONTROL GROUP

Group	Duration								Change
	Pre test		One month		2 months		3 months		
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	
Experimental (N=10)	2.80	.632	2.40	.699	1.60	.516	.90	.316	1.90
Control (N=10)	2.80	.632	2.80	.632	2.80	.632	2.80	.632	0.00
Total (N=20)	2.80	.616	2.60	.680	2.20	.833	1.85	1.089	0.95

Table 9 reveals that experimental group had a gain of 1.90 degrees change from pretest to 3 months (pre 2.80; post 0.90) in cramping pain. In case of control group which had gained only 0.00 degrees (pre 2.80; post 2.80) in case of cramping pain. Irrespective of the groups on the whole, an increase of 0.95 degree change from pre to 3 months observed (pre 2.80; 3 months 1.85).

TABLE 10
REPEATED MEASURE ANOVA ON CRAMPING PAIN DURING PRE, ONE MONTH, 2 MONTHS AND 3 MONTHS DURATION

Source of Variance	Sum of Squares	df	Mean Square	F-ratio
Change	10.737	3	3.579	59.015
Change * Group	10.737	3	3.579	59.015
Error(Change)	3.275	54	.061	

Significant at .05 level, $F_{.05}(3, 54) = 2.79$

Table 10 reveals that there was significant increase in mean degree values ($F=59.015$; $p=.001$) in case of cramping pain. However, when group wise comparison was made, again repeated measure ANOVA revealed a significant difference between the experimental and control groups ($F=59.015$; $p=.001$).

TABLE 11
DESCRIPTIVE STATISTICS OF GNAWING PAIN DURING PRE, 1- MONTH, 2- MONTHS
AND 3 -MONTHS DURATION OF EXPERIMENTAL AND CONTROL GROUP

Group	Duration								Change
	Pre test		One month		2 months		3 months		
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	
Experimental (N=10)	2.10	.567	1.90	.567	1.00	.000	.30	.483	1.80
Control (N=10)	2.00	.000	2.00	.000	1.90	.316	1.90	.316	0.10
Total (N=20)	2.05	.394	1.95	.394	1.45	.510	1.10	.911	0.95

Table 11 reveals that experimental group had a gain of 1.80 degrees change from pretest to 3 months (pre 2.10; post 0.30) in gnawing pain. In case of control group which had gained only 0.10 degrees (pre 2.00; post 1.90) in case of gnawing pain.. Irrespective of the groups on the whole, an increase of 0.95 degree change from pre to 3 months observed (pre 2.05; 3 months 1.10).

TABLE 12
REPEATED MEASURE ANOVA ON GNAWING PAIN DURING PRE, ONE MONTH, 2
MONTHS AND 3 MONTHS DURATION

Source of Variance	Sum of Squares	df	Mean Square	F-ratio
Change	11.837	3	3.946	49.842
Change * Group	9.138	3	3.046	38.474
Error(Change)	4.275	54	.079	

Significant at .05 level, $F_{05}(3, 54) = 2.79$

Table 12 reveals that there was significant increase in mean degree values ($F=49.842$; $p=.001$) in case of gnawing pain.. However, when group wise comparison was made, again repeated measure ANOVA revealed a significant difference between the experimental and control groups ($F=38.474$; $p=.001$).

TABLE 13
DESCRIPTIVE STATISTICS OF HOT BURNING PAIN DURING PRE, 1- MONTH, 2-
MONTHS AND 3 -MONTHS DURATION OF EXPERIMENTAL AND
CONTROL GROUP

Group	Duration								Change
	Pre test		One month		2 months		3 months		
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	
Experimental (N=10)	1.80	.422	1.80	.421	1.00	.667	.600	.699	1.30
Control (N=10)	1.00	.000	1.00	.000	1.00	.000	1.00	.000	0.00
Total (N=20)	1.40	.502	1.40	.503	1.00	.459	.800	.523	0.60

Table 13 reveals that experimental group had a gain of 1.30 degrees change from pretest to 3 months (pre 1.80; post 0.60) in hot burning pain. In case of control group which had gained only 0.00 degrees (pre 1.00; post 1.00) in case of hot burning pain.. Irrespective of the groups on the whole, an increase of 0.60 degree change from pre to 3 months observed (pre 1.40; 3 months 0.80).

TABLE 14
REPEATED MEASURE ANOVA ON HOT BURNING PAIN DURING PRE, ONE MONTH, 2 MONTHS AND 3 MONTHS DURATION

Source of Variance	Sum of Squares	df	Mean Square	F-ratio
Change	5.40	3	1.80	30.375
Change * Group	5.40	3	1.80	30.375
Error(Change)	3.20	54	.059	

Significant at .05 level, $F_{.05}(3, 54) = 2.79$

Table 14 reveals that there was significant increase in mean degree values ($F=30.375$; $p=.001$) in case of hot burning pain. However, when group wise comparison was made, again repeated measure ANOVA revealed a significant difference between the experimental and control groups ($F=30.375$; $p=.001$).

TABLE 15
DESCRIPTIVE STATISTICS OF ACHING PAIN DURING PRE, 1- MONTH, 2- MONTHS AND 3 -MONTHS DURATION OF EXPERIMENTAL AND CONTROL GROUP

Group	Duration								Change
	Pre test		One month		2 months		3 months		
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	
Experimental (N=10)	2.70	.483	2.20	.422	1.40	.516	.90	.568	1.80
Control (N=10)	2.40	.516	2.40	.516	2.40	.516	2.40	.516	0.00
Total (N=20)	2.55	.510	2.30	.470	1.90	.718	1.65	.933	0.90

Table 15 reveals that experimental group had a gain of 1.80 degrees change from pretest to 3 months (pre 2.70; post 0.90) in aching pain. In case of control group which had gained only 0.00 degrees (pre 2.40; post 2.40) in case of aching pain. Irrespective of the groups on the whole, an increase of 0.90 degree change from pre to 3 months observed (pre 2.55; 3 months 1.62).

TABLE 16
REPEATED MEASURE ANOVA ON ACHING PAIN DURING PRE, ONE MONTH, 2 MONTHS AND 3 MONTHS DURATION

Source of Variance	Sum of Squares	df	Mean Square	F-ratio
Change	9.700	3	3.233	37.957
Change * Group	9.700	3	3.233	37.957
Error(Change)	4.600	54	.085	

Significant at .05 level, $F_{.05}(3, 54) = 2.79$

Table 16 reveals that there was significant increase in mean degree values ($F=37.957$; $p=.001$) in case of aching pain. However, when group wise comparison was made, again repeated measure ANOVA revealed a significant difference between the experimental and control groups ($F=37.957$; $p=.001$).

TABLE 17
DESCRIPTIVE STATISTICS OF HEAVY PAIN DURING PRE, 1- MONTH, 2- MONTHS AND 3 -MONTHS DURATION OF EXPERIMENTAL AND CONTROL GROUP

Group	Duration								Change
	Pre test		One month		2 months		3 months		
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	
Experimental (N=10)	2.30	.823	2.00	.667	1.20	.632	.400	.699	1.90
Control (N=10)	2.20	.632	2.20	.632	2.20	.632	2.00	.817	0.20
Total (N=20)	2.25	.716	2.10	.640	1.70	.801	1.20	1.10	1.15

Table 17 reveals that experimental group had a gain of 1.90 degrees change from pretest to 3 months (pre 2.30; post 0.40) in heavy pain. In case of control group which had gained only 0.20 degrees (pre 2.20; post 2.00) in case of heavy pain. Irrespective of the groups on the whole, an increase of 1.15 degree change from pre to 3 months observed (pre 2.25; 3 months 1.20).

TABLE 18
REPEATED MEASURE ANOVA ON HEAVY PAIN DURING PRE, ONE MONTH, 2 MONTHS AND 3 MONTHS DURATION

Source of Variance	Sum of Squares	df	Mean Square	F-ratio
Change	13.238	3	4.413	46.951
Change * Group	8.938	3	2.979	31.700
Error(Change)	5.075	54	.094	

Significant at .05 level, $F_{05}(3, 54) = 2.79$

Table 18 reveals that there was significant increase in mean degree values ($F=46.951$; $p=.001$) in case of heavy pain,. However, when group wise comparison was made, again repeated measure ANOVA revealed a significant difference between the experimental and control groups ($F=31.700$; $p=.001$).

TABLE 19
DESCRIPTIVE STATISTICS OF TENDER PAIN DURING PRE, 1- MONTH, 2- MONTHS AND 3 -MONTHS DURATION OF EXPERIMENTAL AND CONTROL GROUP

Group	Duration								Change
	Pre test		One month		2 months		3 months		
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	
Experimental (N=10)	1.70	.483	1.60	.516	1.0000	.471	.800	.632	0.90
Control (N=10)	1.00	.000	1.00	.000	1.0000	.000	1.00	.000	0.00
Total (N=20)	1.35	.489	1.30	.470	1.0000	.324	.900	.447	0.45

Table 19 reveals that experimental group had a gain of 0.90 degrees change from pretest to 3 months (pre 1.70; post 0.80) in tender pain. In case of control group which had gained only 0.00 degrees (pre 1.00; post 1.00) in case of tender pain. Irrespective of the groups on the whole, an increase of 1.15 degree change from pre to 3 months observed (pre 2.25; 3 months 1.20).

TABLE 20
REPEATED MEASURE ANOVA ON TENDER PAIN DURING PRE, ONE MONTH, 2 MONTHS AND 3 MONTHS DURATION

Source of Variance	Sum of Squares	df	Mean Square	F-ratio
Change	2.938	3	.979	15.667
Change * Group	2.937	3	.979	15.667
Error(Change)	3.375	54	.063	

Significant at .05 level, $F_{.05}(3, 54) = 2.79$

Table 20 reveals that there was significant increase in mean degree values ($F=15.667$; $p=.001$) in case of tender pain,. However, when group wise comparison was made, again repeated measure ANOVA revealed a significant difference between the experimental and control groups ($F=15.667$; $p=.001$).

TABLE 21
DESCRIPTIVE STATISTICS OF SPLITTING PAIN DURING PRE, 1- MONTH, 2- MONTHS AND 3 -MONTHS DURATION OF EXPERIMENTAL AND CONTROL GROUP

Group	Duration								Change
	Pre test		One month		2 months		3 months		
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	
Experimental (N=10)	1.80	.632	1.50	.527	2.00	.666	.20	.422	1.60
Control (N=10)	2.10	.567	2.10	.568	1.60	.680	2.00	.667	0.10
Total (N=20)	1.95	.604	1.80	.616	.20	.422	1.10	1.07	0.85

Table 21 reveals that experimental group had a gain of 1.60 degrees change from pretest to 3 months (pre 1.80; post 0.20) in splitting pain. In case of control group which had gained only 0.10 degrees (pre 2.10; post 2.00) in case of splitting pain. Irrespective of the groups on the whole, an increase of 0.85 degree change from pre to 3 months observed (pre 1.95; 3 months 1.10).

TABLE 22
REPEATED MEASURE ANOVA ON SPLITTING PAIN DURING PRE, ONE MONTH, 2 MONTHS AND 3 MONTHS DURATION

Source of Variance	Sum of Squares	df	Mean Square	F-ratio
Change	8.238	3	2.746	31.717
Change * Group	6.338	3	2.113	24.401
Error(Change)	4.675	54	.087	

Significant at .05 level, $F_{.05}(3, 54) = 2.79$

Table 22 reveals that there was significant increase in mean degree values ($F=31.717$; $p=.001$) in case of splitting pain,. However, when group wise comparison was made, again repeated measure ANOVA revealed a significant difference between the experimental and control groups ($F=24.401$; $p=.001$).

TABLE 23
DESCRIPTIVE STATISTICS OF TRING EXHAUSTING DURING PRE, 1- MONTH, 2- MONTHS
AND 3 -MONTHS DURATION OF EXPERIMENTAL AND CONTROL GROUP

Group	Duration								Change
	Pre test		One month		2 months		3 months		
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	
Experimental (N=10)	1.60	.516	1.40	.516	.70	.675	.50	.528	1.10
Control (N=10)	2.00	.471	1.90	.567	2.00	.471	2.00	.471	0.00
Total (N=20)	1.80	.523	1.65	.587	1.35	.875	1.25	.910	0.55

Table 23 reveals that experimental group had a gain of 1.10 degrees change from pretest to 3 months (pre 1.60; post 0.50) in tring exhausting pain. In case of control group which had gained only 0.00 degrees (pre 2.20; post 2.00) in case of tring exhausting pain. Irrespective of the groups on the whole, an increase of 0.55 degree change from pre to 3 months observed (pre 1.80; 3 months 1.25).

TABLE 24
REPEATED MEASURE ANOVA ON TRING EXHAUSTING DURING PRE, ONE MONTH, 2
MONTHS AND 3 MONTHS DURATION

Source of Variance	Sum of Squares	df	Mean Square	F-ratio
Change	3.938	3	1.313	10.618
Change * Group	4.638	3	1.546	12.506
Error(Change)	6.675	54	.124	

Significant at .05 level, $F_{.05}(3, 54) = 2.79$

Table 24 reveals that there was significant increase in mean degree values ($F=10.618$; $p=.001$) in case of tring exhausting pain . However, when group wise comparison was made, again repeated measure ANOVA revealed a significant difference between the experimental and control groups ($F=12.506$; $p=.001$).

TABLE 25
DESCRIPTIVE STATISTICS OF SICKENING PAIN DURING PRE, 1- MONTH, 2- MONTHS
AND 3 -MONTHS DURATION OF EXPERIMENTAL AND CONTROL GROUP

Group	Duration								Change
	Pre test		One month		2 months		3 months		
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	
Experimental (N=10)	2.00	.471	1.50	.527	.80	.422	.30	.483	1.70
Control (N=10)	2.10	.738	2.10	.738	2.00	.817	2.00	.816	0.10
Total (N=20)	2.05	.605	1.80	.696	1.40	.883	1.15	1.09	0.90

Table 25 reveals that experimental group had a gain of 1.70 degrees change from pretest to 3 months (pre 2.00; post 0.30) in sickening pain. In case of control group which had gained only 0.10 degrees (pre 2.10; post 2.00) in case of sickening pain. Irrespective of the groups on the whole, an increase of 0.90 degree change from pre to 3 months observed (pre 2.05; 3 months 1.15).

TABLE 26
REPEATED MEASURE ANOVA ON SICKENING PAIN DURING PRE, ONE MONTH, 2 MONTHS AND 3 MONTHS DURATION

Source of Variance	Sum of Squares	df	Mean Square	F-ratio
Change	9.700	3	3.233	34.920
Change * Group	7.300	3	2.433	26.280
Error(Change)	5.000	54	.093	

Significant at .05 level, $F_{.05}(3, 54) = 2.79$

Table 26 reveals that there was significant increase in mean degree values ($F=34.920$; $p=.001$) in case of sickening pain. However, when group wise comparison was made, again repeated measure ANOVA revealed a significant difference between the experimental and control groups ($F=26.280$; $p=.001$).

TABLE 27
DESCRIPTIVE STATISTICS OF FEARFUL PAIN DURING PRE, 1- MONTH, 2- MONTHS AND 3 -MONTHS DURATION OF EXPERIMENTAL AND CONTROL GROUP

Group	Duration								Change
	Pre test		One month		2 months		3 months		
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	
Experimental (N=10)	1.60	.699	1.50	.707	.90	.738	.60	.516	1.00
Control (N=10)	2.00	.667	2.00	.667	2.00	.667	2.00	.667	0.00
Total (N=20)	1.80	.696	1.75	.716	1.45	.887	1.30	.923	0.50

Table 27 reveals that experimental group had a gain of 1.00 degrees change from pretest to 3 months (pre 1.60; post 0.60) in fearful pain. In case of control group which had gained only 0.00 degrees (pre 2.00; post 2.00) in case of fearful pain. Irrespective of the groups on the whole, an increase of 0.50 degree change from pre to 3 months observed (pre 1.80; 3 months 1.30).

TABLE 28
REPEATED MEASURE ANOVA ON FEARFUL PAIN DURING PRE, ONE MONTH, 2 MONTHS AND 3 MONTHS DURATION

Source of Variance	Sum of Squares	df	Mean Square	F-ratio
Change	3.450	3	1.150	12.176
Change * Group	3.450	3	1.150	12.176
Error(Change)	5.100	54	.094	

Significant at .05 level, $F_{.05}(3, 54) = 2.79$

Table 28 reveals that there was significant increase in mean degree values ($F=12.176$; $p=.001$) in case of fearful pain. However, when group wise comparison was made, again repeated measure ANOVA revealed a significant difference between the experimental and control groups ($F=12.176$; $p=.001$).

TABLE 29
DESCRIPTIVE STATISTICS OF PUNISHING-CRUEL PAIN DURING PRE, 1- MONTH, 2- MONTHS AND 3 -MONTHS DURATION OF EXPERIMENTAL AND CONTROL GROUP

Group	Duration								Change
	Pre test		One month		2 months		3 months		
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	
Experimental (N=10)	1.50	.707	1.30	.483	.70	.483	.20	.422	1.30
Control (N=10)	2.00	.667	2.00	.667	2.00	.667	2.00	.667	0.00
Total (N=20)	1.75	.716	1.65	.670	1.35	.875	1.10	1.07	0.65

Table 29 reveals that experimental group had a gain of 1.30 degrees change from pretest to 3 months (pre 1.50; post 0.20) in punishing cruel pain. In case of control group which had gained only 0.00 degrees (pre 2.00; post 2.00) in case of punishing cruel pain. Irrespective of the groups on the whole, an increase of 0.65 degree change from pre to 3 months observed (pre 1.75; 3 months 1.10).

TABLE 30
REPEATED MEASURE ANOVA ON PUNISHING-CRUEL PAIN DURING PRE, ONE MONTH, 2 MONTHS AND 3 MONTHS DURATION

Source of Variance	Sum of Squares	df	Mean Square	F-ratio
Change	5.238	3	1.746	15.024
Change * Group	5.238	3	1.746	15.024
Error(Change)	6.275	54	.116	

Significant at .05 level, F.05 (3, 54)= 2.79

Table 30 reveals that there was significant increase in mean degree values (F=15.024; p=.001) in case of punishing cruel pain . However, when group wise comparison was made, again repeated measure ANOVA revealed a significant difference between the experimental and control groups (F=15.024 ; p=.001).

4. DISCUSSION

Significant change in mean degree values was observed between experimental group and control group in reduction of all type of pain symptoms except stabbing pain symptom. More change in mean values of pain reduction symptoms by implementing William exercise in 12 week program

5. CONCLUSION

The result showed experimental group that did William exercises have significantly pain reduction. Pain Rating Index 0 = no pain, Pain-free , 1 = mild, Pain is very mild, barely noticeable , 2 = moderate, it can't be ignored for more than a few minutes , 3 = severe, pain that dominates your senses and significantly limits your ability to perform normal daily activities.

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EFFECTS OF COMPLEX TRAINING ON CORPOREAL VARIABLES OF INTER COLLEGIATE VOLLEYBALL PLAYER

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ABSTRACT

Complex training describes a power-developing workout that combines weights and plyometric exercises. Many athletes include plyometric exercises in their training programs and are well aware of their benefits. However it is slightly less known that the combination of traditional strength with power and plyometric exercises together results in greater Type II b recruitment and consequently greater improvements in power and rate of force development. To achieve the purpose of the study forty women inter collegiate volleyball players were selected from various college affiliated to Bharathiar University, Coimbatore, and Tamil Nadu. The age of the subjects was ranged between eighteen to twenty five years and students were equally divided in to two groups namely Experimental group I (N= 20) underwent complex training, Control Group —II (N= 20) did not underwent any specific training. All the treatment groups under their training protocol as per the schedule for a period of twelve weeks. The corporeal variables that influence the performance in the game of volleyball were selected with greater care on the basis of personal experience of the researcher and the result of the study was analysed by using SPSS software.

Keywords: Strength, power, endurance, Volleyball, females, Inter-collegiate

1. INTRODUCTION

Complex training is a workout comprising of a resistance exercise followed by a . matched plyometric exercise e.g. squats followed by squat jumps; bench press followed by plyometric press up. The logic behind these matched pair of exercise is that the resistance work gets the nervous system into full action so that more type 11 fibers are available for the explosive exercise, hence a better training benefit of complex training programme can be used in the general, specific and competitive phase of training. **Ebbon (2002)** in his recent literature review has stated that complex training has investigated both the acute and long term effects of this conditioning approach. Complex training describes a power-devejoping workout that combines weights and plyometric exercises. About 10 years ago, these workouts were greeted with great acclaim as research indicated that they could significantly enhance fast twitch muscle fiber power and, therefore, dynamic sports performance.

The two benefits from traditional strength work are increased neural activity and increased muscle mass (hypertrophy). It is a highly effective form of physical training that combines both resistance strength training and plyometric explosive power training. The idea is to use the 26 combination of strength and Plyometric exercises to superbly engage the nervous system and activate more fibres. Complex training describes a power-developing workout that combines weights and plyometric exercises.

The combination of plyometric training and weight training are thought to be useful for developing athletic power. More specifically, complex training alternates bio mechanically similar high load weight training exercises with plyometric exercises, set for set, in the same workout An example of complex training would include performing a set of squats followed by a set of jump squats. Anecdotal sources have described the application of complex training (Ebben and Blackard, 1998; Fees, 1997; Fleck and Kontor, 1986)

The idea that prerequisite strength is necessary for complex training to be most effective and that this type of training may be best suited for those who are highly trained (Ebben and Watts, 1998). The vertical jump performance improvement associated with complex training is consistent with the purported role of complex training as an effective training strategy for improving power (Ebben and Watts, 1998).

Ebben and Watts (1998) reviewed the research on various combinations of weight training and plyometric training as'well as complex training. At-that time, despite numerous brief references to complex training in the literature, only one training study specifically examined complex training. The results from that study were difficult to interpret, however, due to the absence of published numerical data (Verkhoshansky and Tetyan, 1973)

1.1 STATEMENT OF THE PROBLEM

The study is to find out the effects of complex training on corporeal variables of inter collegiate volleyball player

1.2 OBJECTIVES OF THE STUDY

1. To observe the effects of complex training on corporeal variables of inter collegiate volleyball player.

2. To identify the changes of pre to post training intervention on selected variables.

1.3 HYPOTHESES

It was hypothesized that the Effects of Complex Training would significantly improve Corporal Variables of inter collegiate volleyball players.

2. METHODOLOGY

2.1 Selection of Subjects

To achieve the purpose of the study forty women inter collegiate volleyball players were selected from various college affiliated to Bharathiar University, Coimbatore, and TamilNadu. The age of the subjects was ranged between eighteen to twenty five years and students were equally divided in to two groups namely Experimental group I (N= 20) underwent complex training, Control Group —II (N= 20) did not underwent any specific training.

2.2. Training Protocol

All the treatment groups under their training protocol as per the schedule for a period of twelve weeks. The corporeal variables that influence the performance in the game of volleyball were selected with greater care on the basis of personal experience of the research, long discussion with the coaches, and critical analysis of the related literature with joint consideration of the feasibility of the test availability of the equipments and acceptability of the subjects.

2.3 Selection of Variables

After having taken care of the above criteria into consideration the following corporeal variables were considered for the study.

1. Agility 2. Explosive Power 3. Cardiovascular Endurance 4. Muscular Strength And Endurance

2.4 Criterion Measures

S. No	Variables	Test items	Units of Measurement
Corporeal Variables			
1	Agility	Iillions agility test	1/10th Second
2	Explosive Power	Sargent Jump	In Centimeters
3	Cardiovascular Endurance	12 Minutes Run and Walk Test	In Meters
4	Muscular Strength And Endurance	Sit Ups Test	In Counts

2.5 Statistical Analysis

To find out the effects of complex training on corporeal variables of inter collegiate volleyball player, mean, SD and t-ratio were computed.

3. RESULTS

To find out the significance of difference between pretest and posttest mean scores of agility, explosive power, cardiovascular endurance and muscular strength & endurance of inter collegiate female volleyball players, mean, SD and t-ratio were computed and data pertaining to this, has been presented in 1 to 4

TABLE 1
SIGNIFICANCE OF DIFFERENCE BETWEEN PRETEST AND POSTTEST MEAN
SCORES OF AGILITY OF INTER COLLEGIATE FEMALE
VOLLEYBALL PLAYERS

Parameter	Test	M±SD	MD	σ DM	t-ratio
Agility in Seconds	Pretest	18.2360+0.697	0.452	0.0479	9.436*
	Posttest	17.7833+0.655			

*Significant at .05 level, t.05 (38)=2.02

Table 1 shows that statistically significant difference was found between pretest and posttest mean scores of agility of female volleyball players, as the obtained t-value of 9.346 for corporeal variable of agility was higher than the required t.05 (38)=2.02.

TABLE 2
SIGNIFICANCE OF DIFFERENCE BETWEEN PRETEST AND POSTTEST MEAN
SCORES OF EXPLOSIVE POWER OF INTER COLLEGIATE FEMALE
VOLLEYBALL PLAYERS

Parameter	Test	M±SD	MD	σ DM
Explosive Power (CM.)	Pretest	47.3333+2.894	1.9333	0.18170
	Posttest	49.2667+2.939		

Significant at .05 level, t.05 (38)=2.02

Table 2 shows that statistically significant difference was found between pretest and posttest mean scores of explosive power of female volleyball players, as the obtained t-value of 10.64 for corporeal variable of explosive power was higher than the required t.05 (38)=2.02.

TABLE 3
SIGNIFICANCE OF DIFFERENCE BETWEEN PRETEST AND POSTTEST MEAN
SCORES OF CARDIO-VASCULAR ENDURANCE OF INTER COLLEGIATE
FEMALE VOLLEYBALL PLAYERS

Parameter	Test	M±SD	MD	σ DM	t-ratio
Cardio-vascular Endurance in Meters	Pretest	1334.000+140.244	52.00	5.451	9.54*
	Posttest	1386.000+146.862			

Significant at .05 level t.05 (38)=2.02

Table 3 indicates that statistically significant difference was found between pretest and posttest mean scores of cardio-vascular endurance of female volleyball players, as the obtained t-value of 10.64 for corporeal variable of cardio-vascular endurance was higher than the required t.05 (38)=2.02.

TABLE 4
SIGNIFICANCE OF DIFFERENCE BETWEEN PRETEST AND POSTTEST MEAN
SCORES OF MUSCULAR STRENGTH AND ENDURANCE OF INTER
COLLEGIATE FEMALE VOLLEYBALL PLAYERS

Parameter	Test	M±SD	MD	σ DM	t-ratio
Muscular Strength and	Pretest	31.933+3.411	2.00	0.169	9.436*
Endurance	Posttest	33.933+3.195			

Significant at .05 level
 $t_{.05(38)}=2.02$

Table 4 reveals that statistically significant difference was found between pretest and posttest mean scores of muscular strength and endurance of female volleyball players, as the obtained t-value of 9.436 for corporeal variable of muscular strength and endurance was higher than the required $t_{.05(38)}=2.02$.

4. DISCUSSION

Now a day's volleyball is one of the most strengthens type of game, it required more speed and power, so many studies are available related to the study, even though and especially complex with swimming may enhance the speed and power for volleyball player. The present study showed the results due to Complex training Group significantly improved the corporeal variables like agility, explosive power, cardiovascular endurance and muscular strength and endurance.

5. CONCLUSION

Inter Collegiate female volleyball players differed significantly in their agility, explosive power, cardio-vascular endurance and muscular strength and endurance components of physical fitness. The present study also showed that complex training group significantly improved all the selected physical fitness components.

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A STUDY OF THE EFFECT OF WALKING ON CHOLESTEROL LEVEL OF OBESE COLLEGE WOMEN.

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ABSTRACT

The purpose of the study was to find out the effects of walking on cholesterol level (Bio-chemical variables namely High-density lipoprotein & low-density lipoprotein). To achieve the purpose thirty obese college women between the age of 20-25 years were selected. By using BMI (Body Mass Index) technique from Govt. Girls Degree College, Kota, Saharanpur. They were divided into two groups and designated as experimental group and control group. The experimental group was given training of exercise programme of walking for a period of eight weeks in morning for six days in a week. Sunday was weekly rest of the experimental group. Where as control group was not arranged any specified training programme rather than their routine physical activities programme. The data were collected before and after the training programme and statistically analyzed by using 't' test. The results showed that walking can be an effective training programme to maximize the HDL and minimize the LDL among obese college women.

Keywords: High-density lipoprotein, Low-density lipoprotein obese, Bio-chemical variables.

1. INTRODUCTION

In the last two decades walking has gained tremendous popularity all over the globe. The researcher has proved that walking has a significant role in maintaining vigor and vitality of the organism and thus improving health related fitness of the individuals.

Obesity has a significant association with early mortality as it increases the risk of developing some fatal chronic diseases or many aggravate diseases caused by the other factors. Diseases related with heart and circulatory systems have a linear relationship with obesity. Obesity increases the likelihood of various diseases, particularly type-2 diabetes, breathing difficulties during sleep, certain types of cancer and osteoarthritis. Obesity is most commonly caused by a combination of excessive dietary calories, lack of physical activities and genetic susceptibility, although a few cases are caused solely by genes, endocrine disorders, medications or psychiatric illness. Obesity is a leading preventable cause of death worldwide with increasing prevalence in adults and children (**Bijnani and Mehta , 2005**). Obesity is a medical condition in which excess body fat has accumulated to the extent that it may have an adverse effect on health. It is defined by body mass index (BMI) and further evaluated in terms of fat distribution via the waist hip ratio and total cardiovascular risk factors. BMI is closely related to both percentage body fat and total body fat (**Dey, 1991**).

Regular exercise may helpful in additional Psychological benefits such as reduction in mental tension, anxiety, depression, improved sense of well being, improved sleep habits, improved self conceptuality to enjoy leisure, improved confidence assertiveness, independence, intellectual functioning and self control **Newsholme, 1984**). Preventive health is gaining much attention nowadays. It is keenly felt that the time duration of any treatment of a disease should be reduced to a great extent. Walking seemed to be boom to mankind for the maintenance of good health (**Devikar, 1978**). The present empirical investigation has been undertaken with a view to understand the effects of walking on cholesterol level of obese college women.

2. METHODOLOGY

2.1 Subjects

Thirty female obese subjects for the present study were selected randomly by virtue of selected Body Mass Index technique from Govt. Girls Degree College Kota, Saharanpur. The age of the subjects ranged 20-25 years. The randomly selected subjects were divided into two groups (experimental – 15 and control – 15).

2.2 Tools and equipments

Tools and equipments for measuring fat percentage the body composition Analyzer and WHO's BMI norms table were used. The BMI was calculated easily from this formula. $BMI = (\text{Weight in Kg} / \text{Square of height in meters})$ As far as experimental training is concern, the eight weeks specified walking programme was conducted in the morning.

2.3 Procedure

The experimental group under went a specified eight weeks of walking programme in the morning. The control group did not participate in any of the training programme. The duration of the training period was eight weeks with six days per week. On each day the subjects exercised approximately one hour under the supervision of the investigator. Five milliliter of vinous blood sample (pre and post experiment) was collected from each subject for assessment of high-density lipoprotein and low-density lipoprotein. The 't' test

was applied to find out significant difference between experimental and control group. In all cases 0.05 level of confidence was utilized to test significance. To ensure uniform testing all subjects were testing in same pathology lab.

3. RESULTS

To find out the significance differences between the pre-test and post-test means of experimental group and control group on the serum levels, i.e. High-density lipoprotein (HDL) and Low-density lipoprotein (LDL) the 't' test was applied. The 't' ratio was tested for the significant difference at the 0.05 level of confidence. The findings related to it are presented in table 1-4

TABLE 1
SIGNIFICANCE DIFFERENCE IN PRE-TEST (HDL) OF OBESE COLLEGE WOMEN
BETWEEN CONTROL AND EXPERIMENTAL GROUP.

Group	Mean	S.D.	't' ratio
Control group	32.70	2.88	0.88
Experimental group	33.58	2.33	

Significant at 0.05 level 't' 0.05 (28) = 2.04

It is observed from table-1 that the calculated 't' (0.88) is less than the tabulated 't' (2.04). Hence, it may be considered that there was no significant difference found between the control and experimental group on the pre-test scores of High-density lipoprotein samples (HDL)

TABLE 2
SIGNIFICANCE DIFFERENCE IN POST-TEST (HDL) OF OBESE COLLEGE WOMEN
BETWEEN CONTROL AND EXPERIMENTAL GROUP.

Group	Mean	S.D.	't' ratio
Control group	36.13	2.61	4.90
Experimental group	41.13	2.82	

*Significant at 0.05 level 't' 0.05 (28) = 2.04

Table 2 reveals that there was significant difference found between the control and experimental group on the post test scores of High density lipoprotein samples (HDL) at 0.05 level of significance because the calculated 't' (4.90) is more than the tabulated 't' 2.04.

TABLE 3
SIGNIFICANCE DIFFERENCE IN PRE-TEST (LDL) OF OBESE COLLEGE WOMEN
BETWEEN CONTROL AND EXPERIMENTAL GROUP.

Group	Mean	S.D.	't' ratio
Control group	86.49	16.75	0.32
Experimental group	84.56	14.52	

Significant 0.05 level 't' 0.05 (28) = 2.04

It is observed from table 3 that the calculated 't' 0.32 is less than the tabulated 't' (2.04). Hence, it may be considered that there was no significant difference found between the control and experimental group on the pre-test scores of low-density lipoprotein samples (LDL).

TABLE 4
SIGNIFICANCE DIFFERENCE IN POST-TEST (LDL) OF OBESE COLLEGE WOMEN
BETWEEN CONTROL AND EXPERIMENTAL GROUP.

Group	Mean	S.D.	't' ratio
Control group	87.96	14.75	2.26
Experimental group	77.10	10.23	

*Significant at 0.05 level 't' 0.05 (28) = 2.04

It is observed from table 4 that the calculated 't' (2.26) is more than the tabulated 't' (2.04). Hence, it may be considered that there was a significant difference found between control and experimental group on the post-test scores of low-density lipoprotein samples (LDL). Thus we can say that 8 weeks training programme of walking can make significant changes in low-density lipoprotein (LDL) of college obese women.

This significant difference might be due to the effects of eight weeks of specified walking programme to the experimental group. The result also indicated in a decrease low-density lipoprotein among obese college women (experimental group) after 8 weeks of specified walking programme.

4. DISCUSSION

The above results have clearly explored that the experimental group had shown significant changes in High-density lipoprotein (HDL) and low-density lipoprotein (LDL) as evident through respective 't' values due to the eight weeks specified walking programme when compared the control group. The effects of walking might be the reason for the evidence increase in (HDL) and decrease in low-density lipoprotein (LDL) of the subjects belonging to experimental group. The findings of this study are in agreement with the finding of Bijlani, Ramesh, L.et.al.(2005) who were proved bio-chemical variables of adults could be improved through exercise."

Bio-chemical variable i.e., fasting plasma glucose, serum total-cholesterol, the ratio of total cholesterol to High-density lipoprotein (HDL) cholesterol and total triglycerides were significantly lower and HDL cholesterol significantly higher.

5. CONCLUSIONS

Based on the results of the present investigation it may be concluded that a well designated and systematically administered eight weeks walking training programme may help in increase in the level of HDL and decrease in the level of LDL among obese females.

There was increase in HDL following 8 weeks of specified walking programme for the experimental group.

LDL was reduced in obese college women as result of 8 weeks specified walking programme.

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INVESTIGATION OF JOB SATISFACTION AMONG SPORT COACHES WORKING IN URBAN REGION OF UTTAR PRADESH

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ABSTRACT

The purpose of the study was to analyse and investigate the job satisfaction of sport coaches in the urban Colleges and Universities of Varansi region. Thirty Five (Males= 23, Females=12) coaches from colleges and universities located in urban region of Varanasi district . were selected as the sample for the study. The MSQ was used to measure job satisfaction. It is a gender neutral instrument that can be administered to either groups or to individuals. The instrument utilizes 20- dimension Likert-type scale format and samples both intrinsic and extrinsic reinforcement dimensions with a total of 100 items. To assess the personal and educational characteristics of male and female coaches, the numbers and percentages of male and female coaches were disaggregated and tabulated by the five demographic variables. To assess the frequencies of response for each of the 5 response options on the MSQ Likert Scale were analyzed. The results of the study revealed that coaches of different games and sports were satisfied in Policies, compensation, and responsibility and slightly Satisfied in rest of the dimensions of Job satisfaction. The sport coaches of both sex had a specialize diploma in coaching,

Keywords: Male, Female, Sport, Coach, Job, Satisfaction, Uttar pradesh

1. INTRODUCTION

Indian Education Commission (1966) describes teacher as one of the most important factors contributing to the national development. He is the pivot around which all the educational programs, such as curriculum, syllabus, textbooks, evaluation, etc., rotate. The best system of education may fail to achieve the desired ends in the absence of sincere, competent and professionally aware teachers. **National Policy on Education (1986)** rightly states “No people can rise above the level of its teachers”. As a person imbibes, interprets and disseminates the relevant items of culture and traditions of the past, he creates new knowledge, promotes innovations, critically appraises the past and its traditions and cultures, sifts the grain, strengthens social and economic fabrics of the nation. Education is basically the influence which the teacher exerts on the students entrusted to his care. Effective teachers are required in the classroom because even the best curriculum and most perfect syllabus remain ineffective in the absence of a good teacher.

Nowadays, there is, however, a general feeling that the teachers do not have satisfaction in their job. There seems to be growing discontentment towards their job as a result of which standards of education are falling. Teachers are dissatisfied in spite of different plans and programs, which have been implemented to improve their job. Job satisfaction consists of total body of feeling about the nature of job promotion, nature of supervision etc. that an individual has about his job. If the sum total of influence of these factors gives rise to feelings of satisfaction, the individual has job satisfaction. Under such circumstances it is essential that the proper understanding concerning satisfaction emanating from the job life be obtained. Job Satisfaction can be an important indicator of how employees feel about their jobs and a predictor of work behaviours such as organizational citizenship (**Organ & Ryan, 1995**), absenteeism, (**Wegge et. al., 2007**), and turnover (**Saari & Judge, 2004**). Further, job satisfaction can partially mediate the relationship of personality variables and deviant work behaviors (**Mount, Ilies, & Johnson, 2006**).

Schultz (1982) defined job satisfaction as “the psychological disposition of people toward their work -- and this involves a collection of numerous attitudes or feelings”. Thus, job satisfaction or dissatisfaction depends on a large number of factors ranging from where employees have to eat their lunch to the sense of self fulfillment they may receive from doing their jobs. Usually, job satisfaction involves a delineation of those factors that an employee perceives to either foster a positive attitude about work, or a negative attitude about work. **Herzberg (1957)** found that “job attitudes are a powerful force and are functionally related to the productivity, stability, and adjustment of the industrial working force”. Also, “the positive effects of high attitudes are more potent than the negative effects of low attitudes” He suggested that job satisfaction increased with age because the individual comes to adjust to his/her work and life situation.

The purpose of the study was to analyse and investigate the job satisfaction of sport coaches in the urban Colleges and Universities of Varansi region.

2. METHODOLOGY

2.1 Selection of Subjects

Thirty Five (Males= 23, Females=12) coaches from colleges and universities located in urban region of Varanasi district . were selected as the sample for the study and all were also asked to participate in this study

2.2 Description of Questionnaire

The MSQ was used to measure job satisfaction. It is a gender neutral instrument that can be administered to either groups or to individuals. The instrument utilizes 20-dimension Likert-type scale format and samples both intrinsic and extrinsic reinforcement dimensions with a total of 100 items. Internal consistency reliability of the MSQ as estimated by the Hoyt's analysis-of-variance method show reliability coefficients for 83 percent of the groups at .80 or larger and only 2.5 percent lower than .70. The coefficient for each dimension ranged from .96 to .75. and a coefficient of .95 was obtained for the group on the MSQ.

2.3 Administration of Instrument and Collection of Data

The source of data for this research was the responses made by participants on the Individual Data Sheet and the MSQ. A letter of introduction, the instruments, the instructions and a self-addressed stamped envelop were mailed to participants. Responses were requested within two weeks and those who had not responded within that time period were sent a postcard reminder. A telephone number was included on the postcard requesting coaches to call if they had not received survey questionnaire and individual data sheet.. Individuals who had responded by this time were thanked. Teachers and coaches who had not responded within 7 days of the postcard reminder were sent a second mailing, and an immediate response was requested. Personal contact was also made to the subject at the site of nearest institutions/universities and data was collected.

2.4 Statistical Analysis

To assess the personal and educational characteristics of male and female coaches, Individual Data Sheet for the variables gender, age, degree, years as institution teachers, institution location, and institution size. These scores indicated the number and percentage of male and female coaches who participated in the study. The numbers and percentages were disaggregated and tabulated by the five demographic variables

3. RESULTS

3.1 Demographic Analysis

To assess the personal and educational characteristics of male and female coaches, the Individual Data Sheet on gender, age, degree, years as institution teachers, and institution size, were tabulated in numbers and percentages by the five demographic variables.

It is evident from Table 1 that in case of gender, there were more males than females, and for age, over 70 percent of the respondents were between 36 and 55 years. As far as sport coaching was concerned in the universities and the colleges, the majority of the respondents held a specialize diploma in coaching, and a little of them held the Master degree in the universities and colleges. Over 70 percent of respondents had been a sports coaches in universities and colleges for 11-15 years. The table also shows that the hundred

percent of sports coaches were from urban universities and colleges. Finally, the all the institutions of these sports coaches ranged in size from 400 students or less than 400.

TABLE 1
DEMOGRAPHIC CHARACTERISTICS OF COACHES (TOTAL N=35)

S. NO.	Variables	N	Percent
1.	Gender Male	23	65.71
	Female	12	34.29
2.	Age Younger than 35	04	11.43
	36-45	13	37.14
	46-55	14	40.00
	Older than 55	04	11.43
3.	Degree Status	35	100%
	Diploma in Coaching	00	0.00%
	Masters	00	0.00%
	Doctorate		
4.	Years of Experience	04	11.43
	1- 6	12	34.29
	7- 10	13	37.14
	11-15	06	17.14
	16 or More		
5.	Institution Size	35	100%
	400 Students or Less	00	0.00%
	401-1000 Students	00	0.00%
	More than 1000 Std.		

3. 2. Scale Analysis

To assess the frequencies of response for each of the 5 response options on the MSQ Likert Scale were analyzed. The 5 options and the assigned weight for each were: Weight Scale Option 1 Not Satisfied (NS) 2 Slightly Satisfied (SS) 3 Satisfied (S) 4 Very Satisfied (VS) 5 Extremely Satisfied (ES) Each of the 20 job dimensions was reported and the frequencies of response for each scale option were tallied and tabulated. The following 5-point Likert rating scale was applied to this study:

- 1 "Not Satisfied" (1.00 - 1.99)
- 2 "Slightly Satisfied" (2.00 - 2.99)
- 3 "Satisfied" (3.00 - 3.99)
- 4 "Very Satisfied" (4.00 - 4.99)
- 5 "Extremely Satisfied" (5.00)

From table 2, it is clearly evident that the three top ranking dimensions were policies, compensation, and responsibility. The coaches of different games and sports were "Satisfied" (3.00-3.99) about rewarded to institution system, pay in contrast to the amount of work and freedom to implement one's judgment on the job that did not go against their conscience. In the rest of the dimensions of job satisfaction, coaches of different games and sports were "Slightly Satisfied" (2.00-2.99).

TABLE 2
RANK ORDER OF COACHES OF DIFFERENT GAMES AND SPORTS ON MSQ DIMENSIONS

Dimension	N	Mean	Rank order
Policies	35	3.38	3
Compensation	35	3.02	3
Responsibility	35	3.01	3
Coworker	35	2.95	2
Creativity	35	2.93	2
Advancement	35	2.92	2
Supervision (HR)*	35	2.86	2
Achievement	35	2.85	2
Supervision (Technical	35	2.85	2
Recognition	35	2.84	2
Ability	35	2.83	2
Variety	35	2.80	2
Activity	35	2.79	2
Independence	35	2.75	2
Working Conditions	35	2.74	2
Status	35	2.73	2
Authority	35	2.68	2
Security	35	2.54	2
Moral Value	35	2.40	2
Social Service	35	2.37	2

4. DISCUSSION

Results of the analysis of demographic variables indicated that there males (65%) were more than females (40%), and for age, over 70 percent of the respondents were between 36 and 55 years. the majority of the respondents held a diploma in coaching. The experience of the coaches was 1-6 years (5%) followed by 7-10 years (48%), 11-15 years (29%) and more than 15 years (18%) in universities and colleges. It was also observed that the 100% of The sport coaches from urban universities and colleges ranged in size from 400 students or less than 400. When the scale analysis for rating the five responses was applied by averaged of obtained scores on the five items. Results of the study showed that the three top ranking dimensions were policies (3.38), compensation(3.02) , and responsibility (3.01). The coaches of different games and sports were “Satisfied” (3.00-3.99).. In the rest of the dimensions of job satisfaction, coaches of different games and sports were “Slightly Satisfied” (2.00-2.99).

5. CONCLUSIONS

1. The majority of the respondents had a specialize diploma in coaching,
2. Most of respondents had experience between 11-15 years in universities and colleges .
3. The coaches of different games and sports were “Satisfied” in Policies, compensation, and responsibility dimensions of Job satisfaction.
- 4.

5. In the rest of the dimensions of job satisfaction, coaches of different games and sports were "Slightly Satisfied".

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EFFECT OF JUMP ROPE PROGRAM ON THE FITNESS OF THE ELEMENTARY STUDENTS

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ABSTRACT

This research aimed at studying the effect of Jump Rope program on the fitness of the elementary students, and to compare pretest and posttest scores of the subjects participating in this study. A group of 37 students participated in the study from The King's School, Goa where the school was selected using the non-probable technique, and the students were selected using a convenient method. Three fitness tests were conducted pre and post Jump Rope program for 12 weeks. The three tests were nine min. R/W test, one-minute sit-ups test and standing broad jump test. To determine the difference between the pretest and posttest, paired sample 't' test was used. There was a positive effect found on the pretest and posttest.

Keywords: Cardiovascular Endurance, Fitness, Jump Rope Program

1. INTRODUCTION

“Lack of activity destroys the good condition of every human being, while movement and methodical physical exercise save it and preserve it”. -Plato Philosopher.

Few would dispute the importance of physical fitness. It contributes to health, job performance, and a higher level of readiness (**Robson, 2013**).

Fitness is the ability to live life, full and balanced. There is a happy outlook on life when a person is fit. Fitness is the absolute necessity of a young man as it breeds self-reliance and mental alertness. Physical fitness is vital for human being as it helps them to adjust well with the environment as the mind and body are in complete harmony.

Physical fitness is a state of health and well-being and, more specifically, the ability to perform aspects of sports, occupations and daily activities (**Wikipedia, 2019**). Physical fitness is not merely being able to perform certain feats that show one's strength. It is the condition of your body as a whole. Everyone has a different level of complete physical fitness which once reached, rewards you with a more productive and more enjoyable life.

Physical fitness is to the human body what fine-tuning is to an engine or instrument. It enables us to perform up to our potential. Fitness can be described as a condition that helps us for a better look, pleasant feel and do our best (**Mir, Para & Ganie, 2019**).

Clarke & Clarke (1984) found that physical fitness is not a static factor but one that varies from individual to individual and in the same person from time to time depending on causes. Physical fitness is the most popular and frequently used term in Physical Education.

According to **Nixon & Cozens (1964)**, it was the desire to establish a scientific approach to the development of physical fitness which formed the basis of the first meeting of Physical Education in 1885 when the profession of Physical Education originated. General fitness implies the ability of a person to live most effectively with their potentials, which depend upon the physical, mental, emotional, social and spiritual components of fitness which are highly interrelated. The authors define physical fitness by a group of five components namely muscular strength, muscular endurance, cardiorespiratory endurance, flexibility and body composition. Physical fitness is an essential aspect for every person and to test their fitness.

Jump-roping involves the muscles in arms and legs, and it also improves cardiovascular function and metabolism. The rope is a portable tool, and jump-roping require minimum space. On the other hand, jump-roping is incredibly cheap compared to other sports. Researchers have claimed that seven weeks of jump-roping workout for 15 to 50 minutes a day and three days per week significantly improves the agility of the teenage boys (17/3%). This study has proven that seven weeks of jump-roping workout is an effective way of improving the agility of the young boys. Also, the results have demonstrated a non-significant improvement in the speed performance with a rate of 0.29 per cent (50 meters running speed). Generally speaking, few researchers have studied the effect of jump-roping on speed (**Jahromi & Gholam, 2015**).

This study aims at improving the fitness of the students, i.e. cardiovascular endurance, strength and power. As the jump rope is convenient, it can be implemented as a part of daily physical activity routines.

The researcher has used a single pretest-posttest design to study the effect of jump rope program on the elementary students. The researcher has selected single pretest-posttest design because the study involves a single group of 37 students consisting of both

boys and girls to be tested before and after the intervention of the jump rope. Hence the researcher has selected this single group design.

The school was selected using non-probable technique, and the subjects were selected using the convenient method. The students were appealed by the researcher to participate in the Jump Rope program (experiment) conducted by the researcher. The ones who were willing to participate were considered as the sample. Three fitness tests were selected for testing the fitness of the students, i.e. Nine-minute run/walk test, one-minute sit-ups test and standing broad jump test. One week practice and training was provided to the students before the tests were conducted. After one week the three tests were conducted for the students before implementing the Jump Rope program. After 12 weeks of Jump Rope program, posttest was conducted for the above tests. The tests were taken under the same conditions and time of the pretest. Assuming that the students were beginners in jump rope, they were taught basic jump rope skill for one week.

The purpose of the present study was to find out the effect of jump rope activity on the fitness of the elementary students. Jump-roping is a low-cost physical activity; therefore its impact on physical fitness is being studied by various researchers.

1.1 Objectives

To study the effect of jump rope program on the fitness of the fifth standard student

1.2 Hypothesis

There will be a significant effect of jump rope program on the fitness of the fifth standard student

2. METHODOLOGY

2.1 Selection of Subjects

2.2 Selection of Variables

For the purpose of investigation, the following physical fitness were selected-

1. Weight,
2. Height,
3. Abdominal strength,
4. Explosive power of the legs and
5. Cardiovascular endurance

2.3 Administration of Tests

2.3.1 Weight

Purpose: Assessment of weight. Equipment: Calibrated Digital scale Procedure: the topic can stand on the platform of the balance with foot parallel. Weight are equally distributed on the foot. Minimum material are wear by the respondent, likes vest and short. Scoring: Weight of the topic is recorded in metric weight unit by scientist.

2.3.2 Height

Purpose: Measuring of standing height. Equipment: Height measurement Stand (Stadiometer). Procedure: the topic stands erect bare-footed with heels and back of the pinnacle touching the stands. The flat card-board is place informed the highest of the pinnacle for measuring of height of the respondent. Scoring: The measuring is taken to the closest cm.

2.3.3 Sit-Ups

Purpose: The purpose of the sit-up is to evaluate abdominal muscular strength and endurance. Procedure: To assume the starting position, the subject lies on his back with knees flexed, feet on floor, with the heels between 12 and 18 inches from the buttocks. The

arms are crossed on the chest with the hands on the opposite shoulders. The feet are held by the partner to keep them in touch with the testing surface. The subject, by tightening his abdominal muscles, curls to the sitting position. Arm contact with the chest must be maintained. The chin should remain tucked on the chest. The sit-up is completed when the elbows touch the thighs. To complete the sit-up the student returns to the down position until the mid-back makes contact with the testing surface. The timer gives the signal, "Ready, go," and the sit-up performance is started on the word "go." Performance is stopped on the word "stop." The number of correctly executed sit-ups performed in 60 seconds shall be the score. Rest between sit-ups is allowed, and the student should be aware of this before initiating the test. However, the objective is to perform as many correctly executed sit-ups as possible in the 60-second period. Scoring : Record the number of correctly executed sit-ups that are completed in 60 seconds.

2.3.4 Standing Broad Jump

Purpose: to measure the explosive power of the legs. Equipment required: tape measure to measure distance jumped, non-slip floor for takeoff, and soft landing area preferred. Procedure: The student stands behind a line marked on the ground with feet slightly apart. A two foot take-off and landing is used, with swinging of the arms and bending of the knees to provide forward drive. The subject attempts to jump as far as possible, landing on both feet without falling backwards. **Scoring:** The measurement is taken from take-off line to the nearest point of contact on the landing (back of the heels). Record the longest distance jumped, the best of three attempts.

2.3.5 Nine Minute Run/Walk

Purpose: The purpose of the distance runs is to measure maximal functional capacity and endurance of the cardio-respiratory system. Procedure: Subjects are instructed to run as far as possible in nine minutes. The students begin on the signal, "Ready, start." Participants continue to run until a whistle is blown at nine minutes. Walking is permitted, but the objective is to cover as much distance as possible during the nine minutes. Equipment and Facilities: Either of the two distance run tests can be administered on a 440-yard or 400-meter track or any other flat, measured area. Examples of appropriately measured areas are the 110 yard or 100-meter straightaway, other outside fields, or an indoor court area. Scoring : The mile and 1.5 mile runs are scored to the nearest second. The nine-minute are scored to the nearest ten yards or ten meters.

2.6 Statistical Analysis

To assess the pretest and posttest data of height, weight, sit-ups, standing broad Jump, and 9 minute run/Walk of school children, mean, median, mode, standard deviation, t-ratio and Pearson Moment Coefficients Correlation were computed. Significance level was set at 0.05 level.

3. RESULTS

To find out the significance of difference between pretest and posttest scores of physical fitness variables, mean, Standard deviation, t-ratio and Pearson Moment Coefficients Correlation were computed and data pertaining to this, has been presented in Table 1 to 3.

TABLE 1
DESCRIPTIVE ANALYSIS OF HEIGHT, WEIGHT AND FITNESS PERFORMANCE ON
PRE & POST TESTS

		Height (cm.)	Weight (Kg.)	Sit Ups	SBJ (M.)	9minR/W (M.)
Mean	Pre	142.38	37.54	24	1.07	1072.97
	Post	142.76	36.03	29	1.31	1231.89
SD	Pre	7.09	8.23	6.47	0.2	222.97
	Post	7.08	8.27	6.8	0.26	209.1
Minimum	Pre	128	24	13	0.8	580
	Post	129	23	15	1	860
Maximum	Pre	156	63	35	1.55	1500
	Post	156	63	44	1.95	1720

From table 1 reveals that the pretest and posttest mean value of the height of students from Students 5th class of The King's School, Goa were found 142.38 cm. and 142.76 cm. with the standard deviation of 7.09 and 7.08 respectively. The mean value of pretest and posttest of the weight of Students 5th class The King's School, Goa is 37.54 kg and 36.03 kg, and the standard deviation is 8.23 and 8.27 respectively. The mean value of sit-ups for pretest and posttest of Students 5th class of The King's school, Goa is 24.11 and 28.59, and the standard deviation is 6.47 and 6.80 respectively. The mean value of standing broad jump for pretest and posttest of Students 5th class of The King's School, Goa is 1.07m and 1.31m, and the standard deviation is 0.20 and 0.26 respectively. The mean value for pretest and posttest of 9 minutes run/walk of Students 5th class of The King's School, Goa is 1072.97 M. and 1231.89 M., and the standard deviation is 222.97 and 209.10 respectively.

It is seen that respective parameters have changed and also some physical factors have shown the difference. It shows that their endurance, power and strength have improved but to check whether the difference is significant or not, the t-test is implemented.

The minimum distance covered by the subject for a 9-minute run/walk test in pretest was 580 which increased to 860 in the posttest performance. The maximum distance covered by the subject in 9-minute run/walk test in pretest was 1500 which increased to 1720 in the posttest. The minimum distance covered by the students in standing broad jump was 0.80 in pretest performance which increased to 1.00 in the posttest. The maximum distance covered by the students in the pretest of standing broad jump was 1.55 which increased to 1.95 in the posttest performance. The minimum number of sit-ups performed by the students in the pretest was 13 which increased to 15 in the posttest. It is observed that there has been an improvement in endurance, power and strength of the students. To check whether the improvement is significant or not, the t-test is used.

The maximum sit-ups performed by the students in the pretest was 35 which increased to 44 in the posttest performance. The minimum weight of the student for pretest was 24 which decreased to 23 in the posttest. The maximum weight of the students in the pretest and posttest was the same. The minimum height of the student in the pretest was 129 which increased to 129 in the posttest. The maximum height of the student was

156, which remained the same for the pretest and the posttest. Thus, this shows that there is an improvement in the performance of the students in height, weight, sit-ups, standing broad jump and 9-minute run/ walk. It is seen that the performance of the students has improved in the respective parameters and to check whether the change is significant or not, the researcher uses the t-test.

TABLE 2
CORRELATION BETWEEN THE PRE-TEST & POST TEST SCORES OF FITNESS VARIABLES

Variable	Coefficient of Correlation	Sig.
Height	0.979	0.000
Weight	0.963	0.000
M. Endurance (Sit Ups)	0.700	0.000
Power (SBJ)	0.616	0.000
CV Endurance (9 min R/W)	0.620	0.000

From Table 2, reveals that the correlation between pretest and posttest of height is 0.979, which shows a very high correlation. The correlation between pretest and posttest of weight is 0.963, which shows a very high correlation. The coefficient correlation between the scores of sit-ups pretest and posttest is 0.7, which shows near to high correlation. The correlation between the scores of standing broad jump pretest and posttest is 0.616, which shows near to high correlation. The coefficient correlation of 9 minutes run/walk pretest and posttest is 0.62, which shows near to high correlation. All the scores are found significant at 0.01 level of confidence.

TABLE 3
PAIR SAMPLE 'T' TEST OF HEIGHT, WEIGHT AND FITNESS PERFORMANCE FOR THE COMPARISON OF PRE & POST TEST

Variables	Pretest Mean	Posttest Mean	MD	σ DM	t-ratio
Height	142.38	142.76	0.38	0.24	1.577
Weight	37.54	36.03	1.51	0.37	4.103
Strength Endurance	1.07	1.31	0.24	0.045	5.298
Abdominal Strength	24.00	29.00	5.00	0.685	7.295
Cardiovascular Endurance	1072.97	1231.89	158.92	31.03	5.122

From table 3 indicates that the t value for height was found to be -1.577 for the degree of freedom 36. The level of significance was 0.05. The t value for weight was found to be 4.103 for the degree of freedom 36. The significance level was considered to be 0.05. From the t value, it is interpreted that the difference that has been found is statistically significant. The t value of sit-ups was -5.298 for the degree of freedom 36. The significance level was considered to be 0.05. This shows that the t value difference found is statistically significant. The t value of standing broad jump was found to be -7.295 for the degree of freedom 36. The level of significance was considered to be 0.05. Thus the t value shows that the difference that has been found is statistically significant. The t value for a 9-minute run/walk found was -5.122 for the degree of freedom 36. The level of significance was considered to be 0.05. This shows that the t value difference found is statistically significant.

The results showed a positive effect on fitness tests performed by the subjects. There was improvement seen in the performance of the students. The height, sit-ups, standing broad jump and nine-minute run/walk scores have increased, and the weight has decreased in most participants.

4. DISCUSSIONS

The purpose of the study was to find out the effect of jump rope program on the fitness of the elementary students. A similar study was conducted by (Partavi, 2013) where it was proved that Jump Rope helps in Improving the Cardiovascular Endurance and agility of middle school student boys. Based on the data analyzed and interpreted it has been found that there is a significant effect of jump rope program on the fitness of the elementary students. The number of laps has increased in the Nine-minute run/walk test as compared to the pretest.

5. CONCLUSIONS

1. The jump rope program has shown a positive effect on the cardiovascular endurance of the students.
2. The fitness of the students has improved.

6. RECOMMENDATIONS

1. A similar study can be done to study the effect of jump rope activity with music on cardiovascular endurance.
2. Research can be done to examine the time required to acquire jump rope skills and its effectiveness.
3. A similar study can also be done to find out how jump rope benefits to athletes and common people of different age groups and genders.

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COMPARISON OF JOB SATISFACTION BETWEEN MALE AND FEMALE SPORT COACHES OF UTTAR PRADESH

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ABSTRACT

The purpose of study was to assess and compare the job satisfaction between male and female coaches of Uttar Pradesh. Thirty Five (Males= 23, Females=12) coaches from colleges and universities located in urban region of Varanasi district . were selected as the sample for the study. The MSQ was used to measure job satisfaction. It is a gender neutral instrument that can be administered to either groups or to individuals. The instrument utilizes 20- dimension Likert-type scale format and samples both intrinsic and extrinsic_reinforcement dimensions with a total of 100 items. To assess the job satisfaction between male and female sport coaches, Mean, SD and t-ratio were computed for each dimension of MSQ. The results of study revealed that The majority of the male and female coaches from urban area were found experienced in their job. The coaches of different games and sports were found satisfied from their job in colleges and universities in urban area of Varanasi region. Significant differences were found between the male and female coaches on ability utilization, authority and social service dimensions of job satisfaction only.

Keywords: Job Satisfaction, Males, Females, Sport Coaches, MSQ

1. INTRODUCTION

Job satisfaction is a complex variable and is influenced by situational factors of the job as well as the dispositional characteristics of the individual (**Sharma, 2015**). Job satisfaction is defined as member's attitude towards their present working conditions. Job satisfaction is a pleasurable emotional state of the appraisal of one's job; an effective reaction and an attitude towards one's job. No doubt job satisfaction is an attitude but one should clearly distinguish the objects of cognitive evaluation which are affect (emotion), beliefs and behaviours (**Weiss, H.M. 2002**). Hence, Job satisfaction is an attitude towards job taking into account feelings, beliefs and behaviours. According to Dictionary.com, job satisfaction is an act of satisfying; fulfillment; gratification. It is the state of being satisfied or contented. It is the cause or means of being satisfied. According to Dictionary of Education, job satisfaction is the quality, state and level of satisfaction as a result of various interests and attitudes of a person towards his job. It is the desire or undesired with which employees view their work. It expresses the extent of match between the employer's expectations of the job and rewards that the job provides. The term 'Job Satisfaction', however, lacks adequate definition (**Hertzberg et al. 1957**) as well as a satisfactory theory about its meaning. The difference in a broad spectrum of views seems to be caused firstly by the various nature of jobs that individuals perform; secondly the attempts to conceptualize job satisfaction in a variety of ways by different disciplines like Psychology, Sociology, Education and Management etc., and finally, the variety of methods employed by various researchers to study job satisfaction. It is widely accepted as psychological aspect of effective functioning in any profession. The Job Satisfaction is an attitude which results from a balance and summation of many specific likes and dislikes experienced in connection with job. Katzell remarks that the term job satisfaction has been used in a variety of ways interchangeably with job morale, vocational satisfaction and job attitude by various authors.

Job Satisfaction can be an important indicator of how employees feel about their jobs and a predictor of work behaviours such as organizational citizenship (**Organ & Ryan, 1995**), absenteeism, (**Wegge et. al., 2007**). and turnover (**Saari & Judge, 2004**). Further, job satisfaction can partially mediate the relationship of personality variables and deviant work behaviors (**Mount, Ilies, & Johnson, (2006)**). **Aamodt, (2009)** defines job satisfaction as the attitude an employee has toward his job **Edwards, et al. (2008)** refers to job satisfaction as an evaluative judgment about the degree of pleasure an employee derives from his or her job that consists of both the affective and cognitive components. Job satisfaction is described as the feelings of employees resulting from the assessment of their job. It can be negative, positive, or moderate. (**Moser and Galais (2007)**) highlighted that employee's ability and opportunities aid to improve their satisfaction of the job level.

2. METHODOLOGY

2.1 Selection of Subjects

Thirty Five (Males= 23, Females=12) coaches from colleges and universities located in urban region of Varanasi district . were selected as the sample for the study and all were also asked to participate in this study .

2.2 Description of Questionnaire

The MSQ was used to measure job satisfaction. It is a gender neutral instrument that can be administered to either groups or to individuals. The instrument utilizes 20-

dimension Likert-type scale format and samples both intrinsic and extrinsic_reinforcement dimensions with a total of 100 items. Internal consistency reliability of the MSQ as estimated by the Hoyt's analysis-of-variance method show reliability coefficients for 83 percent of the groups at .80 or larger and only 2.5 percent lower than .70. The coefficient for each dimension ranged from .96 to .75. and a coefficient of .95 was obtained for the group on the MSQ.

2.3 Statistical Analysis

To assess the job satisfaction between male and female sport coaches, Mean, SD and t-ratio were computed for each dimension of MSQ. The significance level was set at .05 level.

3. RESULTS

To find out the significant differences between male and female sport coaches, Mean, SD and t-ratio were computed for each dimension of MSQ and data pertaining to this, has been presented in Table 1

TABLE 1
SIGNIFICANCE OF DIFFERENCES BETWEEN MEAN SCORES OF MALE AND FEMALE COACHES ON TWENTY DIMENSIONS ON JOB SATISFACTION

Dimensions	Mean		MD	σ DM	t-ratio
	Male	Female			
Ability Utilization	13.15	15.53	2.38	1.01	2.35*
Achievement	14.40	14.13	0.27	0.74	0.36
Ability	13.45	14.67	1.22	0.61	1.96
Advancement	14.65	14.60	0.05	0.91	0.06
Authority	14.15	12.40	1.75	0.61	2.88*
Policies	17.70	15.80	1.90	1.13	1.68
Compensation	15.40	16.60	1.20	1.15	1.05
Coworker	14.40	15.27	0.87	0.81	1.07
Creativity	14.80	14.53	0.27	1.09	0.25
Independence	13.65	13.93	0.28	0.73	0.39
Moral Value	12.45	11.53	0.92	0.64	1.44
Recognition	14.70	13.53	1.17	0.82	1.42
Responsibility	14.90	15.27	0.37	0.71	0.52
Security	12.75	12.67	0.08	0.83	0.63
Social Service	12.55	10.93	1.62	0.68	2.37*
Social Status	13.75	13.60	0.15	0.64	0.23
Supervision (Human Relation)	14.14	14.27	0.13	0.77	0.18
Supervision (Technical.)	13.95	14.73	0.78	0.93	0.85
Variety	13.90	14.20	0.30	0.91	0.33
Working Conditions	13.45	14.07	0.62	0.85	0.72

*Significance at .05 level, $t_{.05}(33) = 2.03$

It is evident from table 3, that the statistically significant differences were found between the male and female coaches on ability utilization, authority and social service dimensions of job satisfaction, as the obtained t-values of 2.35, 2.88 and 2.37 respectively were higher than the required t-value of $t_{.05}(33) = 2.03$. But, there were no statically significant difference between the male and female coaches in rest of the

seventeen dimensions of job satisfaction i.e. Achievement, Activity, Advancement, Company Policies and practices, Compensation, Co-worker, Creativity, Independence, Moral Value, Recognition, Responsibility, Security, Social Status, Supervision (HR), Supervision (Technical), Variety, and Working Conditions, as the obtained t-values of 0.36, 1.96, 0.06, 1.68, 1.05, 1.07, 0.25, 0.39, 1.44, 1.42, 0.52, 0.63, 0.23, 0.18, 0.85, 0.33 and 0.72 respectively were less than the required t-value to be significant.

4. DISCUSSION

Activity and Moral Values were two aspects of the job that contributed to high satisfaction of the respondents in this study. It is encouraging for aspiring physical education teachers to know that physical education teachers find satisfaction in doing the many tasks associated with their jobs, and that these tasks and responsibilities do not conflict with their religious beliefs. To find out the significant differences between male and female coaches, t-ratio was computed. The statistically significant differences were found between the male and female coaches on ability utilization (2.35), authority (2.88) and social service (2.37). But, there were no statistically significant difference between the male and female coaches in rest of the seventeen dimensions of job satisfaction i.e. Achievement (0.36), Activity (1.96), Advancement(0.06), Company Policies and practices (1.68), Compensation (1.05), Co-worker (1.07), Creativity(0.25), Independence (0.39), Moral Value (0.39), Recognition (1.44), Responsibility(1.42), Security(0.52), Social Status (0.63), Supervision (HR)(0.23), Supervision (Technical) (0.18), Variety(0.85), and Working Conditions(0.72).

5. CONCLUSIONS

6. The majority of the male and female coaches from urban area were found experienced in their job.
7. The coaches of different games and sports were found satisfied from their job in colleges and universities in urban area of Varanasi region.
8. Significant differences were found between the male and female coaches on ability utilization, authority and social service dimensions of job satisfaction only.

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COMPARISON OF BODY COMPOSITION BETWEEN DANCER AND NON DANCER FEMALES.

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ABSTRACT

Dance is a form of art that normally involves rhythmic movement of the body and accompanied with music. Dance helps to extend the limits of human physical ability, expressiveness and spirit. When it comes to health dance can be a very effective way of establishing a lasting healthy living. Anecdotally it can be said that dance potentially motivate and excite young people. Dance provides an active, non-competitive form of exercise that has potential positive effects for physical health as well as mental and emotional wellbeing (Chatterjee, 2013). It has the potential to motivate and excite people and it can be a way of engaging people in physical activity (Clippenger, 1997). As a physical activity and a creative art form, it is believed that dance can make a significant contribution to the healthy-living agenda (Marshall, Sarkin, Sallis & McKenzie, 1998). Dance therapy as exercise is known to increase the neurotransmitters called endorphins which increase a state of well-being. Dance increases total body movement, which helps to improve circulatory, respiratory, skeletal, and muscular systems (Quin, Redding & Frazer, 2007). Indian classical dance involves systematic aerobic workout definitely have far reaching positive impact on maintenance of healthy body composition. As a dance by passion the author strived to conduct a research study to analyze the difference of body composition between dancer and non dancer females. The investigator randomly selected 30 females from various dance schools and 30 girls from the hostels of university of kalyani as the subjects. the skin folds of the sites thigh, suprailiac and triceps were recorded with the help of skin fold measurements and lean mass, fat mass, body fat percentage were estimated with the help of soft ware. It was found that the dancer females had significantly lower levels of BF% and Fat Mass in comparison but did not vary with regard to lean mass.

Keywords: Body composition, Dancer, Non Dancer.

1. INTRODUCTION

Dance is a form of art that normally involves rhythmic movement of the body and accompanied with music. Dance helps to extend the limits of human physical ability, expressiveness and spirit. When it comes to health dance can be a very effective way of establishing a lasting healthy living. Anecdotally it can be said that dance potentially motivate and excite young people. Dance provides an active, non-competitive form of exercise that has potential positive effects for physical health as well as mental and emotional wellbeing (**Chatterjee, 2013**). It has the potential to motivate and excite people and it can be a way of engaging people in physical activity (**Clippenger, 1997**). As a physical activity and a creative art form, it is believed that dance can make a significant contribution to the healthy-living agenda (**Marshall, Sarkin, Sallis & McKenzie, 1998**). Dance therapy as exercise is known to increase the neurotransmitters called endorphins which increase a state of well-being. Dance increases total body movement, which helps to improve circulatory, respiratory, skeletal, and muscular systems (**Quin, Redding & Frazer, 2007**). Indian classical dance involves systematic aerobic workout definitely have far reaching positive impact on maintenance of healthy body composition.

Dance is an enjoyable health promoting physical activity which many people worldwide incorporate into their lifestyles today. This physical activity appeals to some who may not be active and therefore may be another alternative of exercise. Dance for health has become an important factor in the prevention, treatment and management in several health circumstances. It is not only significant for your physical health but it also contributes to your mental health and subsidizes social communication. Dance is an art which is learned from many cultures.

The prime purpose of the study was to analyze the difference of body composition between dancer and non dancer females.

The author is of the view that the findings of the present study will definitely enhance the enthusiasm of females towards dance for maintenance of proper and health and body.

2. METHODOLOGY

2.1 Selection of Subjects

The investigator randomly selected 30 females from Nupur dance academy a renowned dance school of Kalyani, West Bengal and 30 girls from the hostels of university of Kalyani as the subjects.

2.2 Selection of Variables: With a view to assess the difference on body composition the author selected the most crucial body composition variables Body fat %, Fat mass and lean mass as the variables of the study.

2.3 Method of Measurement: The scholar initially estimated the skinfold measurements of the sites thigh, triceps and supra iliac with the help of pinch with the help of skinfold calliper and with the help of computer software assessed the body composition variables Body fat %, Fat mass and lean mass.

2.4 Criterion measure

The skin-folds of the sites thigh, supra iliac and triceps were recorded with the help of skin-fold measurements and lean mass, fat mass, body fat percentage were estimated with the help of soft ware.

2.5 Statistical Analysis: The scholar at the beginning computed descriptive statistics like mean SD range and further computed inferential statistics i.e. independent samples t test for assessing the degree of difference between the means.

3. RESULT

The investigator collected data from the volunteers analyzed the data with help of SPSS soft ware 16 version which are presented hereunder.

Initially descriptive statistics was computed to locate calculate the levels of dispersion which was followed by inferential statistics.

TABLE 1
MEAN AND SD OF AGE HEIGHT AND WEIGHT FOR NON DANCER FEMALES.

	N	Minimum	Maximum	Mean	Std. Deviation
ND Age yrs	30	20	27	22.40	1.453
ND Height cms	30	114	155	146.93	7.904
ND Weight kgs	30	38.62	78.40	56.0007	10.35558
Valid N (listwise)	30				

From Table 1, it is clear that the mean age, height and weight of the non dance girls are 22.40, 146.93 and 56,0007 and their SD are 1.453, 7.904 and 10.355 respectively.

TABLE 2
MEAN AND SD OF AGE HEIGHT AND WEIGHT FOR DANCER FEMALES.

	N	Minimum	Maximum	Mean	Std. Deviation
Dan age	30	14	28	20.53	3.608
Dan Height(cm)	30	145.0	167.0	153.993	4.7837
Dan Weight(kg)	30	40.5	73.0	53.283	8.1332
Valid N (listwise)	30				

From Table 2, it is clear that the mean age, height and weight of the non dance girls are 20.53, 153.993 and 53.283 and their SD are 3.608, 4.783 and 8.133 respectively.

TABLE 3.
MEAN AND SD OF BODY COMPOSITION FOR NON DANCER FEMALES.

	N	Minimum	Maximum	Mean	Std. Deviation
BF %	30	19	39	27.70	4.669
fat mass	30	8	32	16.70	5.700
lean mass	30	30	54	40.90	6.718
Valid N (list wise)	30				

From Table 3, it is clear that the mean of BF % Fat Mass and Lead Mass of the non dance girls are 27.70,16.70 and 40.90 and their SD are 4.669, 5.700 and 6.718 respectively.

TABLE 4
MEAN AND SD OF BODY COMPOSITION FOR DANCER FEMALES.

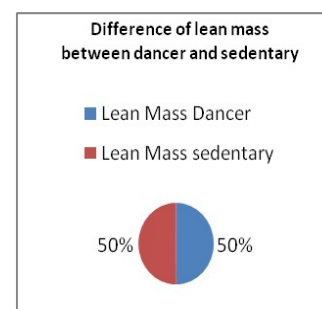
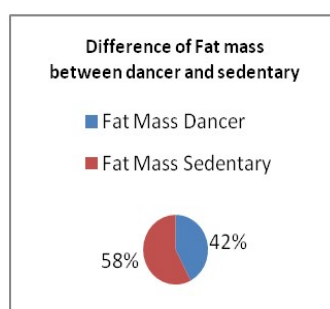
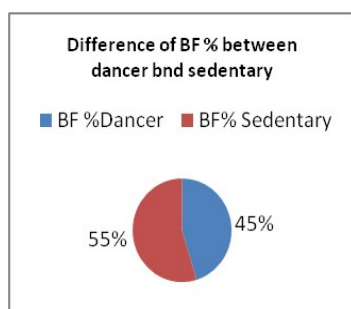
	N	Minimum	Maximum	Mean	Std. Deviation
BF %	30	14	46	22.93	6.464
Fat Mass	30	7	24	12.23	4.116
Lean Mass	30	25	58	40.73	6.736
Valid N (listwise)	30				

From Table 4, it is clear that the mean of BF % Fat Mass and Lead Mass of the Dancer girls are 22.93, 12.23 and 40.73 and their SD are 6.46, 4.116 and 6.736 respectively. To locate the degree of difference between the means paired samples t test was computed.

TABLE 5

Pair	Variables	MD	SD	Σ DM	Df	t-ratio	Sig. (2-Tailed)
1	BF % - BF %	4.767	7.677	1.402	29	3.401	.002
2	Fat Mass - fat mass	4.467	7.660	1.398	29	3.194	.003
3	Lean Mass - lean mass	.167	11.274	2.058	29	.081	.936

From table 5 and pie diagrams presented above it is clear that BF % and Fat Mass of Dancer females are significantly lower in comparison to that of the Non Dancers.



4. DISCUSSION

So far the pedagogy of Physical Education and Sport is concerned Dance is considered as an inextricable part of the whole process. Dance involves thorough and systematic movement of human body parts. It also caters for well-designed cardiorespiratory workout. In the present society people are getting prey to uneven distribution of body composition due to passiveness, people suffering from obesity and related health issues. On the contrary especially the women are supposed to exhibit and more poised body. Considering the above facts, the scholar with a view to assess the impact of classical dance forms on body composition of the females premeditated for the present study. It is clear from the research findings that the Body fat percentage of the non-dancer or sedentary girls is 27.70 while that of dancer girls is 22.93 inferential statistics show that the difference is significant at .002 level. The Fat mass of the non-dancer girls is 16.70 and that of dancer girls is 12.23 which is also significant at 0.003 level. The research findings of some of the eminent scholars stated in the introductory part of the writeup claims positive and far reaching

positive impact of dance on health and fitness of individuals. Thus it can also be deduced that the findings of the present study is well-suited with the findings of other eminent researchers.

5. CONCLUSION

From the investigation it was revealed that the dancer females have significantly lower levels of BF% and Fat Mass in comparison to their sedentary counterpart but did not vary with regard to lean mass. Thus the author is of the view that Indian classical dance is not only an art but also a very good physical activity which can benefit the females for maintenance of good health vigor and body composition.

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**EFFECT OF COMBINED YOGIC AND PHYSICAL EXERCISE
PROGRAM ON SELECTED PSYCHO-SOMATIC
PARAMETERS OF ATTENTION DEFICIT
HYPER ACTIVE CHILDREN**

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ABSTRACT

Attention deficit and Hyper activity are some of the behavioral issues experienced among students in educational institutions especially in schools. Such children are usually referred to clinics for medical interventions. This medicines may have side effect. In such scenario the researcher tried out an alternative procedure to improve the said condition of the children without medication. The purpose of the study was to examine the effect of combined yogic and physical exercise Program on selected Psycho-somatic variables of attention deficit hyper active school children. The subject for the study were seven male students of Christ Academy school, new Mumbai, Maharashtra, who clinically certified as having ADD/ADHD and their age group was between 12 and 15 years. To assess ATT and IMP of the subjects CAT-C, CAT-P, CAT-T standardized scales were used. The data was analyzed using 'paired t-test'. Results revealed that there is a significant improvement in IMP, but there is no significant improvement in ATT of the subject.

Keywords: Attention, Physical Exercise,, Disorder, Deficiency, Teacher, Impulsivity, Yoga

1. INTRODUCTION

ADD/ADHD is a chronic condition that affects millions of children and often persists into adulthood. A recent research point out that among 362 children between the age of 3-12 years attending the outpatient clinic, 64 were found to have ADHD. The sex distribution of these children attending clinic was 58% boys and 42% girls and the mean age of boys was 9.1 years and that of the girls was 7.9 years.

These children are usually considered as trouble makers, naughty, nuisance and headache at schools, family and in society. Most of the schools try to keep them away to solve the problem. In families, these children are taken to doctors and are given some medicines to solve or minimize the issue, but these medication in turn produce some side effects. Here the researcher suggests a new method named as "Chavara Training Program"- a combination of yoga and physical exercise- as an intervention procedure to improve attention and impulsivity. The main of the study is to examine the effect of chavara training Program (a Program which is a combination of yoga and physical exercises) on attention and impulsivity of ADD/ADHD children. It was hypothesized that there would be improvement in ATT and IMP due to six months chavara training Program.

2. METHODOLOGY

2.1 Selection of Subjects :

For the purpose of present study 7 male students who where clinically certified as having attention deficit and hyper active children from Christ academy, New Mumbai, Maharashtra were selected. They were of the age group of 12 to 15 years

2.2 Selection of Variables :

Chavara training Program is the independent variable and ATT and IMP were selected as dependent variables

2.3 Selection of Tool :

CAT -C, CAT-P, CAT-T a standard tool use worldwide to assess attention, impulsivity etc. was utilized for the study.

2.4 Collection of Data :

ATT and IMP scores were collected before and after the implementation of chavara training Program.

2.5 Training Protocol:

The Chavara training Program (consist of 15 minutes yogasanas, 15 minutes physical exercises and 5 minutes relaxation. Total Training = Six months, (35min/day & 5 days/week. Physical Exercises and yogasan are mentioned below

Yogasanas	Physical Exercises	Relaxation
Surryanamaskar, Padmasana, Parvatasana ,Sukhasana & Sukhasana	Spot runs, Stretching exercises & Aerobic exercises	05 minutes

2.6 Statistical Technique :

For analysis of collected data, Mean, Standard, deviation, and 'paired t-test' was applied for testing hypothesis of 0.05 level of significance.

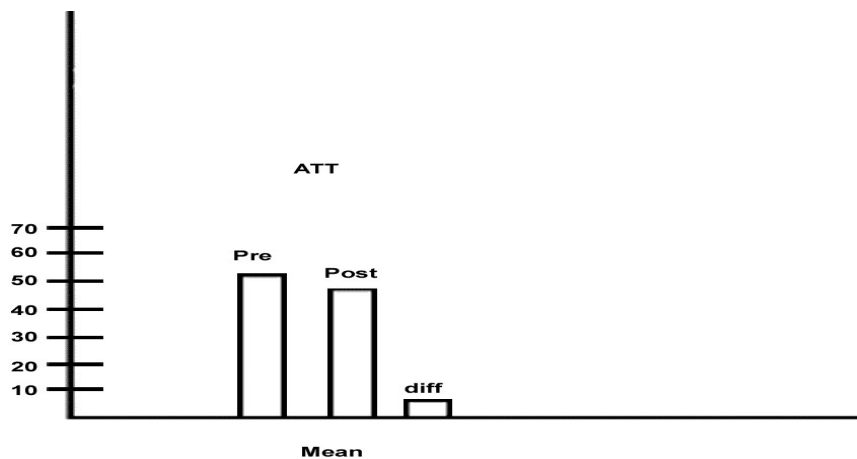
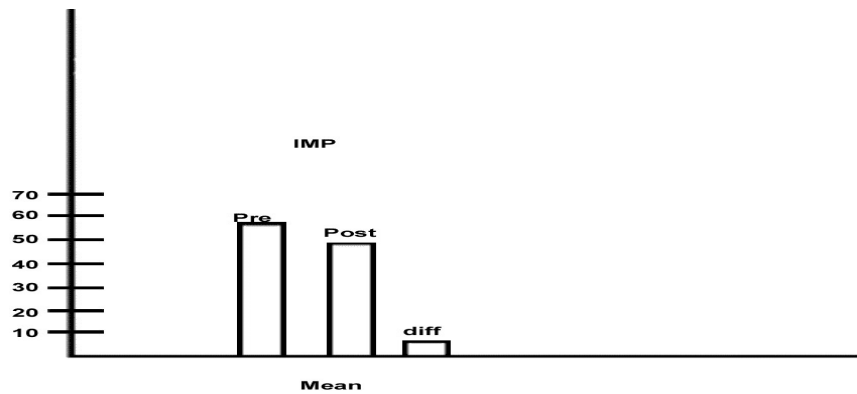
3. RESULTS

TABLE 1
MEAN, S.D, S.E ERROR OF MEAN, MEAN DIFFERENCE SE ERROR OF MEAN AND 't'
VALUE OF ATT AND IMP SCORES.

Variables	N	Mean		S.D	M.D	SE	df	't'	Sig
		Pre	Post						
ATT	7	53.43	48.52	6.642	4.857	2.712	6	1.791	0.10
IMP	7	57.7	49.86	3.76	7.857	1.534	6	5.124*	0.025

*Significant at 0.05 level
 $t_{0.05(6)} = 1.942$

FIG 1
GRAPHICAL REPRESENTATION OF MEANS AND MEAN DIFFERENCE OF PRE AND POST TEST SCORES OF ATT AND IMP



4. DISCUSSION

The present study aimed to find out the effect of chavara training Program (a Program of combination of yogic and physical exercises) all selected psycho-somatic variables ATT and IMP of ADD/ADHD male boys aged between 12 and 15 years studying in Christ academy, New Mumbai, Maharashtra were selected. The selected subjects assessed in ATT and IMP using CAT tool. This served as the pre-test score. Then the subjects were given six months chavara training Program, after which they were again assessed in ATT and IMP which is the post test score. The data was analyzed by 'paired t-test' for testing the hypothesis at 0.05 level of significant.

The result of present study revealed that there is a significant improvement in impulsivity (IMP) of the subject as the obtained 't' value of 5.1214 is much higher than the required table value of 1.942 at 6 df of 0.05 level of significant. But at the same time there is no significant improvement as far as (ATT) attention of the subjects is concerned as calculated 't' 1.791 is less than the required table value of 1.942 at 0.05 level. Hence the Hypothesis is rejected in the case of impulsivity and accepted in the case of attention.

5. CONCLUSION

On the basis of the finding of the present study we may conclude that the chavara training Program is effective in improving the impulsivity (significantly) and attention (insignificantly) of the ADD/ADHD children.

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