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A COMPARATIVE STUDY OF LEADERSHIP QUALITY OF INDIVIDUAL AND TEAM SPORTS

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Keywords: Leadership Quality, Team Sports.

1. INTRODUCTION

Leaders are born; we can not hope to develop them, only to establish them. Leaders should always be fund in the act of "leading"; quiescence is the followers. "Leadership action is more than words describe-et is a quality of interaction which takes on added meaning for people as they live it and study its significance."

Generally, larger groups need more structured leadership which may not be available. Moreover, larger groups are likely to have potentially disruptive coalition than is true among smaller groups. While finally larger groups often are focused on a wider variety of both group and personal that in larger groups shifts in cohesion are not likely to be as abrupt as it true in smaller groups. However, when a larger group's more difficult to change the quality of "we feeling" among members.

If the team does well, and the leadership and norms established by the conservative coalition; are satisfactory, this initial clique is not countered. However, if things do not go well, it is highly possible that a revolutionary coalition will form, composed of medium or low status members, whose opinions assume some power because of the lack of effectiveness of the norms of the first formed conservative coalition. The purpose of the study was to compare the leadership quality between participants of individual and team sports. It was hypothesized that there would be no significant difference of leadership behavior between the participants of individual & team sports. For the purpose of present study sixity female Inter-university players were selected by using random technique. The subjects belonged to different categories of sports such as individual sports (track & Field and Swimming) Team games (Football Basketball) The age of the subjects ranged from 17 to 25 years.

Boucher conducted a study of effect of the congruence of leadership style and task relevant ability on leadership effectiveness of intramural/recreational sports director co-varies with the congruence of leadership style and task relevant ability. In effect, it was and investigation of the adequacy of situational leadership Theory (SLT) in a selected sport environment. Using the lead self Instrument, the leadership style of 174 randomly selected intramural/ recreational sport directors was ascertained. Leadership style was considered to be two dimensional consisting of task oriented and relationship oriented behavior.

2. METHODOLOGY

A likert type questionnaire prepared by L.I. Bhushan (Head and Prof., Department of Psychology, Bhagalpur University, Bhagalpur) consisting 30 items measures authoritarian vs. democratic leadership was employed for this study. The Leadership Preference Scale was chosen for this study because it is suitable for Indian Population & mends for the same age group. The reliability & validity of this leadership Preference Scale is high and administrative feasible. The players of different individual & team sport were asked to underline only one of the five alternative responses for a positive item (i.e. an agreement with which indicated preference for democratic leadership) the scoring was done as following:

Responses Agree	Strongly Disagree	Agree	Undecided	Disagree	Strongly
Scores	5	4	3	2	1

In case of negative items (i.e, an agreement with which indicated preference for autocratic leadership) the scoring was reversed. The total score was the sum of the scores on all the statement.

To compare between team and individual sport, questionnaire were distributed and mailed and after collecting the questionnaire score were assigned. On the basis of those scores mean, standard deviation and

difference between mean of team game and individual game were draw out, t-ratio was employed.

3. FINDINGS

To find out the comparison between team games & Individual sports, t-test was employed which is presented in table.

Table 1: Comparison of the Scores of Leadership Behavior of the Participants of Team Game and Individual Sport

Groups	Mean	SD	DM	DM	T-ratio
Individual	102.033	11.935	4.133	3.021	1.368
Team	97.9	11.463			

** Significance 0.05 Level, Tab. 05 (two tailed) =2.042*

Table shows that mean of individual group is 102.022 and standard deviation is 11.935 and on other hand mean of team group is 97.9 and standard deviation is 11.436. t-value obtained is 1.368 which is insignificant of the tabulated value needed for significance at .05 level is 2.042.

Discussion of Findings an insignificant difference in leadership between the participants of individual and team sport was obtained by means of t-test. This insignificant difference my be because the participants practices in similar kind of environment irrespective of team or individual sport. Sport participations being gregarious in true, they might be mixing with others before as well as after training. Over and above this, the influencing factors for leadership might be their background, the background training and behavior of coaches, the opportunities for development of leadership qualities etc.

Since these factors were also similar for participants of both individual and team games, hence, insignificant difference might have been obtained. On the basis of the results of the study hypothesis framed in chapters one is accepted as insignificant difference between participants of individual sport and team games was obtained.

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COMPARATIVE STUDY OF ACADEMIC PERFORMANCE OF NATIONAL LEVEL PLAYERS & NON-NATIONAL LEVEL PLAYERS OF KV BAAD, MATHURA

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1. INTRODUCTION

The Researcher feels that to execute any skill or technique at high level it requires proper cognitive fitness along with the physical fitness. That is coordination of cognitive domain is necessary with the physical domain of a player to perform at the high level. Further it is says that if a player is playing at high level say national level and performing better than he must possess qualities and potential to perform well in other aspects of life like academics but if a player is not doing well in other streams it means he is not putting efforts and not giving proper attention and time to that particular stream. Hence it should not understood as that he is not having potential to perform well in other streams. It is also pertinent to say that managing time along with the interest plays an important role while performing in any stream or aspect of life. In the opinion of researcher as the school players are practicing mostly during their free time or in non-academic periods hence they should not face any problem in performing well in academics or they should not suffer any academic loss.

2. RESEARCH OBJECTIVE

1. To study the academic performance of national level players KV baad Mathura.
2. To study the academic performance of non-national level players KV baad, Mathura.
3. To study and compare academic performance of national level players & non-national level players of KV baad, Mathura.
4. To study and compare academic performance of girls national level players & non-national girls student of KV baad, Mathura.
5. To study and compare academic performance of boys national level players & non-national boys student of KV baad, Mathura.

3. HYPOTHESIS

There will be no significant difference between the means of academic performance of national level players and non-national plays of KV Baad, Mathura.

4. DELIMITATIONS

1. The study is delimited to national level players and non-national level players of KV Baad, Mathura.
2. The study does not distinguish between the socio-economic backgrounds of the students.
3. The study was conducted for the year 2016-2017.

5. METHODOLOGY

This research is based on primary and secondary data collected from KV Baad, Mathura. This study is focused on students of KV Baad, Mathura studying in the class 8^{th} to 12^{th} . 10 girl students and 10 boys students are selected as subject from national level and non-national level players category.

6. PERCENTAGE OF MARKS OF PLAYERS & NON PLAYERS

The table one is showing all the 40 subjects and their academic performance in terms of percentage and number of times they have represented KVS national sports meet which have been depicted by the term ‘frequency’. This table is also showing average percentage of all marks of national level players & non-national level players.

Table 1: Percentage of Marks of National Level Players & Non-National Level Players

	National Level Players				Non-National Level Players		
S.N.	**Name**	**Class**	**Frequency**	**% of Marks**	**Name**	**Class**	**% of Marks**
1.	X-P1	10	3	60	X-NP1	10	60
2.	X-P2	10	3	54	X-NP2	10	64
3.	X-P3	11	3	80	X-NP3	11	95
4.	X-P4	10	3	70	X-NP4	10	62
5.	X-P5	10	3	67	X-NP5	10	95
6.	X-P6	8	1	95	X-NP6	8	74
7.	X-P7	8	1	76	X-NP7	8	94
8.	X-P8	8	1	67	X-NP8	8	84
9.	X-P9	8	1	85	X-NP9	8	86
10.	X-P10	8	1	74	X-NP10	8	80
11.	Y-P1	10	1	95	Y-NP1	10	54
12.	Y-P2	10	1	78	Y-NP2	10	70
13.	Y-P3	8	1	63	Y-NP3	8	76
14.	Y-P4	8	1	94	Y-NP4	8	91
15.	Y-P5	8	1	83	Y-NP5	8	76
16.	Y-P6	8	1	87	Y-NP6	8	70
17.	Y-P7	8	1	44	Y-NP7	8	88
18.	Y-P8	8	1	76	Y-NP8	8	67
19.	Y-P9	8	1	70	Y-NP9	8	78
20.	Y-P10	10	2	60	Y-NP10	10	94
	Average of percentage			73.95	Average of percentage		77.90

**X-P = National level players girls.*
**Y-N = National level players boys.*
**X-NP = Non-national level players girls.*
**Y-NP = Non-national level players boys.*

Discussion

This table reveals that average of percentage of national level players is 73.95 and average of percentage of non-national level players is 77.90. The total difference between average of percentage of national level players and average of percentage of non-national level players is 3.95; which means that average of percentage of national level players is less then the average of percentage of non-national level players.

Average Percentage Of Marks Of Girls Players & Girls Non Players

In this sequence we have also compared the average percentage of all marks of girls national level players & girls non-national level players which is shown in table number Two.

Table 2: Average Percentage of Marks of Girls National Players & Girls Non-National Players

Girls National Level Players				Girls Non-National Level Players		
S.N.	**Name**	**Class**	**% of Marks**	**Name**	**Class**	**% of Marks**
1.	X-P1	10	60	X-NP1	10	60
2.	X-P2	10	54	X-NP2	10	64
3.	X-P3	11	80	X-NP3	11	95
4.	X-P4	10	70	X-NP4	10	62
5.	X-P5	10	67	X-NP5	10	95
6.	X-P6	8	95	X-NP6	8	74
7.	X-P7	8	76	X-NP7	8	94
8.	X-P8	8	67	X-NP8	8	84

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Girls National Level Players				Girls Non-National Level Players		
S.N.	**Name**	**Class**	**% of Marks**	**Name**	**Class**	**% of Marks**
9.	X-P9	8	85	X-NP9	8	86
10.	X-P10	8	74	X-NP10	8	80
	Average of percentage		72.80	Average of percentage		79.40

**X-P = National level players girls.*
**X-NP = Non-national level players girls.*

Discussion
This table reveals that average of percentage of national level girls players is 72.80 and average of percentage of non-national level girls players is 79.40. The total difference between average of percentage of national level girls players and average of percentage of non-national level girls players is 6.60; which means that there is a significant difference between average of percentage of national level girls players and average of percentage of non-national level girls players.

Average Percentage Of Marks Of Boys Players & Boys Non Players
In this sequence we have also compared the average percentage of all marks of boys national level players & boys non-national level players which is shown in table number Three.

Table 3: Average Percentage Of Marks Of Girls National Players & Girls Non-National Players

Boys National Level Players				Boys Non-National Level Players		
S.N.	**Name**	**Class**	**% of Marks**	**Name**	**Class**	**% of Marks**
1.	Y-P1	10	95	Y-NP1	10	54
2.	Y-P2	10	78	Y-NP2	10	70
3.	Y-P3	8	63	Y-NP3	8	76
4.	Y-P4	8	94	Y-NP4	8	91
5.	Y-P5	8	83	Y-NP5	8	76
6.	Y-P6	8	87	Y-NP6	8	70
7.	Y-P7	8	44	Y-NP7	8	88
8.	Y-P8	8	76	Y-NP8	8	67
9.	Y-P9	8	70	Y-NP9	8	78
10.	Y-P10	11	60	Y-NP10	10	94
	Average of percentage		75.00	Average of percentage		76.40

**Y-N = National level players boys.*
**Y-NP = Non-national level players boys.*

Discussion
This table reveals that average of percentage of national level boys players is 75.00 and average of percentage of non-national level boys players is 76.40. The total difference between average of percentage of national level boys players and average of percentage of non-national level boys players is 1.40; which means that there is no significant difference between average of percentage of national level boys players and average of percentage of non-national level boys players.

Academic Performance Of Players Participating in Sports For More Than One Time
Further Table number four is showing Academic performance of players participating KVS nationals sports meet for more than one time.

Discussion
This table shows that average of percentage of national level players who participated KVS nationals sports meet more than one time is 65.16. The average of percentage of all national level players is 73.95 and the average of percentage of all non-national level players is 77.90. This mean there is big difference between the percentage of all national level players who participated KVS nationals sports meet more than one time and all non-national level players.

Table 4 : Academic performance of players participating KVS nationals sports meet for more than one time

S.L.	Name	Class	% of Marks	Frequency
1.	X-P1	10	60	3
2.	X-P2	10	54	3
3.	X-P3	11	80	3
4.	X-P4	10	70	3
5.	X-P5	10	67	3
6.	Y-P10	10	60	2
	Average of percentage		65.16	-
	Average of percentage of all national level players		73.95	-
	Average of percentage of all non-national players		77.90	-

7. CONCLUSION

- There is no big difference between average of percentage of national level players and average of percentage of non-national level players.
- There is a significant difference between average of percentage of national level girls players and average of percentage of non-national level girls players.
- There is no significant difference between average of percentage of national level boys players and average of percentage of non-national level boys players.
- There is big difference between the percentage of all national level players who participated KVS nationals sports meet more than one time and all non-national level players.

The academic cost is high for the students who are continuously participating at national level sports meets in comparison to those who don't take part in sports activities regularly. No sufficient academic compensation or weightage whatsoever is being provided to the national players by the KVS administration.

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COMPARATIVE EFFECT OF DIFFERENT VIGOROUS TRAINING PROGRAM ON THE HYPERTROPHY AND STRENGTH EXTENSORS OF JUDOKAS

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ABSTRACT

The purpose of the study was to compare the two weight training programs on Judokas 60 physically active judo male players of Gwalior was randomly selected as subjects of the study. The pre data was collected after two or three trial repetitions.The cross sectional size of the muscles was measured with the gulick tape and the maximum strength was measured with the recommended by the Brown and Weir (28). After ten weeks of training again post data was recorded. The groups were compared by the ANCOVA (analysis of covariance). To see the significant difference and the result was presented in the form of mean and standard deviation and no significant difference was found among the groups

Keywords: Cross Sectional Size, Maximum Strength.

1. INTRODUCTION

Judo is a game that requires a high level of stamina and physical strength. Physical strength allows a judoka for good performance, and also helps with the physical contact within the game. Resistance training, also known as weight training, is the best way to increase physical strength for a judoka. Resistance training includes a set of exercises performed for a number of repetitions.

The quadriceps, hamstrings and calf muscles are all involved in the process of kuzushi. Taisabaki and Tsuri and kake, so they are the key muscle groups that should be strengthened during a training session. The core muscles around the abdomen and lower back should also be strengthened as part of a training regimen. Increasing physical strength in these muscle groups resistance-training exercises should simulate movements during bouts. Traditional resistance-training exercises such as the bench press or squats was strengthen a muscle group, but dynamic exercises such as lunges was help in strength training. Elite

Strength training has a powerful effect on muscle hypertrophy and strength. These adaptations are in response to factors such as degree of muscle tension, neural and hormonal adjustments. Muscle tension is a primary factor. As a consequence, high-intensity strength training (7580% of 1 RM) has been recommended to achieve both muscle hypertrophy and strength gains, because low to moderate strength training « 60% of 1 RM) does not seem to generate enough tension to produce gains of the same magnitude [25, 26, 27]. However, recent studies have shown that when low-intensity strength training (20 to 50% of 1 RM) is associated with vascular occlusion both hypertrophy and strength gains are similar to high-intensity training without vascular occlusion. It has been hypothesized that the hypoxia induced by vascular occlusion produces an additive effect on muscle hypertrophy and strength gains when associated to low-intensity strength training. A possible hypothesis for the additive effect of vascular occlusion is an enhancement in motor unit recruitment, as shown by greater EMG levels, which may produce greater strength gains.

Sports-Fitness-Advisor.com recommends using 50 percent of one rep max when lifting in a judo training program. Using lower weights and performing a higher number of fast-moving repetitions is also suggested. Lunges and shoulder presses are suggested resistance training exercise, as are self-weight-bearing exercises such as push-ups and pull-ups.

Resistance training has a fundamental role in physical activity programs, and has been recommended by many major health organizations in order to increase general health and fitness (1-5). Two of the most common goals of resistance training are increases in muscle strength and hypertrophy with athletic, aesthetic or health purposes as in chronic conditions such as sarcopenia and AIDS (6, 7, 8, and 9). The results obtained with resistance training is influenced both by mechanical and metabolic stimuli. Mechanical stimuli is directly influenced by the amount of weight lifted in each repetition and by the number of repetitions performed per set, and is often believed to be

one of the major determinants of the resistance training adaptations(10,11,12). However, some studies suggest that metabolic changes play an important role in gains of muscle size and strength, even when reduced work volume is performed (13, 14, 15, and 16). In the last 8 to 10 years, low-load training with blood flow restriction has attracted a lot of attention, both as a possible alternative to heavy resistance exercise in the rehabilitation setting and as a training method to increase muscle strength and size in healthy individuals. Several studies have shown that blood flow restriction by pressure cuffs in combination with low-intensity resistance exercise induces muscle mass increases at rates comparable with those seen with conventional strength training (20,21,22,23) and sometimes at even higher rates (18,24). In the studies that have included control groups that have trained at the same intensities and volumes but without cuff occlusion, the no occluded groups have generally made little if any gains in muscle size and strength (17, 18, 19, 22, and 23).

So in today's world of sport when every type of training is becoming scientific and advanced for the immediate and the pure results it is very necessary to invent some of this advancement in the training methods that is the purpose of the study to have a training method which really show quick and the actual results.

2. METHODOLOGY

60 male Judokas of Gwalior selected randomly to participate in the study as subjects. Subjects were not engage in any form of resistance training; however, they participated in regular training. They reported no lower extremity injury in the last six months. The subjects were instructed to keep the same level of physical activities throughout the study.

3. SELECTION OF VARIABLES

For the purpose of the study the following variables have been selected

- Hypertrophy(Cross Sectional Size)
- Strength Extensors of the legs

4. COLLECTION OF DATA

The pre data was collected after two or three trial repetitions and then the pre data was collected. The size of muscles was measured with the gulick tape and the Strength Extensors was measured was measured with the recommended by the Brown and Weir. After ten weeks of training again post data was recorded.

5. STATISTICAL ANALYSIS

Mixed models having group (general weight training group, vascular occluded weight training group, and control group), time (pre-and post-test), and leg (occluded, general and control) as a fixed factor and subjects as a random factor, for both strength gains (1 RM) and quadriceps cross-sectional area. The group was compared by the ANCOVA (analysis of covariance). To see the significant difference and the result was presented in the form of mean and standard deviation

6. RESULTS

Table 1: Descriptive Statistics for Occlusion Training, General Weight Training, and Control Group on Leg Girth

Group	Mean	S.D	Estimated Mean	Std. Error	N
Occlusion Training	50.02	3.77	50.06[a]	.247	5
General Weight Training	48.30	2.88	49.10[a]	.250	5
Control Group	48.88	2.38	48.02[a]	.251	5
Total	49.06	2.93			15

Table No, 1 shows the descriptive statistics for occlusion training, general weight training, and control group on Leg Girth in which the mean of leg girth of general weight training group is 48.300 ± 2.88, mean of Leg Girth of occlusion training group is 50.02 ± 3.77 and mean of Leg Girth of control group is 48.88 ± 2.38**.**

Table 2: Tests of Between-Subjects Effects of Occlusion Training, General Weight Training, and Control Group on Leg Girth

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Group	10.19	2	5.099	16.774	.000
Error	3.34	11	.304		
Total	36233.96	15			

Table No. 2 shows the test between the Subjects Effects of Occlusion Training, General Weight Training, and Control Group on Leg Girth where p value 0.00 is less than 0.05 so there is a significant difference in which the mean square of the group is 5.099, F value is 16.774 and type III sum of squares 10.197.

Table 3: Pair wise comparison of Occlusion Training, General Weight Training, and Control Group on Leg Girth

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.
Occlusion Training	General Weight Training	.962	.351	.058
	Control Group	2.038*	.352	.000
General Weight Training	Control Group	1.076*	.359	.037

Table No. 3 shows the pair wise comparison of the groups in which there was no significant difference found in the leg girth of the left leg among occlusion training and general weight training group but a significant difference was found among the occlusion training group and control group and general weight training group and control group.

Table 4: Descriptive Statistics for Occlusion Training, General Weight Training and Control Group on Maximum Leg Strength

Group	Mean	Std. Deviation	Estimated Mean	Std. Error	N
Occlusion Training	50.86	3.70	50.23[a]	.464	5
General Weight Training	48.44	4.01	49.48[a]	.468	5
Control Group	47.84	4.14	47.42[a]	.462	5
Total	49.04	3.90			15

Table No, 4 shows the descriptive statistics for occlusion training, general weight training, and control group on Maximum Leg Strength in which the mean of Maximum Leg Strength of general weight training group is 48.44 ± 4.01, mean of Maximum Leg Strength of occlusion training group is 50.86 ± 3.70 and mean of Maximum Leg Strength of control group is 47.84 ± 4.14.

Table 5: Tests of Between-Subjects Effects of Occlusion Training, General Weight Training and Control Group on Maximum Leg Strength

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Group	21.198	2	10.599	9.971	.003
Error	11.692	11	1.063		
Total	36297.270	15			

Table No. 5 shows the test between the Subjects Effects of Occlusion Training, General Weight Training, and Control Group on maximum leg strength where p value 0.03 is less than 0.05 so there is a significant difference in which the mean square of the group is 10.599, F value is 9.971 and type III sum of squares 21.198.

Table 6: Pair wise comparison of Occlusion Training, General Weight Training, and Control Group on Leg Girth

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.
Occlusion Training	General Weight Training	.756	.665	.839
	Control Group	2.815*	.652	.004
General Weight Training	Control Group	2.059*	.662	.030

Table No. 6 shows the pair wise comparison of the groups in which there was no significant difference found in the maximum leg strength among occlusion training and general weight training group but a significant difference was found among the occlusion training group and control group and general weight training group and control group.

7. DISCUSSION AND CONCLUSION

From the findings it is clearly indicates that there was significant relationship between Occlusion training and General weight Training. The reason for having the significant effect on the physical and physiological variables of the experimental group was that the program was designed in such a way that probably motivated the individuals of the experimental group to do their best.

In case of physiological variable Muscular Hypertrophy, the results of the study reveals that there was a significant improvement found. This is supported by more recent studies which consistently show that performing resistance training with partial vascular occlusion and low loads results in large gains in strength, muscular size and muscle fiber activation (Takarada et al., 2001; Takarada et al., 2004; Sumide et al., 2007; Leonneke & Pujol, 2009). Yet, these studies differed from this current study in that they all examined training protocols which isolated muscles groups of a single joint and trained for, and measured signals of hypertrophy. This present study however, examined whether partial vascular occlusion would be effective when paired with training aimed at increasing maximal power output during a task that involved a large amount of muscle mass across multiple muscle groups. It is well established that higher training volumes are necessary to greatly increase muscle size (Sale, 1992; Baechle & Earle, 2008). Due to these factors, the

improvements are likely not due to the commonly measured signals associated with hypertrophy, that were measured in previous studies examining vascular occlusion during resistance training. It is more likely that this training enhanced the functioning of the neuro-muscular system.

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SPORTS LAWS IN INDIA: AN ANALYSIS

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ABSTRACT

The expansion of life and horizon of education are giving new meanings and magnitude with every morning. Earlier the meaning of life was limited to Right to Life with dignity but now this life has its own expansion which includes right to education along with overall development of body and mind. And the overall development body and mind is directly proportional to the physical activities. The beginning of these activities can be understood by the physical activities and exercise of the mother during pregnancy as advised by the doctors/experts for the proper development of the fetus. And this role of physical activities continues till the last breath in varied forms. In fact this can be said that sports, health and life are inter-linked, inter-dependent, and indivisible as well as are highly essential for a healthy survival. This is with the development and advancement of the society and technology that sports, health and life are now not left untouched with law. When the life style has crossed national geographical boundaries specially in the sphere of sports and physical activities, it become essential to think about the component of Sports Law. Present piece of work is just an idea about the wide-ranging overlapping laws on the sports issues in India with the scheme of Sports laws in various developed countries. Lastly, piece of writing is concluded with a scheme of Comprehensive Sports Code.

Keywords: Sports law, Indian law on sports.

1. INTRODUCTION

This is said that Health is the precondition for Life and Fitness is the precondition for Health. Fitness, which may be understood through different means or modalities, means physical and mental fitness. On some occasions exercise, dance, yoga or aerobics are considered essential for fitness but on other occasions sports and like activities are also considered the way to remain fit. In short, we can say that sports, health and life are inter-linked, inter-dependent, and indivisible as well as are highly essential for a healthy survival. This may be understood as the three 'I' ideology of living life. With the passage of time we have observed that sports and physical activities are everywhere considered paramount. This is with the development and advancement of the society and technology that sports, health and life are now not left untouched with law.

Human Rights/Fundamental Rights are integral part of life which ensure Right to Life and the same must be read along with Right to Health. And health is impossible without sports and physical activities. Today 'Sports' are considered highly essential for the mental and physical development of human being.[1]Therefore it becomes necessary to have good governance in the sphere of sports because of its necessity for the life in general and health in particular. Though sports and physical activities are integral part of life but full of danger and sometimes they may up to the extent that this may also put the life in danger. Here the old maxim of English law of tort 'volunti non-fit injuria' is applicable and the victim will not get protection under the assumption that the said prior knowledge of danger involved in the sports.

Sports touches varied areas of law and the legal principles are adapted to the conflicting situation in sports. Areas of law like contracts, tax, competition, discrimination share a boundary with sports when issues arise relating to performance of a contract or selection of a player on the basis of racial discrimination[2]apart from the issues related to violence in sports or issues related to commercial gain in a way or another. Sports and physical activities are a consistent backdrop in India because of lack of protective legal mechanism for interested individuals. The sheer popularity of sports means there's an awful lot of potential issues that can arise. Present piece of work is written to give people a broad overview of the different dimensions of sports laws. Despite the fact of varied area of sports law, the contemporary sports law can be understood with the help of two key areas – 'regulatory issues of sports and physical activities in ground' and 'commercial and financial disputes'. Regulatory issues are focused on the rules of the sport and the breaches that can occur. The other side of sports law is much more to do with the commercial nature of sport. Athlete and player contracts are a typical example but sports law is heavily involved in stadium development, financial administration issues, agreements with players, sponsorship deals and broadcasting rights[3]. One particularly famous case from employment law is Walker v Crystal Palace F.C.[4]which emphasizes how much role a sport plays in our legal system. Every one tends to forget that athletes, managers

and backroom staff are still subject to the same rules and laws as everyone else.

Sports law is well defined and structured in various countries. In the United States, sports law overlaps substantially with labor law, contract law, competition or antitrust law, and tort law. Issues like defamation and privacy rights are also integral aspects of sports law there. The Amateur Sports Act of 1978, signed by President Jimmy Carter, established the United States Olympic Committee and provides for national governing bodies for each Olympic sport. The Act provides important legal protection for individual athletes.[5]In UK "Safety of Sports Grounds Act"[6]protects stadium related activities which was further extended with modifications in 1986, 1991, 2000.[7]There is long list of sports laws in UK the latest laws being are Sports Grounds Safety Authority Act 2011, Sporting Events (Control of Alcohol etc.) Act 1985, Safety of Sports Grounds Act Sporting Lands Rating (Scotland) Act 1886, Fire Safety and Safety of Places of Sport Act 1987, The Community Amateur Sports Clubs (Exemptions) Order 2014, The Value Added Tax (Sport) Order 2014, The Safety of Sports Grounds (Designation) Order 2014, The Sports Grounds and Sporting Events (Designation) (Scotland) Amendment Order 2014, The Safety of Sports Grounds (Designation) (Amendment) (No.2) Order 2015, The Safety of Sports Grounds (Designation) (Amendment) Order 2015, The Safety of Sports Grounds (Designation) (No. 2) Order 2015, The Community Amateur Sports Clubs Regulations 2015, The Safety of Sports Grounds (Designation) Order 2015, The Sporting Testimonial Payments (Excluded Relevant Step) Regulations 2016, The Major Sporting Events (Income Tax Exemption) Regulations 2016, The Merchant Shipping (Vessels in Commercial Use for Sport or Pleasure) (Amendment) Regulations 2016, The Transfer of Functions (Secretary of State for Digital, Culture, Media and Sport) Order 2017, The Major Sporting Events (Income Tax Exemption) Regulations 2017.[8] Likewise Australia, South Africa, China, Italy and so many other countries have their own well thought-out laws to govern sports and physical activities. In spite of the developed countries sports and physical activity legal mechanism, few of the underdeveloped countries also developed their mechanism to control sports and physical activities. Ghana, Tanzania and Kenya are few to name. Apart from these for world community at international level, there is further defined mechanism to govern sports and related activities eg.**International Olympic Committee (IOC),** ANOCA (Association of National Olympic Committees of Africa), PASO (Pan American Sports Organization), OCA (Olympic Council of Asia), EOC (European Olympic Committees), ONOC (Oceana National Olympic Committees). And for drug control during physical activity, comprehensive legal mechanism exists which includes **World Anti-Doping Agency (WADA), World Anti Doping Code adopted by 80 countries,** Anti-Doping Danmark, Australian Sports Anti-Doping Authority, Czech Anti-Doping Committee, German Nationale Anti-Doping Agentur, Japan Anti-Doping Agency, South African Institute for Drug-Free Sport, United States Anti-Doping Agency etc.

In general sports law is nothing but the overlapping of various laws as Law of Torts, Contract Law, Labor Law, Human Rights Law, Public Order Regulations, Criminal Law, Drugs Laws, Public Law, Safety Rules, Administrative Law, Disciplinary Measures, Antitrust Law, Conduct and Wider Issues, Competition Law, Anti Competitive Behaviour Regulations, Intellectual Property Rights Law, Restraint of Trade law Media Law, Defamation, Company Law, Privacy Rights etc.

Like other world countries, in India exhaustive as well legal mechanism to regulate sports and related physical activities is missing. Though with one thousand three hundred million population, India is the second largest country of the world but highly backward in sports and physical activities at International level. India became a democratic and republic state on 26th January 1950 and in the adopted constitution, sports has been kept on entry no. 33 of the State List in the Seventh Schedule of the Constitution of India.[9]Since the sports have been kept in the State List, States are expected to regulate sports and to develop laws for the same. In this line, the first Act on the subject was Calcutta Sports Act[10]to regulate sports related activities in Calcutta. Later on in few state provincial Acts have been developed but are not effective due to lack of common nation policy on the subject.

This was after 1984 when the concept of National Sports Policy was coined and later on National Sports Policy, Sports Law and Welfare Association of India, Sports Authority of India, and The Sports Broadcasting Law in India started to regulate various damnations of sports and physical activities but most of the protective issue remained untouched. In the National Sports Policy threefold objectives have been determined:

- Firstly to define the areas of responsibility of the various agencies involved in the promotion and development of sports.
- Secondly, to identify National Sports Federations eligible for coverage under these guidelines, to set priorities, and to detail the procedures to be followed by the Federations, to avail the Government sponsorship and assistance.
- Thirdly, to state the conditions for eligibility which the Government will insist upon while releasing grants to Sports Federations.

This was in the early twenty first century when issues related to broadcasting sports activity were challenged in Supreme Court of India.[11]This case resulted in the enactment of The **Sports Broadcasting Signals (Mandatory Sharing with Prasar Bharati) Act** 2007. During modern discourse on one hand Prevention of Sporting Fraud Bill 2013 and National Sports Development Bill 2013 are pending to bring with one National Policy for sports etc. On the other hand

InGovern[12] produced a report analyzing the governance structure of 27 sporting associations ('SA'), which include the IOA[13]and 26 affiliated NSFs[14] whose sporting affiliations were included in the Rio Olympics 2016 ('Report'). In the detailed report many issue related to sports etc have been touched upon. Few of them are:

- Creating timeline plans by sports association for 5 to 10years
- Clarity in the election process
- Transparency
- Conflict of interest
- Player and women representation
- Further suggestions
- Code of ethics
- Designated committees
- Judicial and disciplinary procedure
- Statutes, rules and regulations

In our country efforts of the government are not enough to achieve the desired results. However joint efforts on the public private partnership model (PPP model) may significantly change the scenario of sports and physical activities. The challenges are many and yet needed to be answered in a country like India where finance on one hand and gender on another plays a vital role for one who may opt sports as a profession. Local status and caste polity may accelerate the probability of violence in sports. Cheating, betting, fraud, etc are few common offences which exist in indoor and outdoor sports activities. Gender issues are also widespread. Sometimes individuals who are in the field of sports and physical activity are neither well versed with law nor are aware of the process of making money through physical activities, they hesitate to form a sports contract (though after IPL situation is better than it was earlier). Sports and physical activity must be considered as a business; and intellectual property rights of the individuals must be protected, popularized and safeguarded for proper promotion of the same. Problems related to selection procedure, disputes, indiscipline etc are many and need to be curtailed in all aspects. In fact sports and physical activity should be considered as a specialized industry and all the participants in all capacity eg. Players, sports article manufacturers, Coach etc must be shielded by law at all levels along with tax exemption in majority of sports & physical activity related financial affairs for proper promotion of the same at International level.

In absence of any material and well structured policy, the present structure of Indian sports administration will need to take steps based on the following principles: 1. Facilitation of public understanding and participation. 2. Systematic and integrated promotion through coordination and cooperation amongst those involved in sports. 3. Securing financial resources to promote and utilize them efficiently.[15]

In India, sports and physical activities, work as a unifying influence; sports develop brotherhood and brings individuals from different religions, sects, castes and creed together. Sport is a vibrant and fast-growing sector with a misjudged macro-economic impact. It can serve as a means for local and regional progress, urban rejuvenation and rural advancement. The need of the time is to provide protection and meet out the challenges with a consolidated Sports Regulation or an enactment. The Regulation must be comprehensive determining the rights and obligations of players, responsibilities of the stakeholders, defining sports related offences, betting possibilities, as well as the gender protection. A consolidated sports law is also essential to protect the national image at international level and to maintain diplomatic relations.

2. CONCLUSION

Lastly this can be concluded that the golden thread running through all aspects of sports law is contract but other relevant laws are required redefining the laws with special reference to sports and related physical activities. The projected law may be in the form of a Consolidated Sports Code in term of definitions, liabilities / obligations, rights, immunities, violence, penalty etc to develop sports as a carrier in India.

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EFFECT OF MENTAL SKILLS ON PERFORMANCE IN SPORTS

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1. INTRODUCTION

The fundamental mental skills training is require in every games and sports the development of performance not only engaged the practice of skills but there is a urgent need to approach and presenting the importancy and application of mental skills to enhance learning performance, which may be great help through out the training programme of physical mental and coordinating different of the skills of sports and game.

Once the athlete acquisition of the mental skills they can performed more consisted and concentrate towards reach to optimal performance and achieving a goal setting task. The routines of skill performance is depend upon the athlete confidence until an unless the athlete or performing continue practice were the confidence reach to the maximum skill level to enhancement of the top level (Snambrrok, 1996, Murley and Sowdey, 1992).

The outcome of positive result in competition coaching plan involved different methods of strategies which coach can deal with the help of learning skill Tactics, in sports activity preparation and execute the performance. So imagery has been found to be effective in several mental skills and improve the confidence as well as motivation. The confidence of athlete can improve through the recreation activities and it can focus on difference angle of imagery, the imagery has also been used in effectively improve the learning of sports skills and strategy. (Beauchamp-Bray, & Albinoson, 2002; Taylors & Shaw, 2002).

2. STRESS MANAGEMENT

The training programme Athletes setting short term goal practice session can be valuable to get proper action and have decreased feeling of anxiety frustration and moodness.

The improvement of performance needs a basic stress management technique such as deep relaxation, breathing progressive relaxation that can help the Athlete in decreasing the unwanted tension, anxiety and frustration. Gaining the self confidence, relaxed state of consciousness, higher level of self control are also more effective for self awareness which help to Athlete refresh and stay abreast of current thinking and adopted professional development.

The creative of performance that coach must design certain programme for creative and competition practice sessions, changing the practice session provides almost a improvement training volume and stress may need to be lessened or more systematic way of training and Tapering may need to be adopted organizing rest and recovery intervals and activities for athletes.

3. CONFIDENCE BUILDING MANAGEMENT

Athlete can improve the self confidence through many ways; confidence refers to the inner view that can establish the top performance of athlete in different level of sports competition. The competition of sports need more consistent and inter act with other performance but most of the athlete are frustrate in their performance because the negatively can increase intensity level where athletes are trying the concentration of the consciousness which are related to the mental skills. Due to negative thinking of athlete is directly or adversely affect on their confidence level.

Performance routine in involved cognative behaviour emotional and energizing components, the cognative components which help to productive thoughts of making a confidence enhancing these components need adequate rest, recovery activity (Weignherg & Comar, 1994).

4. GOAL SETTING THROUGH MENTAL SKILLS

The positive outcome of the performance are depend upon the goal-setting the affective way of goal setting enhancing team building, motivation and more oriented behaviour which can include in competitive strategies for Sports and Games.

The objectives of the goal setting have certain specific performance areas that need improvement, and inspired the accountability for each member of team. During the short terms goals on the way to achieving the longer time goals influencing by their commitment efforts and mental readiness.

When one is progressing toward a goal, confidence and motivation increases and great achievement may also be desirable in the sports competition. The self confidence needs certain specific drills which contribute to achieving a goal throughout season practice.

5. CONCLUSION

The successful attainment of goal setting that lead to attainment outcome goals but there is an important of feedback component also enhancing the critical components of the goal setting process in such are the specific performance of the area which need more attention of require for elite level of sports competition.

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EFFECT OF YOGA ON FITNESS TASK MANAGEMENT IN SPORTS AND GAMES

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ABSTRACT

Yoga is ancient method of philosophical and practices of combines body movement. That coordinates with mind posture and breathing techniques and it also guides to the consciousness of individual to master the capacity to think and lead self efficacy in sports personality. Today yoga is gaining and strength our determination mot only to achieving the performance but increasing popularities due to its possible application in various aspects i.e. of sports injuries of physical and mental ability as well as promotes the positive body image of sports person. Because yoga is recognize systems which increase motivation and internal healing of soul mind and body which can coordinate of psycho neuro-physiological movement variable. The present paper focused on active participation in practice for seminal long term duration to sustain athlete personality.

Keywords: Effect of Yoga on Fitness Task Management in Sports and Games

1. INTRODUCTION

The sports Excellency in physical education is contribution not only in the activities programme but the yoga play an important role in personality development of the student but most of the physical education teacher neglecting the important of yoga in activities is equally important for various benefit for all round development of student personality and protecting the health and safety of injuries as well as fitness parlance and performance.

The preparation of physical education programme require appropriate personality and that will be contribute to assess the athlete competencies in various sports and games and enhancing the balance and make the correct posture of the student.

Yoga is playing a vital role in personality development in positive our come and minimize negative one the health growth and development of students are depend upon regular practice of the yoga. Yoga is differently help to student in nero-physicologicall activities of human body. As well as to maintain the reflected mind behavior and voluntary movement are also develop.

The perception in yoga in which human mind and body assimilated in self with divine power, and acquire complete command of all forces of nature also rightly achieving. Yoga deals with a mind that is universally it is the process of yoga to concentrate the mind and performed various fundamental movements to specific movement and enables to control all the movement of internal body system of sports man. The application of yoga in various posture and treatment for stress management.

Because most of the peoples are suffering from the various types of tension so there are various types of yoga such as PADMASANA AND SHAVASANAS are the best and more useful to free from the stress not only in the daily life but it is also help to other field of health related fitness and performance related achievement as well as cure the certain sports injuries where as sports man also performed very well in difficult condition of the sports activities. The physical activities and traditional sports also distinct features of the physical development and there are various multicomponent of physical mental and spiritual power quick discussion and concentration and make successful performance for the competition also.

2. YOGA AND PHYSICAL FITNESS

Change in integral part of human progress and cognitive growth for various competitive and improved the variety of individual behavior. The physical education teacher should analysis that what kind of yoga which should more benefit for the particular activity. According to activities of the sport that can develop concentration of mind which execute the skills and build the positive qualities through confidence and attention and maintain the proper posture stretches as well as breathing exercises can relieve the body tension and provides the physichological means through analytic and protecting from negative thought and emotion, and maintain the equilibrium in behaviour condition of individual.

In most of the sports and games who do not stretch lack

the flexibility. Flexibility of tend to injured more frequently it is important to mete that there sports activities require combined Yoga therapy and psychological consulting which combines physical work capacity ad sense of well being in various events of athletes and perfume the following Yoga, Asanas to prevent, injuries these are.

- Paadhhatasana
- Paschimotasana
- Hal asana
- Vgraasanas

To achieving basic fitness therapy yogic training programme which a Fleish man battery test which count unique the basic componentet of fitness of a sports person, i e endurance, power, agility, balance, flexibility, accuracy and reaction time.

Dr Pedro de Vicente, a was Spanish Cardiologicalist suggested that how essential Yoga prevent control and other Yoga technique and other yogic techniques such as Kapalbati, Vddyana, andha and relaxation this leap divers to cope with awkward situation such as slow yielding or deferred cylinders and teachers. Thaw not to panic

3. YOGA AND MENTAL HEALTH

Yoga practice emerged as exploration of a new vision and of advance in spiritual life which have been to adopt the living of super mental status wholeness sure of truth in the present situation of human life this aurobindo called the integral yoga, the yoga which should life the integral cum service and purifying the soul and mind we mean by this term a methodized effect towards self perfection by the expensive of the potentialities and improve the latent behavior in the human being due to increasing the ambitious desires and competitiveness restiving and tension also increased by leaps and bounds materialism could not feel the charm of spiritual and secrete dissatisfaction and much destitute, suspicious aggressive and restless as it was perhaps in the primitive age. Ever increasing disease of mental deformity and distractive instincts are some of the physiological and psycho-social problem facing man.

Any important reason for this growth affection is that the present situation of human life is to complexity due to this he is passing through various internal and external stresses due to which his mind is officiated and full of anguish the practical acquisition of yoga is the attainment of tension free.

4. CONCLUSION

The present yoga practice may be facilitating the mind behavior and conceptualization both traditionally and philosophical understood and dispenser solace of the body mind as well as guiding perfect huminous sense.

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COMPARATIVE STUDY OF PHYSIOLOGICAL VARIABLES AMONG THE GIRL STUDENTS OF PLAIN AND HILLY AREA OF UTTRAKHAND

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ABSTRACT

The purpose of the present study was to compare the physiological variables among the girl students of Plain and hilly area of Uttrakhand. To achieve the purpose of the study Two hundred (N=200) girl students of different schools from the plain and hilly area of Uttrakhand were selected. The age ranges of the subjects were 12 to 17 years. Vital Capacity, Heart Rate, Blood Pressure and Resting Respiratory Rate were selected as criterion physiological variables. The data have been collected with standardized equipments. The collected data was analyzed by using the descriptive statistics and t-test. The level of confident was set at 0.05. The result of the present study shows that the significant differences were found between the mean scores of plain and hilly area girl students of Uttrakhand in relation to Vital Capacity, Heart Rate, Systolic Blood Pressure and Resting Respiratory Rate as the t-values were found 2.141, 10.273, 2.612 and 2.699 respectively. It may be due to the high altitude and environmental condition. It is also concluded that insignificant difference was found between the mean scores of plain and hilly area girl students in relation to Diastolic Blood Pressure as the t-value was found 1.501 which is lower than the required table value at .05 level of significance. It may be due to less difference in sea level of plain area and hilly area that was considered in Research as Haldwani and Nainital of Uttrakhand respectively because diastolic blood pressure depends on many factors and one of them is not changing in normal difference of sea level

Keywords: Physiological Variables, Vital Capacity, Heart Rate, Blood Pressure, Resting Respiratory Rate.

1. INTRODUCTION

Physical education activities are important for children's proper growth and development. Regular fitness activities started in early childhood can enhance bone development and delay osteoporosis, reduce the risk of heart disease, challenge to the developing bodies of all school-aged children. There is strong evidence that regular physical activities improve self-concept and confidence, assist children coping with stress and is related to physical activity participation in adult years. When physical training is done, the physiological changes occur in almost every system of the human body. These changes depend on frequency, duration and intensity. Sports Physiology tells about the complete story of various internal functions of the body during rest and play.

Health is one of the fundamental human rights. The international organizations like United Nations and World Health Organization have endorsed the principle of health. Unfortunately, health cannot be given or described but it has to be acquired actively. Whenever an individual is in a perfect balance with the environment and has an upper hand over the harmful factors like pathogenic micro-organic insets, physical and chemical agents called healthy. There is a considerable amount of such recent information that needs a human being to become the average citizen. A final reason is that the habits affect health and schools can help to develop health habits. The relation between habits and health is clear evidence of the effects on health of a change of habits.

It is universally accepted that the physiological functions of the body improve with the use and decline with disuse. More specifically, the heart, lungs and muscles become stronger and more durable the more they are used. Exercise strengthens the heart muscle. Greater demands are placed on heart cause it to increase in size and get stronger through use. The person who exercises regularly has a lower pulse rate, and this rate returns to normal more quickly after exercise than does the pulse rate of the sedentary person. Exercise helps player's heart, lungs and circulatory system to perform more efficiently. Heart, which is a muscular Introduction 8 tissue, increases in strength and can pump more blood through this system in fewer beats per minute. It is a physiological fact that the human organism needs stimulating exercise. When the whole body is subjected to regular muscular activity, requiring a vigorous stress on the heart, lungs and muscles,

the general efficiency of physiological functions improves. Research now strongly supports the theory that regular, vigorous exercise helps to keep heart healthy and may prevent cardiovascular disease. A physically fit heart beats at a lower rate and pumps oxygen is increased substantially. Heart rate increases linearly with increasing oxygen consumption in both trained and untrained individuals. Resting heart rates in highly trained athletes may be as low or lower than 40 to 45 beats per minute. On the other hand, in healthy but untrained subjects, resting heart rates may be as high as 90 to 100 beats per minute. The volume of air breathed varies with every change in bodily activity, sleeping, sitting, walking and running. The amount of air breathed cannot be estimated from mere inspections. The total volume of air inhaled and exhaled during a certain period rarely can be exactly controlled by the will, but is automatically adjusted to maintain the interior atmosphere of the body as nearly constant as possible. Respiration essentially plays a two fold part in the body during physical exertion. On the one hand, it supplies the oxygen required by the muscles and on the other hand it serves to keep the acid base balance of the blood constant within certain narrow limits.

2. STATEMENT OF THE PROBLEM

The purpose of the study was to compare the physiological variables among the girl students of plain and hilly area of Uttrakhand.

3. OBJECTIVES OF THE STUDY

- To compare the Vital Capacity of girl students of plain & hilly area of Uttrakhand.
- To compare the Heart Rate of girl students of plain & hilly area of Uttrakhand.
- To compare the Blood Pressure of girl students of plain & hilly area of Uttrakhand.
- To compare the Resting Respiratory Rate of girl students of plain & hilly area of Uttrakhand.

Subjects: To achieve the purpose of the study, two hundred (200) girls from Uttrakhand were selected. These subjects were divided into two group's namely plain area and hilly area, each group constitutes of 100 subjects. The age of these subjects range between 12 to 17 years, the selected subjects gave willingness to participate in this study.

Criterion Variables And Tools

Sl. No.	Variables	Test/ Equipment	Unit of measurements
1	Vital Capacity	Spiro meter	Liters
2	Resting Heart Rate	Manual	beats/minute
3	Blood Pressure	Sphygmomano meter.	mmhg
4	Resting Respiratory Rate	Manual	breath/minute

4. RESULT

To find out Vital capacity between plain and hilly area girls, descriptive statistics was used and presented in table-1.

Table 1

	Plain Area Girls	Hilly Area Girls
Mean	1616.5	1456
Standard Deviation	612.25	425.75
Range	2200	3300
Minimum	800	200
Maximum	3000	3500

It is evident from the table no.1, that the mean value of Vital Capacity for plain area girls was 1616.5, whereas mean value for hilly area girls was 1456. This table shows the standard deviation value of Vital Capacity for plain area girls was 612.25, whereas standard deviation value for Vital Capacity for hilly area girls was 425.75. The range value of Vital Capacity for plain area girls was 2200, whereas range value of Vital Capacity for hilly area girls was 3300. Table also reflects that the minimum value of Vital Capacity for plain area girls was 800, whereas minimum values of Vital Capacity for hilly area girls was 200. The maximum value of Vital Capacity for plain area girls was 3000, whereas maximum value of Vital Capacity for plain area girls was 3500.

To find out Heart Rate between plain and hilly area girls, descriptive statistics was used and presented in table-2.

Table 2

	Plain Area Girls	Hilly Area Girls
Mean	100.20	78.19
Standard Deviation	1.91	9.947
Range	87	59
Minimum	60	65
Maximum	147	124

It is evident from the table no.2, that the mean value of Heart Rate for plain area girls was 100.20, whereas mean value for hilly area girls was 78.19. This table shows the standard deviation value of Heart Rate for plain area girls was 1.91, whereas standard deviation value for Heart Rate for hilly area girls was 9.947. The range value of Heart Rate for plain area girls was 87, whereas range value of Heart Rate for hilly area girls was 59. Table also reflects that the minimum value of Heart Rate for plain area girls was 60, whereas minimum values of Heart Rate for hilly area girls was 65. The maximum value of Heart Rate for plain area girls was 147, whereas maximum value of Heart Rate for plain area girls was 124.

To find out Systolic Blood Pressure between plain and hilly area girls, descriptive statistics was used and presented in table-3.

Table 3

	Plain Area Girls	Hilly Area Girls
Mean	76.89	74.30
Standard Deviation	8.46	5.17
Range	48	22
Minimum	50	66
Maximum	98	88

It is evident from the table no.3, that the mean value of Systolic Blood Pressure for plain area girls was 76.89, whereas mean value for hilly area girls was 74.30. This table shows the standard deviation value of Systolic Blood Pressure for plain area girls was 8.46, whereas standard deviation value of Systolic Blood Pressure for hilly area girls was 5.17. The range value of Systolic Blood Pressure for plain area girls was 48, whereas range value of Systolic Blood Pressure for hilly area girls was 22. Table also reflects that the minimum value of Systolic Blood Pressure for plain area girls was 50, whereas minimum values of Systolic Blood Pressure for hilly area girls was 66. The maximum value of Systolic Blood Pressure for plain area girls was 98, whereas maximum value of Systolic Blood Pressure for plain area girls was 88.

To find out Diastolic Blood Pressure between plain and hilly area girls, descriptive statistics was used and presented in table-4.

Table 4

	Plain Area Girls	Hilly Area Girls
Mean	117.34	115.21
Standard Deviation	13.06	5.55
Range	90	28
Minimum	90	102
Maximum	180	130

It is evident from the table no.4, that the mean value of Diastolic Blood Pressure for plain area girls was 117.34, whereas mean value for hilly area girls was 115.21. This table shows the standard deviation value of Diastolic Blood Pressure for plain area girls was 13.06, whereas standard deviation value of Diastolic Blood Pressure for hilly area girls was 5.55. The range value of Diastolic Blood Pressure for plain area girls was 90, whereas range value of Diastolic Blood Pressure for hilly area girls was 28. Table also reflects that the minimum value of Diastolic Blood Pressure for plain area girls was 90, whereas minimum values of Diastolic Blood Pressure for hilly area girls was 102. The maximum value of Diastolic Blood Pressure for plain area girls was 180, whereas maximum value of Diastolic Blood Pressure for plain area girls was 130.

To find out Resting Respiratory Rate between plain and hilly area girls, descriptive statistics was used and presented in table-5.

Table 5

	Plain Area Girls	Hilly Area Girls
Mean	19.20	17.60
Standard Deviation	4.97	3.23
Range	32	14
Minimum	14	12
Maximum	46	26

It is evident from the table no.5, that the mean value of Resting Respiratory Rate for plain area girls was 19.20, whereas mean value for hilly area girls was 17.60. This table shows the standard deviation value of Resting Respiratory Rate for plain area girls was 4.97, whereas standard deviation value of Resting Respiratory Rate for hilly area girls was 3.23. The range value of Resting Respiratory Rate for plain area girls was 32, whereas range value of Resting Respiratory Rate for hilly area girls was 14. Table also reflects that the minimum value of Resting Respiratory Rate for plain area girls was 14, whereas minimum values of Resting Respiratory Rate for hilly area girls was 12. The maximum value of Resting Respiratory Rate for plain area girls was 46, whereas maximum value of Resting Respiratory Rate for plain area girls was 26.

Table 6: T-ratio of the means of vital capacity between plain and hilly area girls students

	Students		t-ratio
	Plain Area Girls	Hilly Area Girls	
Mean	1616.5	1456	2.141*
SD	612.25	425.75	

**Significant at .05 level*
t-value required to be significant at 198 df =1.960

It is evident from table-6 that significant difference was found between the mean scores of plain and hilly area girl students in relation to vital capacity as the t-value was found 2.141 which was higher value than the required table value at .05 level of significance.

The scores are also illustrated in the figure-1

Figure 1

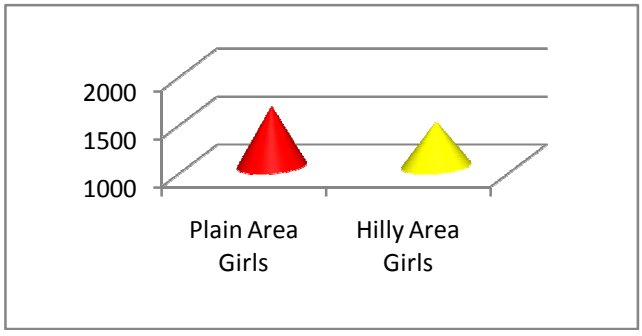


Table 7: T-ratio of the means of heart rate between plain and hilly area girls students

	Students		t-ratio
	Plain Area Girls	Hilly Area Girls	
Mean	100.20	78.19	10.273*
SD	1.91	9.947	

**Significant at .05 level*
t-value required to be significant at 198 df =1.960

It is evident from table-6 that significant difference was found between the mean scores of plain and hilly area girl students in relation to Heart Rate as the t-value was found 10.273 which was higher value than the required table value at .05 level of significance.

The scores are also illustrated in the figure-2

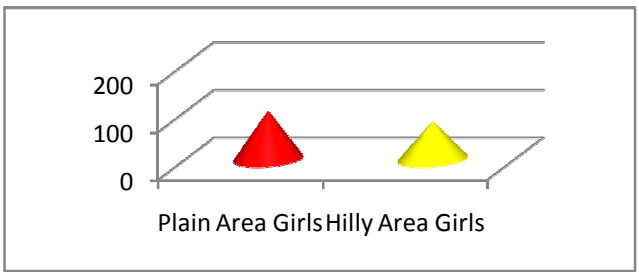


Table 8: T-ratio of the means of systolic blood pressure between plain and hilly area girls students

	Students		t-ratio
	Plain Area Girls	Hilly Area Girls	
Mean	76.89	74.30	2.612*
SD	8.46	5.17	

**Significant at .05 level*
t- value required to be significant at 198 df =1.960

It is evident from table-6 that significant difference was found between the mean scores of plain and hilly area girl students in relation to Systolic Blood Pressure as the t-value was found 2.612 which was higher value than the required table value at .05 level of significance.

The scores are also illustrated in the figure-3

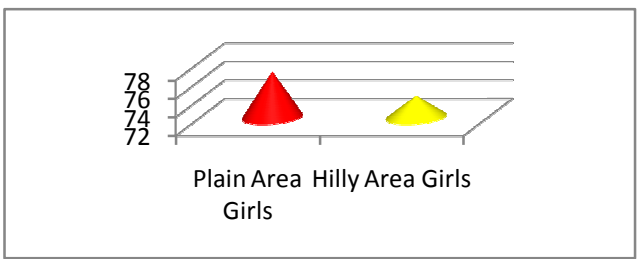


Table 9: T-ratio of the means of diastolic blood pressure between plain and hilly area girls students

	Students		t-ratio
	Plain Area Girls	Hilly Area Girls	
Mean	117.34	115.21	1.501*
SD	13.06	5.55	

**Significant at .05 level*
t-value required to be significant at 198 df =1.960

It is evident from table-6 that insignificant difference was found between the mean scores of plain and hilly area girl students in relation to vital capacity as the t-value was found 1.501 which was lower value than the required table value at .05 level of significance.

The scores are also illustrated in the figure-4

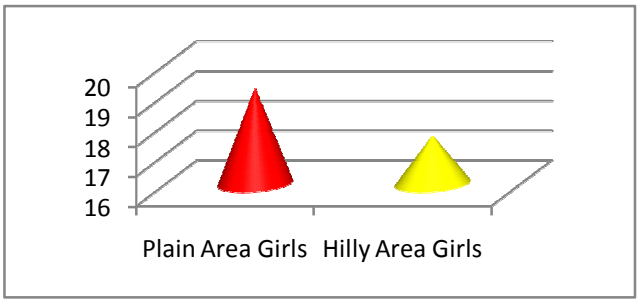
Table 10: T-ratio of the means of resting respiration rate between plain and hilly area girls students

	Students		t.ratio
	Plain Area Girls	Hilly Area Girls	
Mean	19.20	17.60	2.699*
S.D	4.97	3.23	

**Significant at .05 level*
t-value required to be significant at 198 df =1.960

It is evident from table-10 that significant difference was found between the mean scores of plain and hilly area girl students in relation to vital capacity as the t-value was found 2.141 which was higher value than the required table value at .05 level of significance.

The scores are also illustrated in the figure-5.



5. CONCLUSION

On the basis of the finding of present study, we may conclude that significant differences were found between the mean scores of plain and hilly area girl students in relation to Vital Capacity, Heart Rate, Systolic Blood Pressure and Resting Respiratory Rate as the t-values were found 2.141, 10.273, 2.612 and 2.699 respectively. It may be due to the high altitude and environmental condition. It is also concluded that insignificant difference was found

between the mean scores of plain and hilly area girl students in relation to Diastolic Blood Pressure as the t-value was found 1.501 which is lower than the required table value at .05 level of significance. It may be due to less difference in sea level of plain area and hilly area that was considered in Research as Haldwani and Nainital of Uttrakhand respectively because diastolic blood pressure depends on many factors and one of them is not changing in normal difference of sea level.

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SPORT'S ROLE IN NATION-BUILDING

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ABSTRACT

This paper concentrates on the role of sports in urban and rural development of a strong nation. At the grassroots or community level, sport can be seen to provide a useful way of creating an environment in which people can unite to: work towards the same goal, show respect for others and share space and equipment. Also the paper examined the importance of sports in society, the benefits, effects of sports and health, sport and politics, Group dynamics sport and economic development, using sports to fight the social problems in sports. The paper is rounded up with recommendations on the roles of sports in national development.

Keywords: Sports Role in Nationa-Building

1. INTRODUCTION

Sport is all forms of physical activity which, through casual or organized participation, aim to use, maintain or improve physical fitness and provide entertainment to participants. Sport may be competitive, where a winner or winners can be identified by objective means, and may require a degree of skill, especially at higher levels. Hundreds of sports exist, including those for a single participant, through to those with dual participants and either in team participants. Some non-physical activities, such as board games and card games are sometimes referred to as sports, but a sport is generally recognized as being based in physical athleticism. Sports are usual governed by a set of rules or customs. While practices may vary, participants in many sports are expected to display good sportsmanship, and observe standards of conduct such as being respectful of opponents and officials, and congratulating the winner after having lost.

The role of sport in society has been debated for many decades. Sport is part of the society both as an educational fixture and as an entertainment enterprise. Sport forms part of human and social development, it can contribute to social cohesion, tolerance and integration and it is an effective channel for physical and socio-economic development.

2. IMPORTANCE AND VALUES OF SPORT

Sport is a means of exchange and understanding among people of various backgrounds, nationalities or beliefs, and it promotes expression beyond traditional barriers. The rules of the game transcend differences and inequality and help redefine success and performance. Through sport, people identify new role models in society. Since sports can play such important roles in the process of national development as outlined above, there must be deliberate plans to promote and develop sports on a wide scale in order to achieve maximum benefits.

3. THE FINDINGS

- that sport releases emotions, acts as a safety value and relieves aggressive tendencies
- that sport offers opportunities to be recognized and to express one's individual qualities
- that in a society where deviance is prevalent, sport provides a means of control over people.
- that sport serves as a means of socializing those individual who identify with it.
- that sport results in social change, introduces new behavior patterns and changes the course of history; and
- that sport creates a communal spirit that brings people together in search of common goals.

4. SPORT AND HEALTH

Regular sporting activities that are performed on most days of the week are capable of reducing the risk of developing or dying from some of the leading causes of illness and death.

Regular and supervised physical activities and sport may improve health of the individual by reducing:-

- the risk of dying prematurely
- the risk of dying from heart disease
- the risk of developing diabetes
- the risk of developing high blood pressure
- feelings of depression and anxiety
- the tendency to become overweight
- the hindrances in build and maintain healthy bones, muscles and joints.
- the inability of older adults to become stronger and better able to move about without falling.

Given the numerous health benefits of sports and physical activity, the hazards of being in-active are clear. Physical inactivity is a serious, nationwide problem. Its scope poses a public health challenge for reducing the national burden of unnecessary illness and premature death.

5. GROUP DYNAMICS

Participation in sports gives every citizen to stay in group which motivates them to reach one goal as a result the diversity between the society gets guided by sports to move in one direction. So as a whole team games or individual sports event creates an opportunity to exchange culture, develops the feeling of brother-hood, group cohesion and citizenship. In fact all sports competitions are the true reflector of a civilized society.

6. SPORT AND ECONOMIC DEVELOPMENT

Sport can contribute to economic development by creating additional sources of income including the manufacture of sporting goods, the development of sport related services and infrastructure or the hosting of sports events. Event management and creating self employment such as establishing private coaching centers and Gym in the community can contribute one's and family economic condition. Increasing current levels of activity could significantly reduce the costs to society and the nation but even maintaining them can result in savings.

7. USING SPORT TO FIGHT THE SOCIAL PROBLEMS

It is evident that most of the countries in Africa are losing war against social problems, the spread of infectious diseases especially the HIV AID, the drug abuse and the crime rate. Certainly, sport can be used to change the attitude of the people in the slums and bring hope to their lives. As already pointed out, a breakthrough in sport development national and International level may reduce poverty, ethnic strives and genocide, such as the one already mentioned. This does not implying that sport is a panacea to every social and economic problem.

In the modern era, sport has gone through a series of transformation to evolve into an industry and a showcase for entertainment extravaganza. Since the advent of industrial revolution, the electronic and the print media have not only popularized sport but have brought top-level sports to every family via the satellite and the internet. While this electronic revolution has created a positive impact on the love and popularity of sports viewing, there is an imminent danger of creating a society of spectators and people who will appreciate and enjoy sports passively.

One most intriguing question is whether professionalism and commercialization of sport has taken precedence over the important requirement of sport for all. This point becomes evident when an important marathon race is staged to favor television viewing rather than the important consideration of the health of the athletes. While professional sport has certainly an important role on economic parameters there is need to look at both sides of the coin in terms of sport values versus economic gains.

In addition to the benefits already discussed, the sport industry has the potentials for employment opportunities to tap talents of the experience staff forced into early retirement through retrenchment processes. Sport industry also offers opportunities to young professionals in Physical fitness and sport science.

8. SPORTS AND POLITICS

There is no gain saying sport can provide a useful channel for improving relations between nations with long-standing antipathies is clearly demonstrated by the ping-pong diplomacy which helped break the ice between the US and China in the 1970s, and, more recently by the baseball match between a US professional team and the national team of Cuba. This resulted in one of the few suspensions of the ongoing boycott of the island by its big neighbor.

Sport's role in nation-building is multi-faceted: a victory in a major international sporting event is of national importance. Many victims of psychological trauma feel physical uncomfortable with themselves, They feel that they are no longer in control of their own lives. Sport can help them recover that very basic sense of physical wellbeing. In addition, the social structure of sport is very important. Sport provides people with a social context where they can encounter other people in a non-threatening way and can get rid of harmful emotions. Rivalry and tension in sport are healthy elements, they allow violent emotions to be vented in a rule-governed context. Furthermore, through sport, values such as respect for others and keeping to the rules are learned.

While it is true that sport helps build bridges between nations and unite people, the apparently straight forward discourse of sports development can hide some major problems. For example, it is usually difficult for the majority of people to gain access to sports facilities. Mass mobility is frequently prevented by poor roads.

9. RECOMMENDATIONS

- Every nation should make sport development as an integral part of national economic strategic planning.

- There is need to define and articulate sports policies in order to incorporate sport in the national development strategies.
- The benefits of sport in terms of human and economic development cannot be left solely in the hands of the non-governmental organizations and volunteers of each nation should ensure the provision and equity of the distribution of resources especially among the poor communities.

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COMPARATIVE STUDY OF SELECTED PSYCHOLOGICAL VARIABLES OF NORTH ZONE INTER UNIVERSITY CRICKET PLAYERS AT DIFFERENT LEVEL

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1. INTRODUCTION

Aggression is as old as human race, beginning with Cain's Murder, of Abe and extending thought out history, Wars, world wide wars, religious war conflicts. Today man continues to do so. It appears that the technical and cultural 'advance' of man has led to more violent and destructive behavior.

What is aggression and why it is to commonly manifest by supposedly higher form of intelligence such as man? In lieu of this paper we try to address some of these important issues as they related to sports. We will begin by defining aggressive behaviour and differentiating if from assertive behavior in sports contexts. Anxiety is a psychological and physiological state characterized by somatic, emotional, cognitive, and behavioral components. The root meaning of word anxiety is to b vex or trouble: In either-presence or absence of psychological stress anxiety can create feelings of fear, worry, uneasiness, and dread. Anxiety considered is to be a normal reaction to a stress or it may help someone to deal with a difficult situation by promoting them to cope with it.

Test anxiety has been defined as a situation specific personality trait (Speilberger-1972) as a special case of general anxiety. It regers to those phenomenological, physiological and behavioural responses that accompany concern about possible failure Test anxious individual perceive evaluative situation as personally threatening and responds to them with intense emotional reactions. Evaluative situations also evoke task irrelevant self centered worry responses that interfere with effective performance on cognitive intellectual tasks.

2. METHODS

The present investigation was conducted on 88 male cricket players selected from different university of north zone. Who participated in the tournament at different level in fixture? Only those teams were selected who played final, semifinal and quarterfinal stages. For the collection of Roma Pal and Tasneem Naqavi Aggression scale and Sud and Sud test anxiety was used. To analyze the date 't' test was used in the study.

3. RESULTS AND FINDINGS

Within the limitations and delimitations of the present study following results are drawn:-

Table 1: Difference in Aggression level of Quarterfinal Winner and Looser Cricket Players of North Zone Interuniversity

Variable	Subjects	N	Mean	S.D.	S.E.M	M.D.	Df	t-value	
Aggression	Winner	44	81.840	14.943	2.252	.5681	86	.153	NS
	Looser	44	81.272	19.591	2.953				

df=86
NS = Not significant at 0.05 level

It si evident from table 1 that mean value for winner and looser of quarterfinal level of cricket players of north zone University came out 81.840 and 81.272, which indicates that who groups of players i.e. winner and looser differ from each other. The value of standard deviation of winner and looser of quarterfinal level of cricket players of north zone University is 14.943 and 19.591, which shows that there is deviation in score of winner. The table 1 shows that t-value of quarterfinal winner and looser interuniversity cricket players with regard to aggression came to be .153, which is not significant at 0.05 level of confidence.

Table 2: Difference in Aggression level of Semi-final Winner and Looser Cricket Players of North Zone Interuniversity

Variable	Subjects	N	Mean	S.D.	S.E.M	M.D.	Df	t-value	
Aggression	Winner	22	86.181	12.034	2.5657	8.681	42	1.992	NS
	Looser	22	77.50	16.52	3.5221				

df=42
NS = Not significant at 0.05 level

It is evident from table 2 that mean value for winner and looser of Semi-final level of cricket players of north zone University came out 86.181 and 77.50, which indicates that who groups of players i.e. winner and looser differ from each other. The value of standard deviation of winner and looser of quarterfinal level of cricket players of north zone University is 12.034 and 16.52, which shows that there is deviation in score of winner. The table 2 shows that t-value of semi-final winner and looser interuniversity cricket players with regard to aggression came to be 1.992, which is not significant at 0.05 level of confidence.

Table 3: Difference in Aggression level of Winner and Runner-up Cricket Players of North Zone Interuniversity

Variable	Subjects	N	Mean	S.D.	S.E.M	M.D.	Df	t-value	
Aggression	Winner	11	83.545	8.594	2.591	5.272	20	1.029	NS
	Looser	11	88.818	14.66	4.420				

df=20
NS = Not significant at 0.05 level

It is evident from table 3 that mean value for winner and runner-up cricket players of north zone University came out 83.5450 and 88.818, which indicates that who groups of players i.e. winner and looser differ from each other. The value of standard deviation of winner and runner-up cricket players of north zone interuniversity is 8.594 and 14.661, which shows that there is deviation in score of winner. The table 3 shows that t-value of winner and runner-up inter-varsity cricket players with regard to aggression came to be 1.029, which is not significant at 0.05 level of confidence.

Table 4: Difference in Test Anxiety level of Quarterfinal Winner and Looser Cricket Players of North Zone University

Variable	Subjects	N	Mean	S.D.	S.E.M	M.D.	Df	t-value	
Test Ansiety	Winner	44	54.568	7.228	1.089	.477	.86	.264	NS
	Looser	44	54.090	9.571	1.443				

df=86
NS = Not significant at 0.05 level

It is evident from table 4 that mean value for winner and looser of quarterfinal level of cricket players of north zone interuniversity came out 54.568 and 54.090, which indicates that who groups of players i.e. winner and looser differ from each other. The value of standard deviation of winner and looser of quarterfinal level of cricket players of north zone University is 7.228 and 9.571, which shows that there is deviation in score of winner. The table 4 shows that t-value of quarterfinal winner and looser inter-varsity cricket players with regard to test anxiety came out to be .264, which is not significant at 0.05 level of confidence.

Table 5: Difference in Test Anxiety level of Semi-final Winner and Looser Cricket Players of North Zone Interuniversity

Variable	Subjects	N	Mean	S.D.	S.E.M	M.D.	Df	t-value	
Test Ansiety	Winner	22	52.863	7.402	1.578	3.409	42	1.592	NS
	Looser	22	56.272	6.790	1.447				

df=42
NS = Not significant at 0.05 level

It is evident from table 5 that mean value for winner and looser of semi-final level of cricket players of north zone interuniversity came out 52.863 and 56.272, which indicates that who groups of players i.e. winner and looser differ from each other. The value of standard deviation of winner and looser of quarterfinal level of cricket players of north zone interuniversity is 7.402 and 16.790, which shows that there is deviation in score of winner. The table 5 shows that t-value of quarterfinal winner and looser inter-varsity cricket players with regard to test anxiety came out to be 1.592, which is not significant at 0.05 level of confidence.

Table 6: Difference in Test Anxiety level of Quarterfinal Winner and Looser Cricket Players of North Zone Interuniversity

Variable	Subjects	N	Mean	S.D.	S.E.M	M.D.	Df	t-value	
Test Ansiety	Winner	11	50.636	7.513	2.265	4.454	20	1.448	NS
	Looser	11	55.090	6.905	2.082				

df=20
NS = Not significant at 0.05 level

It is evident from table 6 that mean value for winner and looser of quarterfinal level of cricket players of north zone interuniversity came out 50.636 and 55.090, which indicates that who groups of players i.e. winner and looser differ from each other. The value of standard deviation of winner and looser of quarterfinal level of cricket players of north zone interuniversity is 7.513 and 6.905, which shows that there is deviation in score of winner. The table 6 shows that t-value of quarterfinal winner and looser inter-varsity cricket players with regard to test anxiety came out to be 1.448, which is not significant at 0.05 level of confidence.

4. CONCLUSION

- It is clear from table 1 that there will be no significant difference between quarterfinal winner and looser regard aggression level.
- It is clear from table 2 that there will be no significant difference between Semi-final winner and looser regard aggression level.
- It is clear from table 3 that there will be no significant difference between winner and looser regard aggression level.
- It is clear from table 4 that there will be no significant difference between quarterfinal winner and looser regard test anxiety level.
- It is clear from table 5 that there will be no significant difference between semi-final winner and looser regard test anxiety level.
- It is clear from table 6 that there will be no significant difference between winner and looser regard test anxiety level.

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SPORTS, POVERTY AND EDUCATION: SOME ISSUES AND CONCERNS

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1. INTRODUCTION

In the culture, custom and natural living of man, sports and related activities holds a significant place. Since primitive times, sports have co-existed with education wherein man honed up his skills of hunting, handling of weapons, testing his strength, building up his courage with endurance and firmness. Sports like football, badminton, handball, volleyball, cricket, tennis etc have substantiated teaching and learning activities at all levels of education. Education, whether formal or informal, needs to be imparted in conformity with sports activities. A well developed sports system acts like a boon for the country. It helps in producing medal winning sportspersons, but the grim situation is the fragmented organization, with weak coordination, and poorly funded that hampers in developing the youth talent, in identifying them, and thus creating a tensile force in the improvement of sports and education in any nation.

A study by Hannah Okediji on the relevance of sports in developing education in Nigeria since 1904 till date revealed that sports which was formally introduced into educational curriculum in Nigeria as physical education by the British administration, promotes not only physical health and fitness but also recreational activities, relaxation prestige, economic status. It identifies talents, abilities, impart skills, encourage socio-cultural relationship which enhances unity among the populace. Another study on the role of private sport schools in the Norwegian sport system in 2017 by K Sen and Houlihan revealed that in developing an elite youth sport system, the government has though made efforts to enable the strengthening of the sport system by allowing the sports schools to expand in its space yet multiple and overlapping problems have received, only partial policy solutions some of which, such as the growth of private sports schools, have emerged. While the public schools run by the government deal with education, it is the private schools that take up the role of developing the youth sport system.

Article 1 of the INTERNATIONAL CHARTER OF PHYSICAL EDUCATION AND SPORT (Adopted by the General Conference of UNESCO at its twentieth session, Paris, 21 November 1978) says that physical education and sports is a fundamental right for all. It is evident that physical education and sport are simply not confined to physical well being and health of a person, rather it contributes to the full and well balanced development of the human being. But enormous efforts need to be made to make physical education and sports, a reality for all.

2. SPORTS AND EDUCATION

Both sports and education are interwoven with each other. One promotes the other. Sports form a significant component of the education system. It is the education that provides the forum through which different aspects of sports manifest its practices and activities. It has been seen through ages that man has used sports to satisfy his aesthetic needs, to relax from daily routine work and thus assist in living a healthy living.

While sports help in the physical and mental fitness of the individual through sporting activities and rules and ethic building, education helps in the organized and systematic process of acquisition of knowledge, skills, abilities and information through formal and non formal teaching and learning. Sociologists define education as "the process of cultural transmission and renewal." When education is related to culture, it becomes all the more effective. In this way education combines all various aspects of life, may it be literate, or non literate, economic and agricultural levels. Sports translated into Physical and health education in the curriculum, forms part of the content for systematic process of teaching and learning which develops a child to adult and builds him or her up to become a responsible member of the society."

3. SPORT AS A VEHICLE FOR DEVELOPMENT AND PEACE

A complete definition of sports includes all those activities than promotes not only physical and mental development but also very specifically the spiritual, aesthetic, emotional and educational well being in an individual so that he can contribute in the full-fledged development of the society of which he is an active part.

It is no new fact that sports helps to promote peace and

development. An historic example of this is the Olympics which are meant to bring in both humanitarian and development programming. An increasing understanding has evolved that sports can actually become a means for addressing other priorities of development scenario. The United Nations Task Force on Sport for Development and Peace affirmed this notion, concluding in its 2003 report that "sport offers a cost-effective tool to meet many development and peace challenges, and help achieve the MDGs [the UN's Millennium Development Goals]."

4. MAJOR ISSUES TO BE CONSIDERED

In an educational system, physical education and sports are considered to be essential component that must be carried through as it helps to meet individual and social needs. The basic requirement is to develop it adequately with proper facilities and necessary equipments. It must be remembered that even physical education and sports also undergo research and evaluation. This needs to be seriously dealt with as they are indispensable in the overall development and progress of the individual as well as the nation. It must also be added that in the healthy development of the individuals, the ethical and moral values of physical education and sports also must be taken into concern. When moral values are inculcated in the imparting of physical education, a fair and clean sport then becomes a moral responsibility.

5. OBJECTIVES OF SPORTS

To bring out the physical fitness in the individual, sports and physical education must be endured. An adequate set up promotes sporting spirit and besides physical fitness, it also helps in developing mental fitness. Other objectives that are fulfilled through sports are the inculcation of social efficiency, emotional stability, not only cultural but also spiritual enhancement, in choosing a life career, etc.

6. EFFECTS OF SPORTING ACTIVITIES

Sporting activities may not be taken as only meant for fun or for assisting in the physical development of the individual. It has its nationwide effects on the educational development and nation building as well. The effects are not just physical but also psychological, economical, emotional and social in nature. A study on development of sports in Nigeria reveals that traditional sports in Nigeria plays a vital role in integrating the citizens in cultural rituals and ceremonies. It gives a sense of belongingness, fosters unity and cooperation among peer groups across the nation. Different aspects of sports, physical and health education have varying benefits to human endeavors and existence.

According to Badmus (2009), "Recreational activities create the following benefits for the people,

- Provides fun and enjoyment;
- Promotes social and cultural integration;
- Reduces tension and emotion;
- Widens one's outlook and horizon;
- Develops basic skills needed in games and sports;
- Helps in the correction of metabolic disorders, dietary disorders and postural defects e.g. diabetes, obesity and scoliosis"

7. CHALLENGES OF SPORTS IN THE DEVELOPMENT OF EDUCATION

- Like every other aspects of education, even the sports education also faces many constraints and challenges. The first and foremost challenge that mars the development of physical education is the inadequate funding, mismanagement of funds, inadequate personnel and corrupted officials, lack of integrity, long file processing , red tapism, poor infrastructural facilities, etc.
- The major constraint that arises is the financing of the education. It is normally observed that the budget allocation has always been meager in comparison to the amount actually needed for its smooth development. The UNO recommends a minimum of 26 percent for education vote in the budget. Most nations fail to meet up this fair percentage too. During the period of economic recession, the case becomes all the more grim. Financing of sports faces a grave problem to the agencies who are meant responsible for it.
- Mismanagement of funds, the issue of embezzlement, misappropriation of funds, wasteful expenses and misrepresentation pose major barriers to the development of education and society through sports. Some nations even constitute National Sports Commission (NPC) at the state level sports Council and other bodies for the effective implementation of the policies related to sports but the issue of unfaithfulness on the part of the collectors and financial managers at all levels has hitherto put sports at a disadvantaged position to develop education and the society.
- Managerial problems also constitute major hurdles. The inability to take prompt and quality decisions fails to nurture the sporting activities in the institution. The professional preparations are so inadequate that it mars the shape of the sport events to be organized by the school authorities. The sport administrators, the sport personnels, the coaches, the managers do not possess the sharpness and the required ability needed for the performance of the specified event and the management of the sporting facilities.
- Inadequate infrastructural facility is one of the major problems that the sports and physical education section suffer. The building, the ground, the instructional materials are in pathetic condition and the quality of degrading nature. These become the basic reasons for the poor performances in both local and international competitions. Not only the infrastructure but the personnel are also not qualified so as to bring in some qualitative improvement. The teachers and the lecturers are insufficient and even those are there do not possess the skills to transform

the sporting skills in the students.

8. ROLE OF INSTITUTIONS

Whether the country is industrialized or in a developing mode, the onus on reducing the disparity which continues to exist between them in respect of free and universal access to physical education and sport is same for both.

The poverty of any developing nation poses a hindrance in the appropriate development of the sports facilities for its people. Thus there arises an emphasis on the importance for peace and friendship among people of cooperation between the international government and non-governmental organization in the promotion of physical education and sports. The International Charter proclaims that development of physical education and sports is a prerequisite for the human progress. For this, the governments are urged along with competent NGOs, educators, families and individuals to be aptly guided and to disseminate it and put it into practice.

National institutions play a significant role in the keen development of physical education and sports. The government of every nation should consider its prime responsibility to nurture the latent sporting talents of each child and this can be made possible by providing best opportunities to let them learn and grow. It is not merely sports that are benefitted through government's participation but with it the positive self esteem, the overall health development (cardiovascular and skeletal health) and the skill development in the individual also gets a platform.

With the basic facility being provided by the government, sporting behavior gets a platform to get nurtured in the childhood itself and thus enables the individual to lead a healthy lifestyle. An environment needs to be created to keep the children physically active and this is possible only in schools as they spend the maximum amount of their time in schools. Sport events and physical education as a subject must be given due importance so that the child understands its scope and becomes interested in choosing it as their life career.

9. SOME SUGGESTED MEASURES

Workshops and seminars need to be organized and global information should be updated to these institutions to make way for a healthy sporting environment. The schools time-table should be drawn to give appropriate time for outdoor sporting activities and exercises; Government should provide facilities for recreation and relaxation in various strategic places in the villages, towns and cities. Adequate training to the teachers, coaches, and trained personnels should be imparted to chisel their weak areas which can go a long way in the development of the sports and physical education. The element of corruption which eats away all that is initiated by the government need to be strictly dealt with. Adequate medical facilities and care should be provided for those who sustain injuries, wounds and those on rigorous training sessions.

Funds which are considered to be poor in the allocation to sports and its development need to be given major emphasis. A country is poor so it cannot afford to spend on sports and physical education but in doing so, it fails the economy to grow in these areas and ultimately the economy is again drenched into the pool of poverty. It thus becomes a dire need to facilitate the sports with adequate funds. Here the NGOs and the international cooperation can join hands and supplement the task of the government. Sports specialists like teachers, coaches and administrators should assist the government by improvising instructional materials at low cost to be able to make progress during economic recessions; Other means of mobilizing funds like gate fee, voluntary donations from different groups in the communities should be explored to boost the economy of sports. The low remuneration which is paid to the teachers and the trainers must be hiked up so that the scope of this area can be made significant. People with special talents in one game or sports should be identified in the schools or community for training and proper grooming in order to encourage them to develop their talents for the benefit of the nation.

Physical and Health Education should be made a core subject and not elective in the secondary education curriculum.

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FIGHT AGAINST DOPING IN SPORT

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1. INTRODUCTION

The fight against doping in sports commenced as a result of the death of a Danish cyclist during the Rome Olympic Games in 1960. The International Olympic Committee (IOC) established a Medical Commission (IOC-MC) which had the task of designing a strategy to combat the misuse of drugs in Olympic Sport. Some International Sport Federations (IF) and National Sports Federations followed suit, but progress was modest until the world's best male sprinter was found doped with anabolic steroids at the Olympic Games in Seoul in 1988. Further progress was made following the cessation of the cold war in 1989 and in 1999 public authorities around the world joined the Olympic Movement in a unique partnership by creating WADA – the 'World Anti-Doping Agency'. The troubled history of the anti-doping fight from the 1960s until today is reviewed. In particular, the development of detection methods for an ever increasing number of drugs that can be used to dope is described, as are the measures that have been taken to protect the health of the athletes, including those who may need banned substances for medical reasons.

It became apparent that doping had been practiced for many years and involved many Olympic sports. A giant gap needed to be closed. Although anti-doping efforts have intensified since 1967, and the methods for the detection of doping substances have become increasingly sophisticated, until recently it was generally accepted that the dopers and their entourage were well ahead of those who endeavored to curtail doping. In fact, some believed that the dopers will always be ahead, and that the struggle against doping is doomed to be a losing battle and therefore futile.

The use of doping substances in many sports and on all continents has become a major public health issue. The global and universal characteristics of doping led to the formation in 1999 of the World Anti-Doping Agency (WADA) a unique collaboration between sports and governments. WADA is founded on equal partnership between public authorities and Olympic sport. Thus, the fight against doping has evolved from a singled-handed effort of the IOC and sport federations to one that encompasses the active support of the international political establishment.

In the early days, it was generally believed that only certain stimulants such as amphetamine, cocaine, strychnine and ephedrine were used as doping substances. Since such drugs are taken at the time of a competition to temporarily enhance performance, a strategy was developed which included not only the production of a set of rules together with information and education about doping, but also doping control tests at competitions. These became known as 'in-competition' tests.

The World Anti-Doping Agency was created for four main reasons. First, there was a lack of harmonization of anti-doping rules. Different IFs and national anti-doping organizations (NADOs) had different rules which resulted in an increasing number of doping cases being contested in civil courts. Harmonization of anti-doping rules became an absolute necessity. Secondly, the use of certain doping substances, in particular AAS, expanded beyond the sports arena and tended to become a public health problem. The intake of AAS has the potential to have serious adverse effects on the individual user and society at large Thirdly, there was a need to undertake research to keep abreast of developments within the pharmaceutical industry. In particular, analytical methods needed to be available as new substances and methods came on the market. Fourthly, it was essential to promote anti-doping activities both at the national and international level, and to have those activities monitored by a central body.

The IOC accepted that this could not be achieved by sport alone. The support of public authorities was critical. Governments were invited by the IOC to make joint efforts, and after considerable discussion, WADA was created in 1999. The financial underpinning of WADA is jointly shared by the IOC and the participating governments. By the time of the Olympic Games in Athens in 2004, the World Anti-Doping Code which spells out the anti-doping rules had been prepared by WADA and accepted by the majority of Olympic sports. In 2007 a UNESCO Convention was ratified which lends governmental support to the Code and WADA activities. The Code and its various subsections are constantly updated and amended.

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YOGIC SCIENCE AND NATUROPATHY

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1. INTRODUCTION

In this era every man is busy. He wants to earn more and more money to enjoy all the luxuries. So he/she tries to become rich and able to lead a happy life.But on the same time he/she doesn't know how to lead a happy life without keeping himself/herself physically fit or healthy.It is well known to all that' health is wealth ' moreover good health is our prime factor of prosperity. When we are having good health or harmonius fitness. It means every person should do something for keeping oneself fit and healthy.All the physical and mental enjoyments depend on the strong body. Hence the development of the body is essential in life. ALL THE ACHIEVEMENTS AND THE GRADUATE DEGREES ARE WASTE WITHOUT A GOOD STRUCTURE AND HEALTHY PERSONALITY. Now-a –days the system of education makes the students to feel more stress on their mental development and completely rejects the physical activities. So their curriculum should include the sports, games and physical health education for all round development of the students.

2. YOGA

The word yoga means union between the individual (jivatma) and the supreme soul (Parmatma).The science which deals the method to reach it is called Yoga Shashtra. The term Yoga comes from Sanskrit word 'Yug' which means to join togather,to unify,or to unite as one. Yoga is a systematic process for an all round personality development at physical, mental, intellectual, emotional and spiritual level .It is the joining of the individual self with the universal self. According to Maharishi Patanjali "Yogah Chitta Virity Nirodha" i.e. yoga is a process of gaining control over the mind .So by controlling the mind, we reach our original state.

3. YOGIC SCIENCE

Contrary to western notions Yoga is not about only the physique but the mind the breath etc. It is not theory only but it includes practical too. It also includes other things like diet, sleep etc. for optimum results. This is in fact metaphysics and the philosophy behind it is termed as Yogic Science.

4. WHAT DOES THIS YOGA SCIENCE MEAN TO US?

When people talk about yoga, they often think it as something to do with the physical being only. Whereas Yoga is a science that deals with the body, breath, mind and soul and ultimately the universe itself. It is both practical and theoretical.

5. NATUROPATHY

The term naturopathy has been created from natura and pathos to suggest natural healing. It claims the ancient GreeK "Father of medicine" This term was first coined by John Sheel in 1895. And purchased by Bendict Lust whom naturopathos consider to be the father of U.S. naturopathy.

Naturopathic is based on a belief in the body's ability to heal itself through a special vital energy or force guiding bodily process internally. Naturopaths claim promote the body's natural ability to heal.

6. WHAT IS YOGA?

The word yoga has been derived from the word' yuj In Sanskrit language which means the joining of body and mind is called yoga. Yoga is that means or way by which the soul joins the god.

The famous scholar Patanjali has written in yoga shashtra "Yogischchit Vriti Nirodha". In simple words checking the impulses of mind is yoga.

Lord Krishna has said in Bhagwat Geeta "Yoga karmasu kaushlam" means skill in perfection or working perfectly is yoga.

According to Dr. Sampurnanand "Yoga is spritiual Kamdhenu which gives what we wish.

7. COMPONENTS OF YOGA

- Yama- means practice of restraints or percepts
- NIyama- means to follow rules or discipline.
- Asana- means method of seating or assuming various bodily postures.

- Pranayama- means control of Pranas.
- Darma-involves concentrating the mind or a single point or object such as the image of deity.
- Dhayan- means meditation either passive or active.
- Pratyahar- means deteching the mind and sense organs from relating activity and attaching to the God.
- Samadhi- means a state of observation.

8. WHY YOGA IS SO IMPORTANT

- Yoga; - Helps man to syncronise his diverse life.
- Yoga;- Holds the key for self unifoldment and self improvement.
- Yoga;- Practice can increase our lung capacity and respiratory system
- Yoga;- Is often described as the skill of action.
- Yoga;- links up man with the laws operating at the cosmic level.
- Yoga;- is therefore the best curative and preventive medicine for all the ills of man from the so called modern living.

9. YOGA SCIENCE FOR STUDENTS

The constant practice of yoga leads to several benefits and many states of consciousness and experience. It leads complete mastery over the body and the mind. The other benefits of yogic science are the knowledge of the past prana and future, intuition or pratibha, ability to read the other pupils mind and thoughts, knowledge of the past lives, knowledge of the friendship and elephant strength, and exact sensory perception etc.The study of yogic science help the students in many ways.

- To experience stress and poor health at early age. Yoga appears to meet this challenge effectively.
- Yoga science teaches body consciousness, both knowledge and understanding of the importance of correct posture, proper sequence, right timing and body hygiene.
- Yoga can definitely helps in excellence, in the present day sports as it develops the stamina and concentration both.
- Meditation is of great value to strength a child‘s power of concentration when growing. In those schools where meditation is taught students show great improvement both in class and interaction.
- Yoga is one of the main pillers of the cultural life of India. It has multiple benefits for its practitioners. It gives them a new push in life.
- Yogic Science aims at keeping the people free from disease of the body as well of the mind .And if someone gets hurt physically or mentally, there is naturopathy to heal the injured part through natural process.

10. YOGA FOR HEALTHY AND HAPPY LIFE

- Yoga exercise can be done even in one’s residential room. There are people who have all
- Material comforts and modern amenities at their command but even then their life is is full of worries and disturbances. Thus, we find that every one is sick having mental tension in one or another form. Under these circumstances, yoga can play a vital role to reduce, eliminate mental tensions and to maintain fitness.
- How naturopathic medicine help us
- Naturopathic medicine is a science based tradition that promotes wellness by identifying the unique aspects of each patient and employing non toxic natural therapies to restore her physiological, psychological, and structural balances.
- What are the principles of naturopathic medicine?

11. NATUROPATHIC MEDICINE FOLLOWS A NUMBER OF KEY PRINCIPLES

- The healing power of nature: The body has an inherent ability to maintain and restore health. Naturopathic physicians facilitate this healing process by removing obstacles to cure and identifying treatments to enhance healing.
- Identify and treat the cause: Naturopathic physicians treat the underlying cause of illness rather than just the symptoms of disease. Symptoms are an external manifestation of an internal imbalance due to any combination of physical, mental, or emotional causes. It is more important not to disregard the underlying cause of disease.
- First do no harm: A naturopathic treatment plan uses therapies that are gentle , non-invasive, effective, and do not have adverse side effects . A conscious effort is made to use methods that do not suppress
- Doctor’s ad teachres: The prime role of naturopathic physician is educating, empowering, and motivating patients to assume more personal responsibility for their health by adopting a healthy attitude, lifestyle, and diet.
- Treat the whole person: Naturopathic physicians help to identify specific weaknesses or dysfunctions in their patients and tailor treatment based upon the patient’s individual presentation.
- Prevention: it is far easier and cheaper to prevent a disease than to treat a disease. Naturopathic physicians evaluate both subjectives and objective information necessary information necessary to uncover potential susceptibilities to future disease states in their patients.
- How can naturopathic medicine benefit your health and wellbeing?

12. CONCLUSION

Education and parents want their pupils and children to do their best and respect themselves for their efforts. The experience of winning trophy will be etached in their memories, captured on film, pushed out through social media, celebrating with their team mates and fellow pupils

and staff and recognized at home. It will demonstrate the result of hard work, competitive sprit, teamwork and ambition, and a person may live healthy and happy life for longer time with a switch over to yogic science and naturopathy. A naturopathic physician is like a tailor, trying to find the best fit for the patient. This is a genuine practice of medicine, requiring trial and error, along with patience and good communication.

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COMPARISON OF MOTOR INTELLECTUAL ABILITIES BETWEEN PRIVATE AND GOVT. SCHOOLS : AN EFFORT TO INTEGRATE THE EDUCATIONAL APPROACH

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ABSTRACT

The current scenario highly requires a revision of approach towards students to provide them all round development. The purpose of the study was to compare the motor intellectual abilities between private and Govt. schools of Jammu region in J&K. The study is attempted to specify that the regions and causes of why motor intellectual abilities is high in any particular category of schools (if any). Motor Intellectual Ability is the physical and mental ability to coordinate the body movements along with the predictive reaction intelligence. Total one hundred fifty (150) students from different schools of Jammu region (75 from private schools and 75 from Govt. schools) were selected as subjects. The Motor Intellectual Ability was selected as criterion measure in the study. The data was analyzed to find out the significant difference between two groups. 't'-test statistical technique was used to analyze the significant difference and the level of significance was set at 0.05 level. The results showed that there was significant difference between private and Govt. schools students for their Motor Intellectual Abilities. It was found that the private students were more approached to develop Motor Intellectual Abilities like programs than the govt. schools.

Keywords: Motor Intellectual Abilities, Students, Govt. and Private Schools.

1. INTRODUCTION

Development is a lifelong process, and different aspects of development (physical, motor, cognitive, emotional, etc.) are correlated and interdependent in multiple ways. The complex interreaction of our genes, and our social, cultural, and physical environment, is what defines us. According to the current theories, cognition, perception, motor behavior, and emotions are in close relationship.

During the first 7-8 years of life, development of basic movement patterns depends largely on the rate of neuromuscular maturation of an individual, residual effect of movement experience and current movement experience, as well as growth and maturation status. When fundamental movement patterns are once established, learning and exercising become significant factors of influence on motor competence.

Physical and motor development of the child must be considered within a certain context. Lifting head or unaided sitting of the infant is not an exclusive source of maturation processes (age-dependent ones) as physical and social characteristics of environment play significant roles in it too. Adolph and Berger use the example of crawling and learning to walk to illustrate how much everyday practice and mothers' expectations in bringing up children are significant for mastering motor benchmarks. Maturation of brain and nerve structures produces favorable effects on power and balance by increasing speed and efficiency of information processing. Brain growth is very fast during infant age and young childhood, and it continues the growth pattern of the brain and related tissues commenced in the prenatal period. Relationship between motor development and brain growth is especially expressed at the infant age, and this can also be related to a unique cerebellum growth spurt. Intensive and fast development of cerebellum is significant for coordination, postural control, balance and muscular tone, and for cognitive functioning, as well. Independent walking increases child's mobility and opportunities for social interactions, while motor development in general has significant effects on the child's cognitive and language development.

The developing tendencies in international sports, especially in team games are identified as the increase in game tempo, tougher body game and greater variability in technique and tactics. Due to the immaturity of the human nervous system at the time of birth, children grow continually throughout their childhood years. Many factors

contribute to the ability and the rate that children develop their motor skills. Uncontrollable factors include: genetic or inherited traits and children with learning disorders. A child born to short and overweight parents is much less likely to be an athlete than a child born to two athletically built parents. Controllable factors include: the environment/society and culture they are born to. A child born in the city is much less likely to have the same opportunities to explore, hike, or trek the outdoors than one born in the rural area. For a child to successfully develop motor skills, he or she must receive many opportunities to physically explore the surroundings.

Infantile: Early movements made by very young infants are largely reflexive. An infant is exposed to a variety of perceptual experiences through the senses. For example, very young infants have a reflexive response called "rooting". By slightly stroking the side of the infants face, the infant turns its head to that side, frequently resulting in the location of food. Gradually, the infant learns that certain involuntary, reflexive movements can result in pleasurable sensory experiences, and will attempt to repeat the motions voluntarily in order to experience the pleasurable sensation.

Milestone Developmental Stages;

- 6 months – can sit straight
- 12 months – takes first steps
- 24 months – can jump
- 36 months – can cut with scissors; runs on toes

2. PROCEDURE AND METHODOLOGY

SELECTION OF SUBJECTS

Total one hundred fifty (150) students from different schools of Jammu region (75 from private schools and 75 from Govt. schools) were selected as subjects.

SELECTION OF VARIABLES

Motor intellectual abilities involve psychomotor skill that is a voluntary body movement with a predetermined end result. For example, hitting a ball with a bat. Fundamental motor skills are basic skills that are learned when young. They form the basis of more complex movements, for example, jumping. A perceptual skill is about being able to interpret information quickly at a given time and to make an appropriate decision. For example, a goalkeeper in football assessing the movement of an opponent approaching. A cognitive skill is about being able to make sense of a problem and to solve it. These skills affect perception.

STATISTICAL ANALYSIS OF DATA

With regard to purpose of the study Mean, Standard Deviation and 't' test were calculated. In order to check the significance, level of significance was set at 0.05.

3. ANALYSIS AND RESULTS

The results showed that there was significant difference between private and Govt. schools students for their Motor Intellectual Abilities. It was found that the private students were more approached to develop Motor Intellectual Abilities like programs than the govt. schools.

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THE EFFECT OF DIFFERENT GEOGRAPHICAL CONDITION ON SELECTED PHYSIOLOGICAL VARIABLES ON BADMINTON PLAYERS

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ABSTRACT

Introduction: The objective of the study was to investigate the effect of different geographical condition on selected physiological variables on badminton players. Another purpose of the study was to find out the relationship of different geographical among physiological variables of badminton players. **Methods:** The subjects for the study were selected from the ninety badminton players who have participated in national level badminton tournament. Thirty subjects were selected from Karla, Tamilnadu and Andhra Pradesh (Coastal area). Thirty subjects were selected from Uttar Pradesh, Haryana and Punjab (Non-coastal area) and thirty were selected from Uttarakhand, Himachal Pradesh and Jammu and Kashmir (hill area). The age level of subjects ranged from 15 to 18 years. All the subjects were residing at different geographical conditions. Stand and progressive matrices organizational selected physiological variable is (resting heart rate, resting blood pressure, vital capacity and respiratory rate). To find out significant effect of different geographical conditions on selected physiological variable of badminton players, the one-way analysis of variance was used. To find out the relationship among physical variable, the Pearson's Product moment correlation was computed. The level of significance was set at .05 levels. **Results and Discussion:** The result reveals the one-way analysis of variance that there was insignificant ($p>.05$) the effect of different geographical conditions on selected physiological variables (systolic blood pressure and respiratory rate) of badminton players and significant ($p<.05$) deference of physiological variables (resting heart rate, diastolic blood pressure and vital capacity) of badminton players. The result reveals the Pearson's Product moment correlation that there was insignificant ($p>.05$) the effect of different geographical conditions on selected physiological variable (vital capacity) of badminton players and significant ($p<.05$) deference of physical variable (resting heart rate, resting blood pressure and respiratory rate) of badminton players.

Keywords: Geographical Conditions, Physiological Variable, Badminton, Players.

1. INTRODUCTION

In the modern game of Badminton, a player is required to continuously be in movement over a certain period of time (up to 75 minutes depending upon the standard of the player) varying his pace from fast to slow, medium and vice-versa and many a time hopping skipping jumping, lunging and changing direction while in movement. This demands a great deal of cardio-vascular endurance on the part of the badminton player.

Man in action is frequently exposed to environmental condition that might be classified as a typical, if not abnormal. The physiological concept discussed until now have dealt with the body's response to normal exercise and training. But optimal condition do not always prevail the day may be excessively hot and humid and cold, the clothing or uniform may be inadequate or the individual may journey into unusual may be inadequate or the individual may journey into unusual environmental circumstances such as high altitude or under water.

Stamina, speed, strength, skill and strategy are essential ingredients of all sports disciplines. A variation in degree in which these ingredients are present marks out special feature of any particular sports. Badminton at its best is a game of swift and graceful movement, a power play contrastingly highlighted by delicacy of touch, of wrong, footing deception, of incredible retrieving and lighting interception, and of varied chess-like tactics of singles, doubles and mixed doubles each an absorbing and different game on its own.

2. METHODS

The subjects for the study were selected from the ninety badminton players who have participated in national level badminton tournament. Thirty subjects were selected from Karla, Tamilnadu and Andhra Pradesh (Coastal area). Thirty subjects were selected from Uttar Pradesh, Haryana and Punjab (Non-coastal area) and thirty were selected

from Uttarakhand, Himachal Pradesh and Jammu and Kashmir (hill area). The age level of subjects ranged from 15 to 18 years. All the subjects were residing at different geographical conditions. Stand and progressive matrices organizational selected physical variable is (resting heart rate, resting blood pressure, vital capacity and respiratory rate).To find out significant effect of different geographical conditions on selected physiological variable of badminton players, the one-way analysis of variance was used. To find out the relationship among physical variable, the Pearson's Product moment correlation was computed. The level of significance was set at .05 levels.

3. RESULTS OF THE STUDY

Table 1: Analysis of variance in resting heart rate among hill area, coastal and non-coastal players

Source of Variance	d.f	SS	MSS	F-ratio
Between Group	2	653.60	326.80	19.689*
Within Group	87	1444	16.598	

**Significant at .05 level*
F-Value required to be significant at .05(2, 87) = 4.92

The value shown in table-1 clearly indicates that the F-Value calculated in much higher than the required value to be the significant. Farther the mean difference among coastal, non-coastal and hill area players through post hoc test was computed which are presented in the following tables and also are represented by figure I.

Table 2: Comparison of resting heart rate among hill area, coastal and non-coastal players

Hill Area	Coastal Area	Non-Coastal Area	M.D	C.D
68.93	62.33		6.60	2.95
68.93		65.53	3.40	
	62.33	65.53	3.20	

**Significant at .05 level*
**F-Value required to be significant at .05(2, 87) =4.92*

The post hock test to compare the resting heart rate among hill area, coastal area and non-coastal area players has clearly revealed the in significant difference among the badminton players of hill area and coastal area where the calculated mean difference found (6.60), hill area and non-coastal area where the calculated mean difference found (3.40) and coastal area and non-costal area where the calculated mean difference found (3.20) was lower than the required value 4.92. The required value was much lower than the calculated value at .05 level of significant.

The scores are also illustrated in the figure-I

Figure I

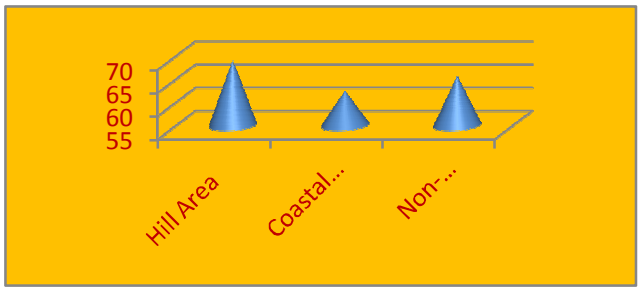

Table 3: Analysis of variance in resting systolic blood pressure among hill area, coastal and non-coastal players

Source of Variance	d.f	SS	MSS	F-ratio
Between Group	2	28.89	14.45	.794*
Within Group	87	1583.17	18.20	

**Insignificant at .05 level*
F-Value required to be significant at .05(2, 87) = 4.92

The value shown in table-3 clearly indicates that the F-Value calculated is much lower than the required value to be significant. Hence it is stated that, no significant relationship exist among the means of hill area, coastal and non-coastal players.

The scores are also illustrated in the figure-II

Figure II

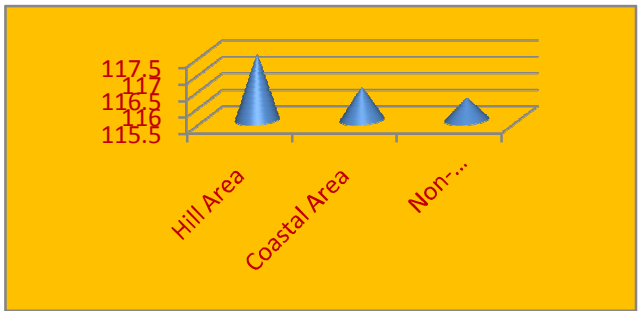

Table 4: Analysis of variance in resting diastolic blood pressure among hill area, coastal and non-coastal players

Source of Variance	d.f	SS	MSS	F-ratio
Between Group	2	614.067	307.033	20.175*
Within Group	87	1324.033	15.219	

**Insignificant at .05 level*
F-Value required to be significant at .05(2, 87) = 4.92

The value shown in table-4 clearly indicates that the F-Value calculated in much higher than the required value to be the significant. Farther the mean difference among coastal, non-coastal and hill area players through post hoc test was computed which are presented in the following tables and also are represented by figure III.

Table 5: Comparison of resting diastolic blood pressure among hill area, coastal & non-coastal players

Hill Area	Coastal Area	Non-Coastal Area	M.D	C.D
72.10	65.87		6.23	2.82
72.10		67.74	4.36	
	65.87	67.74	1.87	

**Significant at .05 level*
**F-Value required to be significant at .05(2, 87) =4.92*

The post hock test to compare the resting diastolic blood pressure between hill area, coastal area and non-coastal area players has clearly revealed the in significant difference between the badminton players of hill area and coastal area where the calculated mean difference found (6.23) and hill area and non-costal area where the calculated mean difference found (4.36). Whereas the score did not reveal any significant difference between the badminton players of coastal area and non-costal area. The calculated value also did not reveal any significant difference between the players of hill area to that of non-costal area as the required value was much higher than the calculated value at .05 level of significant.

The scores are also illustrated in the figure III.

Figure III

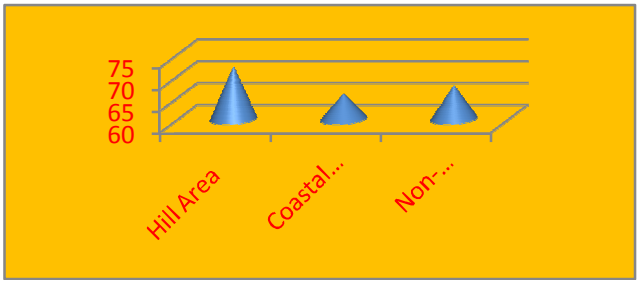

Table 6: Analysis of variance in vital capacity among hill area, coastal and non-coastal players

Source of Variance	d.f	SS	MSS	F-ratio
Between Group	2	2502000	1251000	14.954*
Within Group	87	7278250	83658.046	

**Significant at .05 level*
F-Value required to be significant at .05(2, 87) = 4.92

The value shown in table-6 clearly indicates that the F-Value calculated in much higher than the required value to be the significant. Farther the mean difference among coastal, non-coastal and hill area players through post hoc test was computed which are presented in the following tables and also are represented by figure IV.

Table 7: Comparison of vital capacity among hill area, coastal and non-coastal players

Hill Area	Coastal Area	Non-Coastal Area	M.D	C.D
3585	3975		390	295.74
3585		3675	90	
	3975	3675	300	

**Significant at .05 level*
**F-Value required to be significant at .05(2, 87) =4.92*

The post hock test to compare the vital capacity between hill area, coastal area and non-coastal area players has clearly revealed the in significant difference between the badminton players of hill area and coastal area where the calculated mean difference found (390) and coastal area and non-costal area where the calculated mean difference found (300). Whereas the score did not reveal any significant difference between the badminton players of hill area and non-costal area. The calculated value also did not reveal any significant difference between the players of hill area to that of non-costal area as the required value was much higher than the calculated value at .05 level of significant.

The scores are also illustrated in the figure-IV

Figure IV

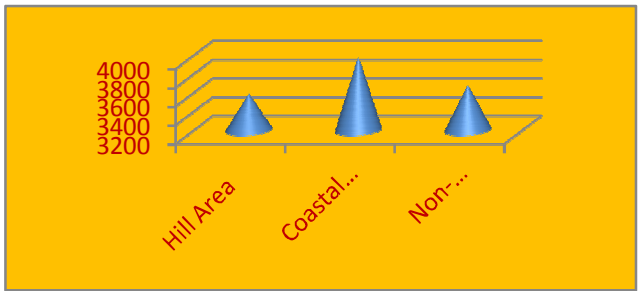

Table 8: Analysis of variance respiratory rate among hill area, coastal and non-coastal players

Source of Variance	d.f	SS	MSS	F-ratio
Between Group	2	55.022	27.511	2.778*
Within Group	87	861.467	9.902	

**Insignificant at .05 level*
F-Value required to be significant at .05(2, 87) = 4.92

The value shown in table-8 clearly indicates that the F-Value calculated is much lower than the required value to be significant. Hence it is stated that, no significant relationship exist among the means of hill area, coastal and non-coastal players.

The scores are also illustrated in the figure-V

Figure V

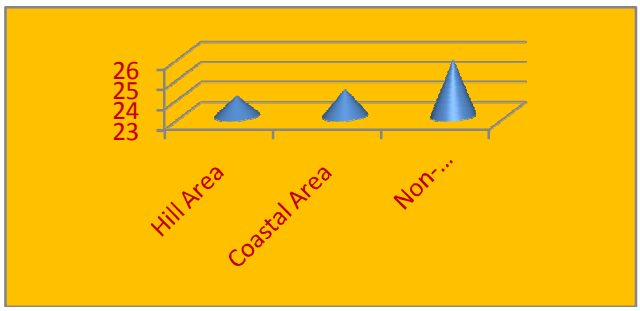

Table 9: Correlation coefficient of physiological variables among hill area, coastal and non-coastal players

Players	Correlation of coefficient
Resting heart rate	.228
Systolic Blood Pressure	1
Diastolic Blood Pressure	.580
Vital capacity	.111*
Respiratory rate	.230

**Insignificant at .05 level (.217)*

It is evident from Table-9 that significant correlation was found among coastal, non-coastal and hill area players in relation to resting heart rate, Systolic Blood Pressure, Diastolic Blood Pressure and respiratory rate and insignificant correlation was found among coastal, non-coastal and hill area players in relation to vital capacity.

4. DISCUSSION OF THE RESULTS

The result of the study was to compare the Physiological Variables Resting heart rate, Resting blood pressure, Vital capacity and Respiratory rate among coastal area, non-coastal area and hill area national level badminton players. Though these exist significant difference among the coastal area, non- coastal area and hill area national level badminton players in relation to Resting heart rate, Vital capacity and Respiratory rate and insignificant difference among the coastal area, non- coastal area and hill area national level badminton players in relation to resting blood pressure.

The result is in the direction of Reilly (1994) studies, consistently indicated Analysis of work rate profiles and factors effecting work rate provides a basis for describing exercise intensity during matches. Physiological responses to soccer play indicate moderate to high intensities intermittently high anaerobic responses and reduction of muscle glycogen stores towards the end of play game related activities impose unique physiological stress on players match play demands have implication for the modeling of training regiments and attention to specificity of soccer skill.

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A COMPARATIVE STUDY OF VITAL CAPACITY OF SPORT MAN AND NON SPORTSMEN

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ABSTRACT

The purpose of the study was to compare vital capacity of sportsman and non-sportsman student of S.M.P Govt. Girls PG College Madhavpuram, Meerut. The Study was conducted on fifty students. They were selected randomly form the college. The vital capacity was measured by using spirometer. The 't' test was used at 0.05 level of significance. There was significant difference between the sportsman and non-sportsman. On the basis of finding the result of the sturdy vital capacity of sportsman was better than the non-sportsman.

Keywords: A Comparative Study of Vital Capacity of Sport man and Non Sportsmen

1. INTRODUCTION

The history of human being witness to the fact as man was busy in this day to day routine work in absence of modern means of life. They do have the problem faced by the today's man. The development in the field of technology has provided numerous comforts to the modern men compared to it. Science applied to sports has enabled modern youth to develop physical and physiological capacities beyond anything earlier imagined.

One of the important, remarkable, beautiful, valuable and priceless thing that god has created particularly on the earth in human life. Therefore it is necessary to protect and maintain human life in order to achieve higher goals and objectives and live a happy and meaningful life. To develop health and fitness and to lengthen life, the scientists and researchers have devoted their lives to invention of medicine that protect life from various diseases and health related equipments that measure that physical, physiological and physiological parameters of individual will to discover new things in this fields are highly remarkable and admirable in the history of men and civilization.

Vital capacity is the maximum amount of air a person can expel from the lungs after a maximum inspiration. It is equal to the inspiratory reserve volume plus the tidal volume plus the expiratory reserve volume. A person vital capacity can be a wet or regular spirometer. In combination with other physiological measurements, the vital capacity can help make a diagnosis of underlying lung disease. The unit that is used to determine this vital capacity is in the milliliter (ml). A normal adult has a vital capacity from three to five litres.

2. METHODOLOGY

The purpose of this study was to compare the vital capacity of sports man and non sports man students. The subject were fifty female students (twenty five sports man and twenty five non sports man) of S.M.P Govt. Girls PG College Madhavpuram, Meerut. The age of the students from 17 to 25 years. Vital capacity measured in liters and instrument used wet spirometer. Data was collected in the morning session. Total there trials was given to subject and best score was taken for the study 't' Test was used. The level of significance was set at 0.05 level of confidence.

3. RESULT AND DISCUSSION

Table 1: Comparison of the means of vital capacity of sportsman and Non-sportsman

Group	Mean	Standard Deviation	't' Ratio
Sports Man	3.76	0.2084	8.78
Non-Sports Man	3.12	0.3013	

't' value to be needed at 0.05 level of confidence with 48 degree of freedom is 1.677

It was inferred from table-1 that there was significant difference found in the vital capacity of sportsman and non-sportsman student.'t' value needed for significance is 1.677 and as the obtained value is more than the needed value i.e 8.78

Non-sportsman has less mean value (3.12) in vital capacity comparison to sportsman mean value (3.76).

The result proves that there was significant difference found in vital capacity between sportsman and non-sportsman students. The sportsman student always involved in the physical avtivity. So, the vital capacity of sportsman is better the non-sportsman students.

4. CONCLUSION

On the basis of findings of the study that significance difference was found in vital capacity between sportsman and non-sportsman students.

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RELATIONSHIP OF ANTHROPOMETRIC MEASUREMENTS TO PERFORMANCE IN HOCKEY

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ABSTRACT

The purpose of this study was to find out the relationship of the selected anthropometric variables contributing to success in hockey viz; striker, defender and mid fielder. Thirty male hockey players who represented Bilaspur (C.G.) district in hockey tournaments were randomly selected for this study. They were further divided into three equal groups as per their playing position i.e. 10-striker, 10 defenders and 10 mid fielders. The grading and performance were judged in the light of ten point scale by a panel of three professional judges. The score was average rating of three experts. Anthropometric measurements including linear measurements, diameters and circumferences were taken by following the standard techniques of Tanner et al. (1969). The relationship of fifteen anthropometric measurements with performance in striker, defender and mid fielder were studied. Coefficient of correlation was computed to find the relationship of various anthropometric measurements to performance in hockey. It was analysed that performance in striker is more a function of arm length, leg length, and shoulder width and forearm girth. Height and shoulder width helps the defenders to perform better and mid fielders need to be shorter to excel in the game of hockey. It has been established that attainment of such characteristics helps the hockey players to perform better during competitions.

Keywords: Anthropometric Measurement and Hockey Players.

1. INTRODUCTION

The role of physique is very important in the view point that morphological constitutions and its proportions in the human body are genetically determined and it cannot be changed under normal circumstances. It is believed that physical fitness is trainable factor but the influence of one's physique and body composition seems to play a great role in its determination as achievement of high level performance is only possible in an individualwith adequate genetic predisposition and under optimal environment condition.

Field hockey is an intermittent endurance sport involving short sprinting as well as movement with and without ball (Manna et al., 2009). Successful performance in field hockey is influenced by morphological and anthropometric characteristics such as body size and composition, functional parameters (physical capacity) (Scott, 1991; Singh et al., 2010) and fitness (strength, speed, anaerobic and aerobic capacity, agility) (Nikitushkin & Guba, 1998). In field hockey, players are to bend forward to the ground for the maximum groundwork and to cover a wider range all around during the game (Sodhi, 1991) and maximum strain comes over the back muscles as well as abdominal muscles during the entire duration of the game. Estimation of back strength of Indian inter-university male hockey players and significant positive correlations of back strength with height, weight, BMI, hip circumference, % lean body mass and abdominal muscle endurance was reported (Koley et al., 2012). Evaluation of anthropometric, physiological and skillrelated a test for talent identification in female field hockey was also reported (Keogh et al., 2003). Anthropometric characteristics and physiological variables were compared too, among the national hockey players of India, Pakistan and Sri Lanka (Singh et al., 2010). Hockey players playing in different positions found to differ on some anthropometric measurements and body cpmposition (Karkare, 2011).

Studies proved that elite players of different sports require different body proportions with respect to their events (Tanner, 1964, de Garry et al; 1974: Carter et al; 1982; 1984 Sharma, 1982; Luthra and Shaw, 1990; Sidhu et al.1990, Sodhi, 1991).

Relationship of anthropometric characteristics and position

wise hockey performance remained less reported, especially in Indian context. To fulfil the lacuna of knowledge, the present study was planned with the hypothesis that there would be significant relationship of anthropometric characteristics studied with field hockey positions.

2. METHODOLOGY

Thirty male level District hockey players from Bilaspur (C.G.) were selected for this study. They were further divided according to their playing position i.e. 10-striker, 10-defenders and 10- mid fielder. The grading and performance were judged in the light of ten point scale by a panel of three professional judges. The score was average rating of three experts.

Anthropometric measurements including linear measurements, diameters and circumferences were taken by following the standard techniques of Tanner et al. (1969).

Coefficient of correlation was computed to find the relationship of various anthropometric measurements to performance in hockey.

3. RESULTS AND DISCUSSIONS

Table 1: Relationship of Selected Anthropometric Measurements with the Performance of Striker

Sl. No.	Measurements	Coefficient of Correlation (r)
1.	Body Weight	0.32
2	Height	0.35
3.	Arm Length	0.69*
4.	Fore Arm Length	0.61
5.	Upper Arm Length	0.53
6.	Foot Length	-0.38
7.	Leg Length	0.72*
8.	Fore Length	0.33
9.	Thigh Length	0.59
10.	Trunk Length	-0.26
11.	Shoulder Width	0.67*
12.	Upper Arm Girth	0.53
13.	Fore Arm Girth	0.68*
14.	Thigh Girth	0.39
15.	Calf Girth	0.54

The coefficient of correlation between various anthropometric measurements with performance of striker have presented in Table-1. It is clear from the table that except, foot length and trunk length all the measurements have shown positive correlation with performance of the striker. Since the calculated value of 'r' in case of leg length, arm length, shoulder width and fore arm -girth with performance is greater than tabulated value (r = 0.632) therefore significant positive relationship ($p<0.05$) of strikers performance with leg length, shoulder width and fore arm girth was observed.

It may be seen that performance of striker is more a function of arm length, leg length, and shoulder width and fore arm girth.

Table 2: Relationship of Selected Anthropometric Measurements with the Performance of Defenders

Sl. No.	Measurements	Coefficient of Correlation (r)
1.	Body Weight	-0.26
2	Height	0.67*
3.	Arm Length	0.68*
4.	Fore Arm Length	0.66*
5.	Upper Arm Length	0.68*
6.	Foot Length	-0.17
7.	Leg Length	0.45
8.	Fore Length	0.29
9.	Thigh Length	0.54
10.	Trunk Length	-0.21
11.	Shoulder Width	0.66*
12.	Upper Arm Girth	0.39
13.	Fore Arm Girth	0.65*
14.	Thigh Girth	0.60
15.	Calf Girth	-0.33

The data of coefficient of correlation between various anthropometric measurements and performance in defenders have been presented in Table 2. It is clear from the table that except body weight, foot length, trunk length and calf girth all the measurements have shown positive relationship with performance of the Defenders. Since the calculated value of 'r' between performance and height, arm length, fore arm length, upper arm length. Shoulder width and fore arm girth are greater than tabulated value (r = 0.632), therefore significant positive relationship ($p<0.05$) of defending with above mentioned measurements was observed.

Speed and arm power effect the performance in bowling It may be due to the reason that arm length, fore arm length, upper arm length and fore arm girth helps an individual to gain more speed whereas excess body weight becomes the hindrance. It is clear that above mentioned characteristics helps the defenders to perform better during competition

Table 3: Relationship of Selected Anthropometric Measurements with the Performance of Mid Fielders

Sl. No.	Measurements	Coefficient of Correlation (r)
1.	Weight	0.47
2	Height	-0.63*
3.	Arm Length	0.25
4.	Fore Arm Length	0.37
5.	Upper Arm Length	0.45
6.	Foot Length	-0.19

Sl. No.	Measurements	Coefficient of Correlation (r)
7.	Leg Length	0.18
8.	Fore leg Length	-0.24
9.	Thigh Length	0.06
10.	Trunk Length	0.51
10.	Trunk Length	0.54
11.	Shoulder Width	0.62
12.	Upper Arm Girth	0.07
13.	Fore Arm Girth	0.40
14.	Thigh Girth	0.46
15.	Calf Girth	0.31

Table-3 represents the relationship between various anthropometric measurements and performance of mid fielders. It is observed from the results that height, foot length and fore leg length have negative($p<0.05$) relationship with performance and positive relationship with rest of the bodily measurements.

However significant negative relationship was analysed between height of the mid fielders and performance. Advantage of short height of mid fielder and performance may be because of the reason that one has to perform quick movement and more agile while playing in their respective position.

4. CONCLUSION

It was concluded that apart from the many factors affecting the performance in hockey, the body structure has also important role to play hockey. Performance in striker is more a function of arm length, leg length, shoulder width and forearm girth. Whereas height and shoulder width help the Defenders to perform better and mid fielder need to be shorter in height to be proficient in the game of hockey. It has been established that having these anthropometric characteristics helps the hockey players to perform better during competition.

Field hockey is a high intensity activity sport with a multidirectional nature. The ability to change direction rapidly while maintaining balance without loss of speed-that is, agility-is therefore an important physical fitness component necessary for successful performance in field hockey. Elite field hockey players also need high level of technical skills such as being able to dribble without losing running speed. For a technically good player, dribbling is essentially an automatic process, and the better players distinguish themselves by their running speed while dribbling the ball (Reilly et al., 1986). So, quite naturally, strong correlations would be there among the physical fitness components, viz. slalom sprint, dribble test, aerobic strength and handgrip strength. The findings of the present study also supported the existing knowledge. However, future investigation is required considering more sample size to validate the data.

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ROLE OF PHYSICAL EDUCATION AND SPORTS IN SOCIAL CHANGES

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ABSTRACT

The role of Physical Education & Sports as an agent or instrument of social change and social development is widely recognized today. Social change may take place when humans need change. When the existing social system or network of social institutions fails to meet the existing human needs and when new materials suggest better ways of meeting human needs.

Physical Education & Sports is seen as a major vector in our society, but that is largely allocated a conservative role, since its main function is in the socialization of the young and the maintenance of the social order. During times of rapid social change, such as the second half of the 20th century, the role of Physical Education & Sports in the service of the nation is emphasized. When things are going well, especially economically, more experimentation with Physical Education & Sports is supported, and more idealistic goals are pursued, such as equity of Physical Education & Sports opportunity. It is in the ideological and moral spheres, however, that Physical Education & Sports is most clearly expected to play a leading role. Social change takes place as a response to many types of changes that take place in the social and nonsocial environment. Physical Education & Sports can initiate social changes by bringing about a change in outlook and attitude of man. It can bring about a change in the pattern of social relationships and thereby it may cause social changes.

Keywords: Physical Education, Sports, Social Changes.

1. INTRODUCTION

Physical Education & Sports can be used as a tool to empower the individual. Through child centered learning, students are able to see their own role in transformation. Social change comes from the collective transformation of the individuals within that society. It has become secular today. It is an independent institution now. Physical Education & Sports has been chiefly instrumental in preparing the way for the development of science and technology. Physical Education & Sports has brought about phenomenal changes in every aspect of men's life.

Francis J. Brown remarks that Education is a process which brings about changes in the behavior of society. It is a process which enables every individual to effectively participate in the activities of society and to make positive contribution to the progress of society.

According to Dr. Manoj Chaudhary, "Physical Education is the process of acquisition of knowledge, skills, values, beliefs, and habits".

Physical Education & Sports in the Present Period:
Physical Education & Sports today is oriented to promoting values of an urban, competitive consumer society. Through the existing Physical Education & Sports system, India has produced in the last five decades number of scientists, professionals and technocrats who have excelled in their fields and made a mark at the national and international levels. The top scientists, doctors, engineers, researchers, professors, etc. not those who were educated abroad but had got their entire Physical Education & Sports in India.

It is not a question of the extent to which Physical Education & Sports provides or fails to provide employment to people but it is a question of Physical Education & Sports providing modern technology for the benefit of the poor and deprived people. It is a question of the quality of Physical Education & Sports.

Instead of merely viewing the growing population as a liability, we should change the population into an asset and strength along with trying to control its growth. This can be done only by Physical Education & Sports and human development.

The three main deficiencies in the present Physical

Education & Sports system may be described as follows:

- The present Physical Education & Sports does not generate or fortify the type of knowledge that is relevant to our changed society.
- Technology associated with a particular body of knowledge is inappropriate to our stage of development in terms of its employment potential or investment demands.
- Physical Education & Sports has failed to provide value framework which may prepare committed politicians, bureaucrats, technocrats, and professionals on whom our nation can depend for sophisticated system of support services to be useful in taking the country to the highest level.

Though Physical Education & Sports does not guarantee high status and higher positions to all people, yet without Physical Education & Sports, an individual is unlikely to achieve social mobility. Gore avers that Physical Education & Sports plays a role in equalizing opportunities in three ways:

- By making it possible for all those who have the desire to be educated and the ability to benefit by that facility.
- By developing a content of Physical Education & Sports which will promote the development of a scientific and objective outlook.
- By creating a social environment of mutual tolerance based on religion, language, caste, class, etc. for providing equal opportunities of social mobility to all individuals in society, and for providing equal opportunity to secure good Physical Education & Sports is crucial.

How is Physical Education & Sports related to equality of opportunity can be perceived on the basis of the findings of one empirical study conducted in eight states in 1967 on the social background of students (age, sex, caste, father's occupation, father's Education, etc.) studying at various levels high school, college and professional colleges. This study presented two posse-group, propositions:

- Physical Education & Sports is priority with those in the white-collar group, and children in this group use Physical Education & Sports facilities more than other groups;
- Physical Education & Sports is differentially available to those who do not belong to white-collar group (see Gore,1994:33). If the first proposition is correct, it probably underlines the irrelevance of Physical Education & Sports to non-white-collar groups in our society.

Physical Education & Sports, Social Change and Modernisation:

Physical Education & Sports has been accepted as one major agency of socialization, teachers and Physical Education & Sports institutions as socializing agents. In describing Physical Education & Sports as an instrument of social change, three things are important:

- The agents of change,
- The content of change, and
- The social background of those who are sought to be changed, i.e. students.

Physical Education & Sports institutions under the control of different cultural groups reflect the values of those groups which support and control Physical Education & Sports. In this situation, teachers impart specific values, aspirations and the children.

Social reformers, who were educated emphasized values like removal of caste restrictions, equality of women, doing away with social evil social customs and practices, voice in the governance of the country, establishing democratic institutions and so on. They, thus, wanted to teach liberal philosophy through Physical Education & Sports for changing society. In other words they regarded Physical Education & Sports as a flame or light of knowledge which dispelled the darkness of ignorance.

The use of Physical Education & Sports for spreading the values of modernization came to be emphasized from the 1960^{s} and 1970^{s} onwards. Highly productive economies, distributive justice, people's participation in decision-making bodies, adoption of scientific technology in industry, agriculture and other occupations and professions were accepted as goals for modernizing the Indian society. And these goals were to be achieved through liberal Physical Education & Sports. Thus, modernization was not accepted as a philosophy or a movement based on rational values system but as a process that was to be confined only to economic field but was to be achieved in social, political, cultural and religious fields too. Physical Education & Sports was sought to be utilized as channel for the spread of modernity

According to the sociological perspective, Physical Education & Sports does not arise in response of the individual needs of the individual, but it arises out of the needs of the society of which the individual is a member1. The Physical Education & Sports system of any society is related to its total social system. It is a sub system performing certain functions for the on-going social system. The goals and needs of the total social system get reflected in the functions it lays down for Physical Education & Sports system and the form in which it structures it to fulfill those functions.

In a static society, the main function of the Physical Education & Sports system is to transmit the cultural heritage to the new generations. But in a changing society, these keep on changing from generation to generation and the Physical Education & Sports system in such a society must not only transmit the cultural heritage, but also aid in preparing the young for adjustment to any changes in them that may have occurred or are likely to occur in future. In contemporary societies, "The proportion of change that is either planned or issues from the secondary consequences of deliberate innovations is much higher than in former times." This is more so in societies that has newly become independent and are in a developing stage. Consequently,

in such modern complex societies, Physical Education & Sports is called upon to perform an additional function of becoming

Thus, the relationship between Physical Education & Sports system and society is mutual; sometimes the society influences changes in Physical Education & Sports system and at other times the Physical Education & Sports system influences changes in the society.

Physical Education & Sports of SCs, STs. and OBCs:
Physical Education & Sports is directly related to the development of an individual and the community. It is the most important single factor for economic development as well as social emancipation. For the weaker sections of society, Physical Education & Sports has a special significance because for a number of centuries, their illiteracy and social backwardness have been used for their harassment, humiliation and economic exploitation.

Social Change:
We can define social change in modern time the changes in living, culture, traditions and modernization.

According to Jones, "Social change is a term used to describe variations in, or modifications of, any aspect of social processes, social patterns, social interaction or social organization."

M. D. Jenson, "Social change may be defined as modification in ways of doing and thinking of people."

P. Fairchild defines social change as "variations or modifications in any aspects of social process, pattern or form.

Characteristics /Features of Social Change:
- Social Change is Social Process
- Social Change is Universal
- Social Change may be Planned or Unplanned
- Criteria of larger population
- Independence
- Force
- Continuity

2. NATURE OF SOCIAL CHANGE AND ITS IMPACT ON PHYSICAL EDUCATION & SPORTS

Change in Wider Social Environment:
The change may be in the total social environment surrounding the society. It may be due to some internal forces or external forces arising in other societies. Social phenomena occurring in neighboring or distant societies have very widespread impact now. English, for example, is now became a world language for dissemination of knowledge and consequently India feels the necessity to emphasis the need for retaining and strengthening the knowledge of English in order to continue to be benefited by new knowledge developing all over the world.

Change in Social Goals, Objectives and Values:
The social change may be in social goals, objectives and values. The changes may be in social values that directly affect the content of social roles and social interaction. For example, the adoption of equality as a value may ultimately lead to compulsory and free primary Physical Education & Sports, to expansion of primary Physical Education & Sports facilities to all children up to the age of fourteen and to providing financial and other aid to backward classes for enabling them to avail of the expanded Physical Education & Sports facilities.

Institutional Social Changes:
The social change may be institutional, which includes change in more definite structures such as form of organization, roles and role content. The adoption of democracy and adult franchise in India has made training in responsible and responsive citizenship absolutely necessary for the electorate. This may ultimately affect the content and the method of teaching in Physical Education & Sports institutions as well as the teacher-taught relationships.

Changes in Knowledge and Technology:
The changes may be in the existing knowledge and technology. Space exploration, industrialization, agricultural and domestic technology, development of transportation, and mass media of communication, new understanding of the human organism, individual and social behavior are some of the scientific and technological areas in which knowledge has expanded a great deal and will still continue to expand. Thus, the development of knowledge and technology may bring changes in syllabus, teaching and evaluating methods and role of teacher.

Change in Size and Composition of Population:
The change may be in the size and composition of population. The explosion of population with differential rates of increase in different regions, communities, socio-economic groups and age groups may necessitate many changes in the Physical Education & Sports system. Students with different levels of intelligence and Physical Education & Sports aspirations, belonging to different socio-economic classes, different castes and religious groups have begun to come in the same type of Physical Education & Sports institution and are huddled in same classroom. All these changes also necessitate change in the Physical Education & Sports system.

Thus, different types of social changes occurring in society make the existing Physical Education & Sports system dysfunctional to a certain extent and in course of time pressurize to bring changes in it.

Social Change and Lags in Indian Physical Education & Sports System:
In response to social change Physical Education & Sports system must also change. The change may be in consonance with the social change and meet the new goals and demands of various social groups adequately.

Otherwise a lag is created between the goals and demands of the society and the goals and demands of the Physical Education & Sports system. A number of such lags have occurred in the Indian Physical Education & Sports system after independence and in many ways perform a dyes functional role in Indian society. This has been accepted by the Kothari Commission very clearly. It reported:

As is well known, the existing system of Physical Education & Sports is largely unrelated to life and there is a wide gulf between its content and purposes and the concerns of national development Instead of promoting social and national integration and making an active effort to promote national consciousness, several features of the Physical Education & Sports system promote divisive tendencies; caste loyalties are encouraged in a number of private Physical Education & Sports institutions; the rich and poor are segregated, the former attending the better type of private schools which charge fees while the latter are forced, out of circumstances, to attend free government or local authority.

3. MODERNISATION OF PHYSICAL EDUCATION & SPORTS IN INDIA: PROBLEMS

The modernization of Physical Education & Sports in India becomes a special problem in several ways. India has adopted the path of economic development within the framework of a free society and therefore it cannot adopt authoritarian means to modernize Physical Education & Sports. The centre has to get the willing consent of the states and each state has to get the willing consent of its elected representatives in their legislative assemblies before introducing any major change in the allocation of resources to Physical Education & Sports or in the Physical Education & Sports system itself.

Secondly, India has no colonies to depend on for resources to meet the expenditure on modernizing its Physical Education & Sports system. It has to depend on its own self and find out its own resources which are bound to be very limited. But, it can avail assistance from advanced countries and international agencies like UNESCO which have developed programmes to assist Physical Education & Sports development in developing countries. However, the fact that this aid will also be limited has to be taken into account.

Thirdly, India has lots of diversities. It economy is mixed, including modern factories along with traditional agriculture. Its tribal, rural and urban groups show very wide contrasts in their physical and social conditions of living. The different levels of development at which the various sections of society stand differentiate their Physical Education & Sports needs and complicate the problem of Physical Education & Sports development. The aims, methods and organization of Physical Education & Sports which may be functional for one group may be dysfunctional for the other.

Lastly, in western societies, economic modernization preceded political and social modernization. Consequently, in their Physical Education & Sports thinking, they could lay more emphasis on the needs of the individual than on the economic needs of the country. But India, being largely agricultural and poor has to think of the economic needs of the country before it thinks of the needs of individuals. It cannot initially afford to waste its resources on Physical Education & Sports programmes that are not productive in economic terms.

Thus the Indian Physical Education & Sports system needs a complete overhaul through proper legislation and its effective implementation. Legislations should be made taking into account the regional diversities of each state. The masses should be made aware of the new developments.

4. CONCLUSION

Physical Education & Sports has become one of the influential instruments of social change in India. It has led to the mobilization of people's aspirations for development and change. Thus in modern complex national societies, Physical Education & Sports can neither be regarded as a controlling force conserving cultural heritage, nor could it be viewed as an agent of social change. It can only be regarded as a cooperative force in bringing about social changes decided by the forces possessing more pervasive power in society.

Thus the Indian Physical Education & Sports system needs a complete overhaul through proper legislation and its effective implementation. Legislations should be made taking into account the regional diversities of each state. The masses should be made aware of the new developments.

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DEVELOPING CRITICAL THINKING IN PHYSICAL EDUCATION AND SPORTS

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ABSTRACT

In this research paper critical thinking then to explain its role in physical education and explores the answer to two questions: How can critical thinking relate to the area of physical education and sport? How can be used Critical Thinking (CT) in fields of sports or within the physical education lesson? In view of that, some strategies are suggested based on the documents in order to foster CT in physical education. The importance of CT, has been well documented in education and there is a role of CT in physical education. Critical thinking is essential to promote physical education students to help improve the knowledge, reasoning ability and self-regulated learning. It has been known that, if we want critical thinking happen in a physical education class, students should demonstrate positive "dispositions" to the process of critical thinking. According to the findings, the level of CT dispositions was moderate for all subscales. The result also shows the highest correlation between harmonious passion and critical thinking disposition ($r = .240$, $p < 0.01$) as well as there is a low correlation between passion criteria with open- mindedness and systematicity ($r = .157$, $p < .05$). Therefore, the students need more critical thinking activities to enhance their ability and skill and if students show a strong passion toward an action which they like most, they will perform better in physical activities

Keywords: Physical Education, Critical Thinking, Sports, Passion, Disposition.

1. INTRODUCTION

Critical thinking was described as askill that can analyse facts, produce and organize thoughts, protect ideas, contrasting capability, give suggestions, assess point of views and resolve problems(Chance, 1986). Beyer (1987) views critical thinking as an evaluative skill, which allows an individual to assess information in order to make a judgement on its validity, worth, or accuracy. He asserts that critical thinking also contains an organized process of approaching, evaluating, and thinking through a problem or challenge. CT is a significant ability because it is obligatory in the workplace or classes to help teachers and students deal with questions. The ones who think critically promote vital questions and problems; they can express the questions clearly, gather relevant information, use intellectual ideas, think about it open-mindedly, and finally communicate effectively with others.

The combination of critical thinking and physical education as a theory might have paradox in terms, but previous studies on this subject have indicated that the physical education background is preferably suitable for fostering critical thinking (R. McBride, 1989; R. McBride & Bonnette, 1995; R. E. McBride, 2004). It has been known that if we want critical thinking happen in a physical education classes, students should demonstrate positive "dispositions" to the process of critical thinking, which support and drive the procedures of critical thinking and a underperformance in any of them can mean that critical thinking will not happen (Beyer, 1987). According to him, these dispositions defined as students who are being open-minded, sensitive to others' thoughts, cooperative, and keen to take risks. These kinds of students recognize and comprehend problems, then choose how to perform them, and assess internal and external sources of feedback. In contrast, students with no dispositions have a tendency to lean too much on their teachers in order to get information, care, and guidance (King & Kitchener, 2004), since in their opinion the teacher is the only source of information. This paper reviews the role of critical thinking in physical education and explores the answer to two questions: How can critical thinking relate to the area of physical education and sport? How can be CT used in different fields of sports or within the physical education lesson?

2. AT A GLANCE OF CRITICAL THINKING (CT) DEFINITIONS

CT can be defined well as questioning and emerging opportunities in order to compare and analyze many thoughts; advance and enhance thoughts; make operative decisions and conclusions; and offer a comprehensive groundwork for cooperative action.

According to Scriven and Paul (1992), critical thinking is

an "intellectually disciplined process". The intellectual process of CT is the ability to conceptualize, apply, analyze, synthesize, and assess information that has been collected from observing, experiencing, reasoning, or communicating, as a chaperon to belief and action. In their article by Scriven and Paul (1996) it was mentioned that CT contains two modules, the first one can be defined as a set of data and thoughts that are producing and treating skills, and second one as the habit, constructed on knowledgeable commitment of using those skills to lead behavior.

According to their definition, two main concern scan be drawn out:

- Critical thinking must be a kind of skill that can be learned.
- Critical thinking is a kind of mind habit or acknowledges able quality,

Which is used willingly and the effects of these reasoning skills is accepted. Thus, CT is a set of knowledge able qualities that noble thinkers possessed it. Therefore, it is understood that it does not contain mindless set of reasonable principles 'as an exercise'. This suggests that there should be some kind of Meta cognitive awareness on the part of the thinker of his own thought process. Therefore, it can claim that CT includes a set of adapted skills possessed by the agent and applied to his thinking.

In this article, **Jennifer Mulnix** (2012) defined critical thinking as a self-disciplined and self-guided thinking process that attempts to judge to best level of quality open-mindedly. People regularly try to live reasonably, if they think critically. They use the intellectual tackles that critical thinking suggests; ideas and ideologies, which enable them to examine, evaluate, and then expand thinking. This kind of people works thoroughly to advance the intellectual qualities of intellectual truthfulness, intellectual humbleness, intellectual graciousness, intellectual compassion, intellectual sense of justice and confidence in reason.

Paul and Elder (2001, 2007), also mentioned that critical thinking includes of some thinking essentials, widespread intellectual values and knowledgeable qualities. They explained these essentials as aim, question at subject, point of view, information, explanation and implication, thoughts, expectations, and consequences, while the intellectual values that are connected with CT are defined as logic and fairness, extensiveness, relevance, clarity, precision, accuracy, depth.

Another definition of CT by **Mc Grath & Myrick** (2003) stated that critical thinking is an active and continuing reasoning process of logical thinking in which the individual systematically discovers and analyzes subjects, understands compound thoughts, considers all aspects of a situation and or argument and where suitable follows with practical judgment. So, a person with a good memory and who knows a lot of facts is not necessarily good at critical thinking. A critical thinker is able to deduce consequences from what he knows, and he knows how to make use of information to solve problems, and to seek relevant sources of information to inform him.

It should be considered that not all the meanings of CT are analyzing thoughts as intellectual power. For instance, critical thinking is a series of processes: it is the assessment or formulation of beliefs, or the fact of rational standards. Critical thinking is systematic because it involves different procedures and methods. And it works according to the rules of rational belief is judged by how well they are supported by reasons (Vaughn, 2008).

Similarly, critical thinking was classified as a series of balanced standards rather than a set of intellectual talents which have controlled by a thinker(Petress, 2004). By having critical thinking the individual can look for to examining the expectations as well as suggestions on an issue which are brought to him by other people or by himself; such inspection is improved by putting thoughts and practices in strain with substitutes. (Facione, 1998) introduces a six-step process which are the core skills in critical thinking: interpretation, analysis, evaluation, inference, explanation and self-regulation. Interpretation means understanding and expressing the implication or meaning of various experiences, situations, procedures or criteria. It was mentioned as "initial interpretation" (Heiman & Slomianko, 1987) for students as CT skills. Analysis or arguments analysis is a skill or process in CT, which helps to identify the real relationship between statements, questions or concepts, descriptions, judgments, experiences, or opinions.

The next step is called inference, which is defined as identifying the features, required to produce sensible outcomes; to reflect relevant facts and to reduce the concerns resulting from facts, reports, ideologies, ideas, explanations, requests, along with further types of representation. The next step in critical thinking is to judge the actual reliability of claims or other statements accounting or describing an individual's experience, or view points; and to evaluate the reasonable strength of the definite inferential interactions between reports, requests or further types of representation. For instance, the students will ask: Do we have our facts right? Alternatively, how strong are those arguments? Explanation is the fifth step in CT, which is to present the outcomes of one's arguments, to validate those arguments by evidence, consideration of concepts, methodologies, and context based on their own results and to offer one's thinking in form of forceful arguments. For example, what were the specific findings of this investigation? How did you come to this interpretation? Finally the last step or skill is Self-regulation which is defined as observing one's cognitive actions as well as the components which are used in those actions, and the outcomes drawn from that, mainly by using the skills of analysis and assess one's judgment by questioning, or correcting any single decision or thought(Halpern, 1993; Heiman & Slomianko, 1987; R. McBride, 1989).

3. PHYSICAL EDUCATION AND CRITICAL THINKING

Perkins and Tishman (1995), who are following the lead of McBride (1991), defined critical thinking in physical education in a broader sense. They regarded critical thinking as a process that encompasses all levels of ability and the everyday experiences of the student. They view critical thinking inclusive of the concept of creative thinking where an individual goes through the process of thinking of various possibilities as solutions to a problem. It is a very basic way of thinking not unlike the everyday types of decision making and problem solving we go through on a day- to-day process, and most importantly, critical thinking does not require high levels of intelligence, just simply the ability to look at various solutions, to take different views, and to explore more options to a problem. Therefore, they adapted their broad definition of critical thinking into four areas: Broad and adventurous thinking, Causal and evaluative reasoning, Planning and strategic thinking, and Meta cognition(Tishman, Perkins, & Jay, 1995; Walkuski, 1997).

McBride (1991) defined critical thinking in physical education as "reflective thinking that is used to make decisions and upheld the motion responsibilities and challenges. Basically, when students think in a critical way, they think about compound information that are gathered from different sources and perceptions, to make a reasonable decision that can be explained and defended. The thought was represented internally by mental activities and external in the form of actions and decisions.

Walkuski (1997) stated that McBride(1991) proposed an initial model of critical thinking in physical education. In this model, he proposed that critical thinking in physical education could be visualized as a loosely configured four-step process: cognitive organizing, cognitive action, cognitive outcomes, and psychomotor outcomes. Cognitive organizing is the process an individual goes through while focusing on a movement problem and assessing and analyzing information regarding that problem. Cognitive action is the process of utilizing the information gathered in the organizing stage in order to develop and refine responses to a movement problem. Cognitive outcomes and psychomotor outcomes can be viewed as inter-dependent processes where the learner can evaluate a solution to a movement problem by discussing it with a teacher or coach and then, ultimately, assess it through actual motor performance. Therefore, in McBride's model, critical thinking is viewed as an active process of organizing information, using that information to develop a strategy to solve a problem and applying it in a movement situation.

Ennis (1991) discovered that some of teachers inspire the combination of their basic cognitive thinking with the content of the movement actively. In this study, teachers use the model planned by Logsdon et al. (1984), based on the basic principles of the movement have to do with the body, space, effort, and money. There are four questions about the activities of movement which should be answered by students: What can my body? Where to move my body? How does the movement of my body? And what happens as I move the relationship?

They regarded CT as a process that encompasses all levels of ability and the everyday experiences of the student. They view CT inclusive of the concept of creative thinking where an individual goes through the process of thinking of various possibilities as solutions to a problem. CT does not require high levels of intelligence, just simply the ability to look at various solutions, to take different views, and to explore more options to a problem.

There is an example of CT in physical education mentioned by (Lodewyk, 2009) for the player to decide whether or not to shoot the ball in netball. The information about the rules must be processed internally by the player (e.g., “Am I in a legal position to shoot?”), strategies (e.g., “Am I strategically positioned to shoot?”), challenging sources of information (e.g., “Should I pass it to Jane, who is open on the baseline?”), his or her talent (e.g., “Is the context appropriate for me to succeed?”), and feelings (e.g., “Am I confident I can make the shot?”). If students decide to shoot, their critical thinking skills will be replicated in the decision of whether it is wise and how the shot was done.

CT does have a place in the psycho-motor domain. Physical education and sport environments can provide a supportive environment for individuals to learn how to think critically. The practical nature of physical activity allows the individual to apply a new strategy, attempt a new movement and evaluate the worth of the response almost immediately. The National Association of Sports and Physical Education [NASPE]-(2004) demonstrated a level of thought and decision making, the need for critical thinking is clear. For example, NASPE(2004) pointed to there is a need for all children from kindergarten through grade 12 to benefit of physical education through an increase of the judgment, i.e. "Students learn to assume leadership, cooperate with others, and take responsibility for their own behaviour."

A research on critical thinking and physical education has been done for Ch. Charan Singh University, Meerut students. The study was a corelational research design using survey procedures in data collection. 187 respondents were involved in completing instruments by random sampling. They are volleyball players from universities all around Meerut university region. Data were collected during two occasions; first, an inter-university level volleyball competition and second, through a sport meet. Questionnaires were distributed using ‘drop- and- pick- up- later’ technique through the team managers. The data showed that the level of critical thinking dispositions were in moderate level. The mean score for CT dispositions were (Mean=23.31, S.D= 2.781). According to these findings, the levels of CT dispositions were moderate for all subscales. Therefore, the students

need more critical thinking activities to enhance their ability and skill.

Table 1: The mean and standard deviation on critical thinking dispositions based on fields of study

Subscale	N	Mean	S.Deviation	Min. Value	Max Value	Interpretation
Analitic	187	24.16	2.879	16	33	Moderate
Open minded	187	18.78	2.478	11	25	Moderate
Maturity	187	18.44	2.160	10	25	Moderate
Truth seeking	187	24.33	2.107	18	30	Moderate
sistematicity	187	21.57	2.844	14	30	Moderate
Self Confident	187	33.53	4.369	21	45	Moderate
Inquisitiveness	187	22.34	2.631	11	30	Moderate
Total	*187*	*23.31*	*2.781*	*14.43*	*31.14*	*Moderate*

People or students can learn critical thinking as an independent skill of high intellectual capacity (Bruning, Schraw, Ronning, & Glover, 1999). It includes the mentally suitability of the actual details along with the reliability of the options, utilizing suggestion and evidences in order to make decisions for a reason, therefore it can be applied to a physical action. This kind of thinking has been linked to academic quality and talents such as making decisions, reasoning, creativity, debating, consideration of reflective, and problem solving (Lodewyk, 2009).

Of course, the ability of critical thinking can also be beneficial in integrating content from different disciplines to physical education and aspects of life outside of education. The reason is that better critical thinkers assumed to make more informed and accountable decisions, for example, healthy activities occur when identified problems more effectively, judge information, and draw conclusions carefully.

4. PHYSICAL EDUCATION CLASS AND ROLE OF INSTRUCTOR'S

These days most P. Eand other instructors utilize the old method of teaching model because they have more control of class or at least decision making. Instructors first identify the skills or concepts to teach; then they separate it into its elements, describe the way of performing a given duty, and later prepare a visual presentation. Learners can get these facts and collaborate with other students, go to the learning station, or just practice their own skills. Then instructor circulates, observes the performance of learning and provides corrective feedback. To summarise it, critical thinking is not expected nor encouraged in traditional method (R. E. McBride, 2004).

In a physical education class or any other class, if we want our students to show dispositions to attend critical thinking, then the instructors must establish and endorse the dispositional aspect of CT. For instance, if a university physical education instructor wants to teach the significance of teamwork playing and sportsmanship, this disposition can be explained and debated in class, students can be taught of some strategies to get together and to deal with situations in a way that they work together while knowing that working together is essential to the success of their activity(R.E. McBride & Cleland, 1998).

The instructor has to make students aware of the spirit of sport to be sensitive to the behaviour of non-decent in game situations. It should be noted that a common mistake in moving towards a student-centred model of education is to make a very big leap too soon. They should guide students through the process of critical thinking in a non-threatening way (R. E. McBride, 2004).

5. STRATEGIES TO FOSTER C.T. IN PHYSICAL EDUCATION

There are many opportunities for students and athletes to apply the four broad areas of critical thinking (compare and contrast, analyse, and evaluate), to the psycho-motor domain, the trial is learning to identify when these opportunities become available. The instructor/coach must be able to recognize those situations in which students can apply critical thinking, assist those students/athletes through the critical thinking processes, and then must follow up on this process by asking the students questions that prompt critical thought.

Instructors and coaches can also challenge their students/ athletes to think critically by providing opportunities for creative and independent problem solving. Opportunities exist in the sporting arena, such as allowing learners to think out a strategic plan or having them create a unique movement solution. Such strategies can be included in sport, fitness, and extra-curricular activities. As an example in sports and games we can expand on the games for understanding model, like utilizing the games for understanding model to teach strategic aspects of games. Allow students to think through and solve certain tactical aspects of a game. Have students think about similarities as well as dissimilarities across games, etc. Beside that we can ask students to modify the games so they are challenged to create situations that force players in a game to utilize a particular skill (Walkuski, 1997).

The other example suggests strategies in fitness or wellness classes like students writing. Using the concept of cardiovascular fitness as an example; for a wet weather programme students are asked to write continuously for three minutes on the topic "Why is cardiovascular fitness important?" Students are paired up to share their opinions

and the class is brought together and a succinct list is created. Other fitness concepts can be explored or discussed in the same way. Or as part of a fitness or wellness unit, students are assigned to create a fitness programme for their own personal use. Areas included in this program include: cardiovascular fitness, muscular strength and endurance, flexibility, body composition. Students take part in their designed programme and measure outcomes over a period of time. Depending on the outcomes, students can reflect on their programmes effectiveness and can think through possible modifications.

Other propositions for fostering critical thinking in physical education are asking questions about the mechanics of the skill, applying previously learned knowledge via analysis. The students should know how to ask question about the criteria and to put their primary information in order to solve the question, and prepare the justification, then examine a physical activity based on the criteria and or defend their movement solutions. They should try to improve their solutions according to a given set of criteria; and utilize the procedures of higher order thinking and finally evaluate the usefulness of the answer, and put on previous knowledge of fitness principles to a new situation.

Table 2: Pearson's Correlation (r) between types of passion in sport and critical thinking disposition

Variable	Passion Criteria	Harmonious Passion
Analyticity	.205**	.221**
Open- mindedness	.157*	.236**
Inquisitiveness	.124	.180*
Truth- seeking	.073	.040
Maturity	.094	.112
Systematicity	.157*	.093
CT- Self confidence	.092	.232**
Critical Thinking Disposition (general)	.183*	.240**

*Note: *p< .05, **p < .01*

A research has been conducted in order to investigate the correlation of critical thinking dispositions and passion among athletes in higher education institution. It was illustrated the harmonious passion in sport give impact on critical thinking disposition among volleyball/ athlete in higher education. The result on table 2 shows the highest correlation between harmonious passion and critical thinking disposition (r= .240, p< 0.01) as well as there is a low correlation between passion criteria with open-mindedness and systematicity(r=.157, p<.05). The types of passion criteria and harmonious passion have positive and significance correlated with both analyticity and open-mindedness. However, passion criteria and harmonious passion show no correlation at all with maturity and truth-seeking.

That means passion also be a contributor in CT disposition and it can be a strategy to foster CT. Since the harmonious passion is related to open-mindedness, analyticity, CT self confidence, and inquisitiveness which are the dispositions for critical thinking. Consequently it can be understood from the article that Sportsman/ athletes who are passionate of performing sport activities, they also show positive reaction to critical thinking dispositions. So if students show a strong tendency toward an action which they like most, they will devote a lot of energy and time to do it. If people do something passionately, possibly they expense and put all of their energies as well as performing critical thinking disposition to ensure in achieving target.

6. CONCLUSION

Critical thinking is essential to promote physical education students to help improve the knowledge, reasoning ability and self-regulated learning. The practical nature of physical activity allows the individual to apply a new strategy, attempt a new movement and evaluate the worth of the response almost immediately. Students can be challenged to produce unique solutions to movement problems, create new versions of a game, and think through issues related to fitness and health. Physical educators can foster CT by preparing an environment that stimulates the expression firmly, representing the role of knowledge and beliefs about teaching and learning, teaching and modeling critical thinking, provide satisfactory support for students, and the use of open tasks. In addition to helping students and mental motivation, by encouraging critical thinking in physical education students gain the ability to apply challenges into their activities as well as other academic subjects and life.

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RELATIONSHIP BETWEEN SELECTED ANTHROPOMETRIC VARIABLES AND ANAEROBIC POWER TO PERFORMANCE OF VOLLEYBALL PLAYERS

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ABSTRACT

The purpose of this study was to determine the relationship of anthropometric variables and anaerobic power to performance of volleyball players. The subjects were 50 male spikers from junior level; ages between 17 to 21 years were selected purposively from top eight teams participated in national championship. The data on maximum vertical jump with different step approaches along with anthropometric variables (Standing Height, Arm length, Upper leg length, Lower Leg length, Thigh Girth, Calf Girth) and anaerobic power was collected. Maximum vertical reach with various step approaches was recorded through digital videography (Casio Exilim Ex-F1).To estimate the relationship of Anthropometric Variables and Anaerobic power to maximum vertical reach with various step approaches of junior level volleyball players, Pearson's Product Moment Correlation was administered. Further to investigate the real relationship among the variables, partial correlation was employed. On the basis of results, following conclusion were drawn: Thigh girth (0.312*) and Calf girth (0.315*) had significant relationship to maximum vertical reach with three step approach at junior level. Anaerobic Power (0.422*) had significant relationship to maximum vertical reach with three step approach at junior level. After partially out the effect of calf girth and thigh girth only the Anaerobic Power (.793*) had significant relationship to maximum vertical reach with three step approach at junior level. After partially out the effect of other variables thigh girth and calf girth have no real relationship to maximum vertical reach of volleyball players.

Keywords: Anaerobic Power, Anthropometric variables, Maximum vertical Reach, Step Approaches, Volleyball.

1. INTRODUCTION

The success or failure of an individual athlete depends on the blending of physical ability, conditioning, training mental preparation and the ability to perform well under pressure. It is not uncommon to hear coaches and athlete express disbelief on how poorly their team performed against a certain opponent or how they field in the crucial situation.

Athletes for superior performance in any sports are selected on the basis of his physical structure and body size, which has proved to be appropriate for high performance in the given sports.

In recent years more and more attention has been paid to nature of physical fitness not only in terms of general health but also of the special physical requirement for competitive sports and certain highly specialized and demanding occupations. As a result of current work particularly in the field of ergonomic and physical education it appreciated that the achievement and maintenance of high level of physical fitness produce significant affects on the working of human body.

Scientists and physiologists have been of the view that anthropometry and physical components of an athlete have a lot to do with the performance, more than the techniques and tactics of a player of a team. The research findings show that a high level of technical perfection alone has nothing to do with the success in competitive sports. Most of the game demands a greater amount of speed, strength, endurance, flexibility, co-ordination and maximum fitness of the organism.The physiological requirements of Volleyball players are similar to most team sports with the primary emphasis on arm and leg power (particularly for the spiker and blockers). Quickness is made up of a complex combination of the body, hand-eye coordination and visual judgment and perception. The purpose of this study was to determine the relationship of anthropometric variables and anaerobic power to maximum vertical reach of volleyball players.

2. METHODOLOGY

The subjects were 50 male spikers from junior level; ages between 17 to 21 years were selected purposively from top eight teams participated in national championship. The

data on maximum vertical jump with different step approaches along with anthropometric variables (Standing Height, Arm length, Upper leg length, Lower Leg length, Thigh Girth, Calf Girth) and anaerobic power was collected. Maximum vertical reach with various step approaches was recorded through digital videography (Casio Exilim Ex-F1). The subjects were given three trials for determining the performance of maximum reach in volleyball and the best trial was taken into consideration. Subject best trial was processed with measuring tool of Siliconcoach Pro7 motion analysis software to obtained spike jump. Further to determine maximum vertical reach with various step approaches this formula was employed

Maximum vertical reach (MVR) = Spike Jump (SPJ) – Standing vertical reach (SVR)

To estimate the relationship of Anthropometric Variables and Anaerobic power to maximum vertical reach with various step approaches of different level volleyball players, Pearson's Product Moment Correlation was administered. Further to investigate the real relationship among the variables, partial correlation was employed.

3. FINDINGS

Table 1: Co-Efficient of Correlation of Selected Anthropometric Variables and Anaerobic Power to Maximum Vertical Reach with Three Step Approach of Junior Level Volleyball Players

Variables			Units	Co-efficient of Correlation "r"
Dependent	Independent			
(Performance) Maximum Vertical Reach with three step approach	Anthropometric variables	Standing Height	Cm	-0.179
		Arm Length	Cm	-0.145
		Upper Leg length	Cm	-0.149
		Lower Leg Length	Cm	-0.189
		Thigh Girth	Cm	0.312*
		Calf Girth	Cm	0.315*
		Anaerobic Power of lower leg	Cm	0.422*

Table 2: Partial Correlation Between Maximum Vertical Reach With Three Step Approach in Junior Level Volleyball Players (X_1) and Anaerobic Power (X_2) After Controlling The Effect Of Calf Girth (X_3) and Thigh Girth (X_4)

Correlations				
Control Variables			Three step approach (X_1)	Anaerobic power (X2)
Calf girth (X_3) & Thigh girth (X_4)	Three step approach (X_1)	Correlation	1	0.366
		Significance (2-tailed)	.	0
		df	0	47
	Anaerobic power (X_2)	Correlation	0.366	1
		Significance (2-tailed)	0	.
		df	47	0

Above tables shows Thigh girth (0.312*) and Calf girth (0.315*) had significant relationship to maximum vertical reach with three step approach at junior level. Anaerobic Power (0.422*) had significant relationship to maximum vertical reach with three step approach at junior level. After partially out the effect of calf girth and thigh girth only the Anaerobic Power (.366*) had significant relationship to maximum vertical reach with three step approach at junior level. After partially out the effect of other variables thigh girth and calf girth have no real relationship to maximum vertical reach of volleyball players.

4. DISCUSSION

Greater calf and thigh circumference has significant correlation with jump in spikers. The finding was quite significant with the conclusion of Davis et al. (2003). Our analyses of the anthropometric and testing results indicated that most of the anthropometric characteristics of volleyball players were not significantly correlated with their maximum vertical reach with various step approaches at different level. This means that there were many other factors that might have contributed to the maximum vertical reach with various step approaches at different level and the decisive contributors were not the anthropometric characteristics. The findings are quite significant with the conclusion of Zhang (2010).

The result may be due to the fact that anaerobic capacity is the total amount of energy from the anaerobic (without oxygen) energy systems that is the combined amount of

output for the ATP, phospho-creatine and lactic acid systems. The anaerobic system is maximally stressed in short duration high intensity activities (generally between 30 seconds and several minutes), and most of the following tests are over this time period. A related measure is the anaerobic threshold or lactate threshold measurements.

On the other hand we know that while executing vertical jumps a noticeable problem transpires in the efficient transfer of rotational energies of the trunk and the lower body segments into the largest rotational kinetic energy between body segments following a proximal to distal principle and for this energy we need anaerobic energy that's why the result of the study showed a significant relationship between anaerobic power and the maximum vertical reach. The result of the study in the same direction along with Kasabalis A et al. (2005)

5. CONCLUSION

- Anaerobic Power (0.422*) had significant relationship to maximum vertical reach with three step approach at junior level.
- Calf girth (0.315*) had significant relationship to maximum vertical reach with three step approach at junior level.
- Thigh girth (0.312*) had significant relationship to maximum vertical reach with three step approach at junior level.
- Anaerobic Power (.366*) had significant relationship after partially out the effect of calf girth and thigh girth to maximum vertical reach with three step approach at junior level.
- After partially out the effect of other variables thigh girth and calf girth have no real relationship to maximum vertical reach with various step approaches at different level volleyball players.

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SPORTS PHOTOGRAPHY : A NEW GENRE IN FINE ARTS

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1. INTRODUCTION

Sports photography refers to the genre of professional photography that covers all types of sports. In the greater part of cases, Sports photographers usually work for a newspaper, magazine and for advertising agency. The main purpose of professional sports photographers is to capture images for editorial purposes. Though, sportsman is also preferred as model to use for advertising purposes for both to build a brand and as well as to promote a sport in a way that cannot be accomplished by editorial resources. Photographers working in the sports industry use their artistic vision to take pictures of fast-moving athletes during live sporting events through, manual and digital cameras. Most of the photographers use specialized equipment, such as high-definition lenses and multi-shutter-speed cameras.

Sports photographers take many images during a sporting event and then scrutinize through the images to choose the best photo for publication. Although some sports photographers use film-based cameras or digital cameras, consent to the ease of cropping and editing pictures on a computer without wasting money on film and printing materials. As a result, many photographers have become highly skilled with photo-enhancing software programs.

Sports photographers cover sporting events such as cricket, football, basketball, track and field or swimming meets and golf tournaments. A sports photographer must be an expert in their field. They must have all the skills that are required in a photographer and also the ability to capture the game winning or action shot. They require an enthusiastic eye and a great attention to detail. It is important that a sports photographer works regularly to improve upon their skills. They may be involved in capturing a good shot, and this can include many different factors. They are often responsible for the lighting, the set up, and the cleanup of the areas that they use to capture photos. They may handle all of this work within their own studio but often they have to travel to games to capture the action shots as well.

It is important that a sports photographer show an interest in the sports that they work to cover. They must keep themselves educated on current trends, players, and understand how the game works. The big part of the job is must to be ready for the action shots as they take place. Working on relationship building can be another important part of the photography. They should have ability to get photos of the players and to get a good spot for the photos to be taken can come out of building relationships. Sports photographers must often meet with their team members or organizations. They must ensure that they get their photos developed on their own and turned in by deadline. There is no one set educational requirement to become a sports photographer. It is important that an individual in this role have a strong background and be able to demonstrate experience within photography directly. They must understand what it takes to get a good shot, particularly in an often unsystematic environment.

Equipment typically used for sports photography includes a digital single-lens reflex (DSLR) camera with nonstop shooting speeds and identical lenses ranging from 14mm to 400mm or longer in focal length, depending on the type of sport. The proper lenses are very important they allow the photographer to reach closer or beyond as quickly as possible to keep up with the game play. Essential accessories include a monopod or tripod for stability and extra batteries.

Longer focal length lenses are typically used to photograph action in sports such as football and wide angle lenses are used for sideline and close-up athletic photos.

The preferred camera bodies for modern sports photography have fast autofocus and high burst rates, typically 8 frames per second or faster. The current flagship sports cameras produced by canon and Nikon are the canon EOS-ID X Mark II and the Nikon D5. These are popular in professional sports photography. Different sports favor different lenses, but sports photography usual requires fast telephoto lenses. With fast autofocus presentation. Fast autofocus is needed to focus on movement, telephoto to get close to the action, and wide aperture for several reasons as-

- The background is dramatically put out of focus due to a shallow depth of field, resulting in better subject division.

- The lenses can focus more quickly due to the increase in light entering the lens important with fast-moving action.
- Faster shutter speeds can be used to freeze the action.

Tremendously wide apertures are more rarely used because at these apertures the depth of field is very low; it makes focusing more difficult and slows down autofocus. The main difference between outdoor sports and indoor sports is in outdoor sports the distances are greater and the light is brighter or in indoor sports the distances are lesser and the light is dimmer. For that reason, outdoor sports are inclined to have longer focal length long focus lenses with slower apertures, while indoor sports be inclined to have shorter lenses with faster apertures.

Both zoom and prime lenses are used as zoom lenses allow a greater range of framing, primes are faster, cheaper, lighter, and optically superior but are more restricted in framing. For example the Nikon AF-S NIKKOR 400mm f/2.8G ED VR AF lens and the canon EF 300mm f/2.8L IS II USM lens are both fixed telephoto lenses which cannot zoom.

Apertures of f/2.8 or faster are most often used, though f/4 is also found, mainly on brighter days. Particularly visible are the canon super telephoto lenses, whose distinctive white casing is recognizable at many spo9rting events. This varies with sport and first choice for

Example golf photographers may prefer to use a 500mm f/4 as opposed to a 400mm f/2.8 as it is a lighter lens to be carried around all day.

Sports photographers may use remote cameras triggered by wireless shutter devices to photograph from places they could not otherwise stay, for examples in an elevated position such as above a basketball, or to be in two places at once as at the start and the finish such as at horse racing.

Location is often important for sports photography. At big events, professional photographers often shoot from VIP spots with the best views, usually as close to the action as possible. Most sports require the photographer to frame their images with speed and adjust camera settings spontaneously to prevent blurring or incorrect exposure. Some sports photography is also done from a distance to give the game a unique effect.

Shutter speed is critical to catching motion, thus sports photography is often done in shutter priority mode or manual. A frequent goal is to capture an instant with minimal blur, in which case a minimal shutter speed is desired, but in other cases a slower shutter speed is used so that blur shows to capture the motion, not simply the instant. A particular technique is panning, where the camera uses an intermediate shutter speed and pans with the subject, yielding a relatively sharp subject and a background blurred in the direction of motion, yielding a sense of speed – compare speed lines. ISO speed is often high and may be left in auto. Photos are often taken in burst mode to capture the best moment, sometimes in combination with JPEG rather than RAW shooting. Sports photographers take fast action photos at sporting events.

Sports photography is a great career choice for sports enthusiasts interested in the technicalities of camera work, as well as fine arts and design.

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COMPARATIVE STUDY OF PERSONALITY TRAITS AMONG COMBATIVE (JUDO) AND NON-COMBATIVE (ATHLETICS) PLAYERS

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1. INTRODUCTION

Personality is all that a person is. It is the totality of one's behavior towards oneself and others as well. It includes everything about the person –his physical, emotional, social, mental and spiritual make up. It is all that a person has about him. Personality is a characteristic way of thinking and acting which identifies each person as a unique individual. Although sports and games do have an impact on personality, it is also true that an individual's personality has an equally important impact on sports. It is due to this reason that we find some individuals preferring certain type of activities while others opting for activities of different kind. Personality, in fact, is a hallmark of an individual.

Shergill (1992) studied personality differences between high and low performance female hockey players and found significant differences between the low performance groups. Singh (1999) compared the personality traits of top-level Indian individual and team game players. The findings revealed that individual game players were more extrovert than the team game players and team game players were less neurotic than the individual event players. However, no differences were found between male and female players, both in the case of individual and team game players. Shukla (2000) conducted his study based on Cross Sectional data of 120 International Hockey players who was participated IIIrd Indira Gandhi Gold Cup Hockey Tournament which was held at Lucknow from 14 to 22 Jan 1989. Cattle's 16 P.F. was used to assess the personality factors which was using by factor model Multivariate analysis. The results reveals that significant differences been observed on different field of specialization like forwards, half back, full back and goalkeepers. Becker et al. (2001) found that obese women had the highest rates of mental disorders overall as well as for all sub groups of mental disorder. Furthermore, they found that obese women had higher rate of cumorbidity. Bawa and Randhawa (2003) investigated Personality traits of sportsmen o individual, combative and Team Sports Disciplines. The study has been conducted on 60 National level sportsmen belonging to individual, combative and team sport disciplines. There were 20 subjects in each category. 16 PF Questionnaire by Cattle and Eiber (1971) was used to obtain data. The result of the study revealed that sportsmen of individual sports disciplines (Gymnastics and Swimming)were significantly more reserved, humble, sober and relaxed as compared to sportsmen of combative sport disciplines (Boxing and wrestling). Results also revealed that sportsmen belonging to individual sports disciplines were more reserve, sober, tough minded, and forth right than the sportsmen of team sports disciplines (Hockey and football). The results also revealed that sportsmen of combative sports discipline were significantly more reserve, tough minded and forth right when compared with sportsmen of team sports disciplines.

2. OBJECTIVE OF THE STUDY

The study had sought to achieve the following objective:

- To compare the personality characteristics of inter-university level Combative and Non-Combative Sports Players.

3. METHODOLOGY

Sample: For the purpose of this study a total of 60 subjects in the age group of 18 to 25

Years studying in various colleges' of Punjab were done through purposive random sampling technique to constitute the sample. The subjects were judokas and athletes (athletics) who had participated in inter-university level of competition during the session 2011-12.

Selection of Test: To measure personality characteristics among the subjects, personality inventory developed by Bhargava (1998) was used. The test consisted of 60

statements. It measures six important personality dimensions: (i) Activity- Passivity (ii) Enthusiastic-non-enthusiastic (iii) Assertive-submissive (iv) Suspicious-trusting (v) Depressive-non –depressive and (vi) Emotional instability and Emotional stability.

Statistical Analysis: The data obtained from the questionnaires filled up by the subjects to statistical analysis on computer. The values such as mean, S.D. and t-values were calculated. In order to find out the difference between the Combative and Non- Combative Sports Players who had participated in inter-university level of competition.

4. RESULTS AND DISCUSSION

Results: The results of the present investigation have been presented in the following table:

Table: Mean S.D. and T- value of personality traits, Between Combative and Non-Combative Sports Players

Sr. No.	Variable	Combative Sports Players			Non-Combative Sports players			
		N	Mean	SD	N	Mean	SD	t- Value
1	Activity passivity	30	12.50	2.39	30	11 .00	2.59	237**
2	Enthusiastic/ non Enthusiastic	30	13.73	2.99	30	10.83	2.27	4.22**
3	Assertive/submissive	30	10.53	4.21	30	9.67	2.14	1.01
4	Suspicious/Trusting	30	9.17	2.96	30	8.93	2.41	0.62
5	Depressive/non-depressive	30	7.30	2.05	30	8.57	2018	2.32*
6	Emotional instability/Emotional stability	30	8.50	2.77	30	8.57	222	0.10
7	Total personality	30	61.93	6.53	30	57.57	5.70	2.76**

*$p<0.01$ **$p<0.05$

The results revealed significant difference between two groups ($p<0.5$, $t=2.37$) on the variable Activity v/s Passivity. The result revealed that were significant difference between the two groups ($p<0.01$, t-4.22) on the variable enthusiastic v/s non enthusiastic. No significant differences were found between Combative and Non-combative on the variable assertive v/s submissive, suspicious v/s trusting and emotional instability v/s emotional stability. With regard to the variable depressive v/s non-depressive significant difference were found between the studied two groups ($p<0.05$, $t=2.32$). The Combative Sports Players are having overall balance personality as compared to Non-combative Sports Players ($p<0.01$, $t=2.76$) and rejected the findings of Bawa and Randhawa (2003) who also investigated personality traits of sportsmen of individual combative and team sports discipline. The result of the study revealed that sportsmen of individual sports disciplines (gymnastics and swimming) were significantly more reserved, humble, sober and relaxed as compared to sportsmen of combative sports disciplines (boxing and wrestling).

5. CONCLUSION

The following conclusions have been drawn on the basis of the findings of this study.

The comparison of Combative Sports Players and Non-Combative Sports Players did indicate that the Combative Sports players (judokas) having overall Balance Personality as compared to the Non-Combative Sports Players (athletics).

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EFFECT OF UJJAIPRANAYAM ON SELECTED BODY COMPOSITION VARIABLES

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ABSTRACT

The purpose of the study was to determine the effect of UJJAIPRANAYAMon selected body composition variables. Thirty male students of B.P.E. first year of CCS University, Meerut, were randomly selected as subjects for this study. Subjects were divided into two groups i.e. one experimental group and one control group. The quantitative measurements of each subject were taken with the help of standard equipment, before and after the treatment period of twelve weeks. The selected Body Composition Variables were Body Fat (%), Lean Body Mass (Kg), Body Water Content (%) and Basal Metabolic Rate (Kcl). All the test were administered in the Yoga Laboratory of the Institute. Paired 't' test was applied to determine the effect of UJJAIPRANAYAMon selected Body Composition Variables. The Paired't' test revealed that practice of UJJAIPRANAYAMpranayama had significant effect on Body Fat Percentage (t = 5.47), Lean Body Mass (t = 9.65), Body Water Content (t = 17.24) and Basal Metabolic Rate (t = 9.410) against required tabulated value of 1.761 which showed significant effect of practice of UJJAI PRANAYAMpranayama. On the basis of results following conclusions were drawn: 1.Significant effect was found on Body Fat Percentage 2. Significant effect was found on Lean Body Mass. 3. Significant effect was found on Body Water Content. 4. Significant effect was found on Basal Metabolic Rate.

Keywords: Effect of Ujjaipranayam on Selected Body Composition Variables

1. INTRODUCTION

Today yoga being a subject of varied interests, has gained worlds wide popularity. Recent research trends have shown that it can serve as an applied science in a number of fields such as education, physical education and sports. Health and family welfare, psychology, medicine and also one of the valuable means for the development of human resources for better performance and productivity. However, there exists controversy in accepting yoga as medicine and therapy because it has generally been believed that yoga is spiritual science having emancipation as it goals and hence cannot be treated only as a therapy.

Yoga exercise are scientific means for strengthen of all living or atrophying muscle fibers and tissues. This system teaches how to awake new life pulsation in active tissues. In this context it is different from other system of exercise in as much as it is different from other system of exercise in as much as it teaches one how to concentrate his attention on the awakened energy which is the direct gives of power, strength and vitality of all the parts of the body. It develops will power alongwith bodily strength. This aspect of yoga is technically known as "asanas" which was developed by the latin hatha yogic into a well organised system of physical culture.

Pranayama is a science of Respiration. It consists of three phases Purack, Kumbhak, Rechak. High abdominal pressure created in pranayama by the action and counter action of the different anatomical parts together with the upward pull of the crura, is responsible for wakening of Kundalini.

The word UJJAIPRANAYAMis a compound consisting of two members: Kapal and Bhati. In Sanskrit Kapal means the skull and Bhati is derived from a Sanskrit rot meaning to shine. Hence UJJAIPRANAYAMmeans an exercise that makes the skull shining. UJJAIPRANAYAMis one of the six cleansing processes, known in Hatha yoga as shat kriysa, and is intended to clear the nasal passages contained in the skull, along with the remaining parts of the respiratory system. As the exercise necessarily cleanses a part of the skull, the name Kapalabhati is appropriately given to it.

The assessment of body composition is generally performed in order to determine and monitor one's health and fitness status, and to aid in planning training programs for athletes. It has been well established that a high percentage of body fat (low lean body mass) is associated with a higher risk of heart disease, diabetes, hypertension, cancer, hyper lipidemia and a variety of other health problems. On the other hand, a high percentage of lean body mass and low-fat mass is associated with athletic prowess and good health.

2. OBJECTIVES OF THE STUDY

- To know the effect of UJJAIPRANAYAMon Body Fat Percentage
- To know the effect of UJJAIPRANAYAMon Lean Body Mass.
- To know the effect of UJJAIPRANAYAMon water content
- To know the effect of UJJAIPRANAYAMon Basal Metabolic Rate.

3. METHODOLOGY

Subjects

Thirty male students were randomly selected from B.P.E. I Year of Lakshmibai National Institute of Physical Education, (Deemed University) Gwalior. The age group was from 17-22 years. Further two groups i.e. one experimental group and one control group (each of 15 students) were randomly selected from the selected subjects.

Variables

The following Body Composition Variables were chosen for the study. Body Fat Percentage, Lean Body Mass, Water Content and Basal Metabolic Rate

Criterion Measures

The criterion measures chosen for testing hypothesis were: Body Fat Percentage (%tage.), Lean Body Mass (Kilogram),Water Content (%tage) and Basal Metabolic Rate (Kilo calories).

Training of Anulom vilom

There were two groups i.e. control group and experimental group. Control group was not given any kind practice of panayama however experimental group was exposed to training of UJJAIPRANAYAMpranayama for the duration of twelve week. Both the groups were performing their regular practice of the game. For the experimental group the duration of training session was half-an-hour and the training was conducted in the afternoon 3:00 to 3:30 pm from Monday to Friday.

Anulom vilom

It consists of active puraka and passive recheka. In every Recheka during UJJAIPRANAYAMas much air was expelled or driven out of the lungs as a sudden and vigorous inward stroke of the front abdominal muscles. At the end of Recheka abdominal muscles are contracted. But in puraka one had to simply withdraw his control from these muscles and they were relaxed. Relaxation of muscles is a passive act. Time duration was for first two weeks was 10 minutes. In UJJAIPRANAYAMthe rest of two minutes was allowed after every five minutes. After two weeks time it was increased gradually.

Design of the Study

Random group design was utilized for the purpose of the study.

Administration of Tests

The tests for Body Fat Percentage, Lean Body Mass, Water Content and Basal Metabolic Rate were administered in the Yoga Research Laboratory of Lakshmibai National Institute of Physical Education, Gwalior with the help of a team of tester and research assistant under the guidance and supervision of the experts using Body Composition Analyzer with following standard procedure:

- Measure the exact height.
- Step on the equipment.
- Track the exact weight minus the additional weight.
- Feed the built of an individual (Standard/Athletic)
- Feed in the gender.
- Feed the age of an individual.
- Feed the height in cms.
- Enter n wait for the process to complete.
- Take out the analyses from print out.

Statistical Technique

In order to find out the effect of UJJAIPRANAYAMon selected Body composition variables, paired 't' test was applied at 0.05 level of significance.

4. ANALYSIS OF DATA AND RESULT OF THE STUDY

The statistical analysis of data and results of the study are presented from table 1-4.

Table 1: Body Fat Percentage

Groups	*D*	S	't' ratio
Experimental Group	3.68	2.60	5.47*
Control Group	0.007	0.0764	0.354

** Significant $t_{0.05(14)} = 1.761$*

Since the calculated t (5.47) is more than tabulated t (1.761) at 0.05 level of significance, thus it may concluded that the Body Fat Percentage shown the significance effect of Anulom vilom.

Table 1 reveals that the significance effect not shown in the control group. Calculated 't' value of control group is t (0.354) which is below the required value of 0.05 level of significance (t=1.761). It has no effect on Body Fat Percentage of Control Group.

Table 2: Lean Body Mass

Groups	*D*	S	't' ratio
Experimental Group	1.01	0.405	9.65*
Control Group	0.64	1.417	1.747

** Significant $t_{0.05}(14) = 1.761$*

Since the calculated t(9.65) is more than tabulated t(1.761) at 0.05 level of significance, thus it may concluded that the Lean Body Mass shown the significance effect of Anulom vilom.

Table 2 reveals that the significance effect not shown in the control group. Calculated 't' value of control group is t

(0.354) which is below the required value of 0.05 level of significance (t=1.761). It has no effect on Lean Body Mass of Control Group.

Table 3: Water Content

Groups	*D*	S	't' ratio
Experimental Group	1.25	0.287	17.24*
Control Group	0.69	1.810	1.475

** Significant $t_{0.05(14)} = 1.761$*

Since the calculated t (17.24) is more than tabulated t (1.761) at 0.05 level of significance, thus it may concluded that the Body Water Content shown the significance effect of Anulom vilom.

Table 3 reveals that the significance effect not shown in the control group. Calculated't' value of control group is t (0.354) which is below the required value of 0.05 level of significance (t=1.761). It has no effect on Body Water Content of Control Group.

Table 4: Basal Metabolic Rate

Groups	*D*	S	't' ratio
Experimental Group	139.7	57.45	9.410*
Control Group	0.533	1.45	1.422

** Significant $t_{0.05(14)} = 1.761$*

Since the calculated t (9.410) is more than tabulated t(1.761) at 0.05 level of significance, thus it may concluded that the Basal Metabolic Rate shown the significance effect of Anulom vilom.

Table 1 reveals that the significance effect not shown in the control group. Calculated 't' value of control group is t (0.354) which is below the required value of 0.05 level of significance (t=1.761). It has no effect on Basal Metabolic Rate of Control Group.

5. CONCLUSION

Within the limitations of the present study the following conclusions were drawn:

- Significant effect was found on Body Fat Percentage and no change was found in Control group.
- Significant effect was found on Lean Body Mass and no change was found in Control group.
- Significant effect was found on Body Water Content and no change was found in Control group.
- Significant effect was found on Basal Metabolic Rate and no change was found in control group.

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COMPARATIVE STUDY OF STATE ANXIETY LEVEL BETWEEN MALE AND FEMALE ATHLETES

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ABSTRACT

The purpose of the present study was to compare the state anxiety level of all India Inter University Male and Female athletes from Kurukshetra University. It was hypothesized that there would not be significant difference among male and female athletes. For this study 20 male and 20 female athletes were selected by random sampling method. The age of the subject was 18 to 20 years. In order to collected the data with the help of general anxiety scale developed by Dr. Anil Kumar. All the questions were clearly explained to the subjects there was no time limit to fill up the questionnaire. The data was analyzed and compared with the help of statically procedure in which mean standard deviation and t-test were employed on the basis of finding of the study the conclusion was drown that there was no significant difference between male and female athletes.

1. INTRODUCTION

Sports and games became a focal point to establishing a strong relationship wherever we lived. It is a familiar and comfortable venue for connection with each other because sport is a complex activity, which become a sort of war on human muscles and mind. We have witnessed a revolution in the wide arena of sports. Now a day's one of the most challenging tasks for athletes is how they improve psychological behavior and performance in competitive sports. It has been previously conceded that psycho-physiological conditioning programs and traditionally skill spectacles are of crucial importance in high-level competitive sports, which highly affects an athlete's performance.

It is a collection of sports events that involve running, throwing and jumping. The first race of record is noted to have taken place at the first Olympic remained the main stage for all track and field events and it only displayed such events every four years. The first college athletics competition was held between Oxford and Cambridge in 1864, and it was included in the first modern Olympic which was organized at Athens (Greece) in 1896 and has formed its backbone since. Female were first allowed to participate in track and field events into Olympics in 1928 because both male and female do not participate against each other.

Historically, sport psychology emerged as discipline from physical education. In recent years, however, a significant interest in the discipline has developed among individuals prepared in psychology and counseling. This has raised the issue among practicing sport psychologists as to which people are qualified to call themselves "sport psychologists and to provide services to athletes.

The word psychology refers to the study of human behavior and sports psychology notes a sub category of psychology that deals with the behavior of athletes and teams engaged in competitive sports. Sports psychology is that play field both under practice and competitive situations with a view t bring about qualitative improvement in performance and maintain the same even during the stresses of competition. It is the study of human behavior in sports settings with an emphasis on mental aspects of human behavior.

Sports psychology is the study of how psychology influences sports, athletic performance, exercise, and physical activity. Some sports psychologists work with professional athletes and coaches to improve performance and increase motivation.

2. METHODOLOGY

Research is pursuit of new knowledge, it increases the existing knowledge. Research in general term known as Re-search means searching anything which is already existing but adding something valuable in that and also establish facts and reach new conclusions for the study

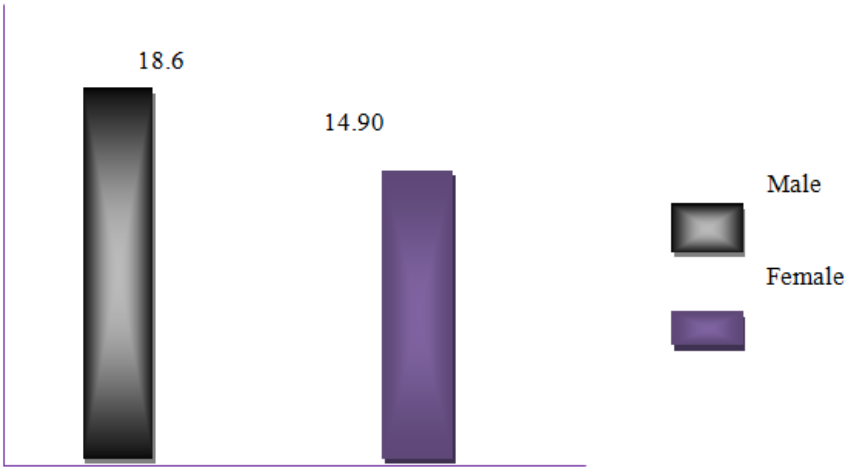
purpose of the present study 40 male and 40 female athletes were selected from the kurukshetra university, Haryana as subject who have attended the camp of the inter university. The age of the players was between 18 to 25 years. For the study the data was collected through the questionnaire method. The questionnaire used was the standardize questionnaire. The name of the tool was "state Anxiety" developed by Dr. Anil Kumar, before felling up the questionnaire the athletes were told how to fill it, there was no time limit to fill up. Questionnaire but they respond quickly, for the study purpose mean, standard devotion and test was used for the calculation of data to see the state anxiety level between male and female athletes.

3. ANALYSIS OF DATA

The data was collated 20 male and 20 female athletes were taken as Subject which were selected for All India Inter University Camp. The age group of the subjects was between 18 to 25 years. For finding the results General anxiety scale developed by Dr Anil Kumar tool have been used to see if there is any significant difference among the choose athlete. Data were being collected through the questionnaire method.

Gender	No.of Student	Mean	S.D.	Level of state Anxiety	S.E.D.	T. test score	Sign ficant
Male	20	18.60	5.95	Average	2.03	0.34	No
Female	20	17.90	6.25	Low			

Comparison of state anxiety between male and female athletes



The result shows there is no significant difference between state anxiety among male and female athlete. Lalele dopiest that the mean of male athletic was founded 18.60 and female athlete was 17.90 respectively. It shows that the state anxiety level of male athletes is more than the female athletes. The t-test was applied and presented in the table. The calculate value was found 0.34 which is less than table value 2.10 at 0.05 level of significance this way it shows that there was no significant difference between state anxiety among male and female athlete.

4. DISCUSSION AND FINDING

The aim of this study was to compare the state anxiety level among the male and female athlete. The findings revels no significance. Difference between male and female inter university athletes. Both gender were having anxiety level but male athlete is more than female because it is psychological factor in every athlete were. Found in which some less or more.

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DIFFERENT GEOGRAPHICAL CONDITIONS AND IT'S ROLE IN ANXIETY OF ATHLETES

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1. INTRODUCTION

The purpose of this Research is to describe the physiological responses to many environmental conditions during the performance of sporting activities. Different Geographical Condition play vital role in human performance and Sports. Human Performance and Health is influenced by the interplay of a variety of biomechanical, physiological, and psychological factors. This conversely has a rippling effect on man's performance on physical activity (Human Performance and Health, 2017).

Almost every anthro-geographical problem the element of environment enters an individual different phase, with different modes of operation and varying degrees of importance. The geographical environment affects the physiology of the inhabitant according to the law of nature. Therefore, it is observed that individual's endurance capacity, work ethic, stress endurance etc. is influenced by the conditions he/she lives coupled with the availability of nutrition. Since this causal conception of geography demands a detailed analysis of all the relations between environment and human development, it is advisable to distinguish the various classes of geographic influences (David Bezanson et.al 1997).

2. RESULTS OF THE STUDY

METHDOLOGY

The samples for the present study included all male sportsmen, who were selected to represent their university at all India inter-university level tournaments in various team and individual sports events. These were:

- All India Inter University Squash organized by Gurukul Kangri University Haridwar.
- All India Inter University Boxing conducted by Kurukshetra University Kurukshetra, Haryana.
- All India Inter University Wrestling at Mysore University Mysore.
- All India Inter University Athletic Meet at Punjabi University, Patiala.
- All India Yoga at Choudhary Ranveer Singh University, Jind, Haryana.
- All India Inter-Zonal Basketball conducted by University of Mumbai, Mumbai.

The Purposive Sampling procedure was used to select the subjects. The age level of subjects ranged from 18 to 25 years. All the subjects were residing at different geographical locations. The one-way analysis of variance was used. To find out the relationship anxiety between coastal, plain and hilly area players was computed. The level of significance was set at .05 levels.

To measure anxiety the Sensation Seeking & Anxiety, test of Neary and Zuckerman was used.

Table 1: Descriptive statistics of Anxiety among coastal, plain & hilly area players

	Coastal Area	Plain Area	Hilly Area
Mean	43.35	44.46	39.86
Standard Deviation	9.63	13.29	10.52
Minimum	21	21	15
Maximum	67	75	93

OBSERVATION

- The above table shows the mean and standard deviation of coastal area is 43.35 and 9.63 respectively.
- The mean value standard deviation of plain area is 44.46 and 13.29 respectively.
- The mean and standard deviation of hilly area is 39.86 and 10.52 respectively.
- The table also shows the minimum value and maximum value for anxiety for all the three regions, for coastal area is 21 & 61, plain area is 21 & 75,

whereas for hilly area the values is 15 & 93 respectively.

To find outAnxietyamong coastal, plain & hilly area players, analysis of variance statistics was used and presented in Table-2

Table 2 : Analysis of variance in Anxiety among coastal, plain & hilly area players

Source of Variance	Degree of freedom	Sum of squares	Mean Squares	F-ratio	F-critical
Between Group	2	1722.4	861.25	6.806	3.02
Within Group	447	56562.57	126.54		

**Tabulated value of F to be significant at 0.05 level for the degree of freedom (2,447) = 3.02.*

The value shown in table-2 clearly indicates that the F-Value calculated is higher than the tabulated value. There is significant relationship among the means of coastal, plain & hilly area players level in relation to their anxiety level. Coastal, plain and hilly area through test it was computed which are presented in the following tables and are represented by

Figure 1

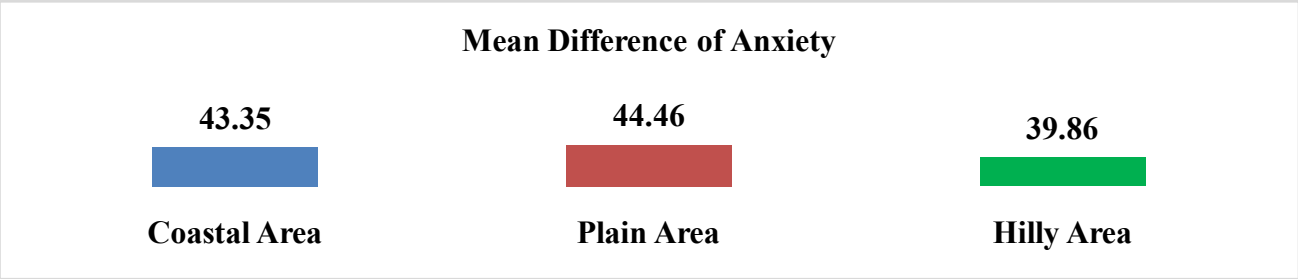

Figure-1

Mean difference Anxiety among coastal area, plain area, and hilly area athletes.

Post hock test of anxiety among coastal, plain& hilly area playerspresented bellow in Table 3

Table 3: Post hock test of anxiety among coastal, plain& hilly area players

Coastal Area	Plain Area	Hilly Area	Mean Difference	Critical difference
43.35	44.46		-1.11	2.55
43.35		39.86	3.49	
	44.46	39.86	4.60	

Post hock test to compare the anxiety among coastal, plain & hilly areaplayers has clearly revealed the in significant difference between the players of coastal area and hilly area where the calculated mean difference found (3.49) coastal area and plain area where the calculated mean difference found (-1.11) and plain area and hilly area where the calculated mean difference found (4.60) plain and hilly area athletes. Whereas the score did not reveal any significant difference between the players of coastal and plain area. The calculated value also did not reveal any significant difference between the players of coastal area to that of plain area as the required value was much higher than the calculated value at 0.05 level of significant.

3. CORRELATION COEFFICIENT OF ANXIETY

To find out anxietybetween plain and hilly area players, correlation coefficient statistics was used and presented in Table-4.

Table 4: Correlation coefficient of anxiety between coastal, plain and hilly area players

CORRELATION COEFFICIENT OF ANXIETY			
	Coastal	**Plain**	**Hilly**
Coastal		**0.203**	
Plain			**0.054**
Hilly	**0.078**		

It is evident from Table-4 that the correlation between Coastal and plain area is positive i.e. 0.203. which indicates it is very low and almost negligible co-relation. Its indicate that there is positive relation but low magnitude between Coastal & plain area players.

The correlation between coastal and hilly area is positive i.e. 0.078. Which indicates it is very low and almost negligible co-relation. It indicates that there is positive relation but low magnitude between coastal and hilly area players.

The correlation between hilly and plain area is positive i.e. 0.054. Which indicates it is very low and almost negligible co-relation. Its indicate that there is positive relation but low magnitude between hilly and plain area players.
From the above table, it can be inferred that there is significant correlation, between the test scores of the coastal, plain & hilly area players.

4. FINDINGS AND DISCUSSION

The result of the study discovered that the geographical conditions have significant effect on psychological variables of athletes. The environment is an important element instrumental in the effort to promote sports has always been acknowledged. However, neither there is any literature nor major efforts made to establish the inter-relationship between environment and sports before.

There are practical works and analogy that sports talent has direct relationship on the locality in which the population is and the situation of the population has an impact on the overall physical capabilities and characteristics of the human beings who are living there. Working on this principle scholar tried to work on interrelationship of different geographical conditions and it's role in sports performance variables on the basis of the present study following findings have been investigated as follows:

Plain area athletes have high mean and variance value inAnxiety variable which has been measured by questionnaire.

- To measure sensation seeking and anxiety the Sensation Seeking & Anxiety, test of Neary and Zuckerman was used.
- Significant difference was found between Analysis of Variance of coastal, plain and hill area players with relation to their Anxiety as the F- value 6.806 found to be higher than the required value (3.02) at 0.05 level of significance.

The performance of athlete at All India Inter-University / Inter-Zonal university games:

- **Athletics**- 1. Punjabi university. Patiala, 2. Manglore University. 3.Guru Nanak Dev University Amritsar.
- **Wrestling**
    - **a). Free Style** 1. Choudhary Charan Singh. University Meerut, 2. Maharshi Dayanand University Rohtak 3. Kurukshetra University Kurukshetra, 4. Panjab University Chandigarh, 5. Shivaji University. Kohlapur.
    - **b). Greco-Roman** 1. Maharshi Dayanand University Rohtak, 2. Mahatma Gandhi VidyapithVaransi 3. Punjab University Chandigarh. 4 Kurukshetra University Kurukshetra 5. Punjabi University Patiala.
- **Boxing**- 1 Kurukshetra University Kurukshetra, 2 Maharshi Dayanand University Rohtak, 3 Punjabi University, Patiala 4 Punjab uni. Chandigarh.
- **Basket Ball -** 1. University of Mumbai, 2. Anna University, 3. University of Madras, 4. S.R.M. university.
- **Yoga**- 1. Kurukshetra University Kurukshetra, 2. Panjab university, Chandigarh, 3. Panjabi university, Patiala, 4. Choudhary Ranbir Singh University Jind.
- **Squash** 1. Delhi University 2. University of Mumbai, 3. University of Calcutta, Manipal University Karnataka.

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HOLISTIC THERAPIES FOR HUMAN HEALTH

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ABSTRACT

Holistic medicine means consideration of the complete person, physically, psychologically, socially, and spiritually, in the management and prevention of disease. It is underpinned by the concept that there is a link between our physical health and our more general 'well-being'. In an holistic approach to medicine, there is the belief that our well-being relies not just on what is going on in our body physically in terms of illness or disease, but also on the close inter-relation of this with our psychological, emotional, social, spiritual and environmental state. These different states can be equally important. They should be managed together so that a person is treated as a whole. In fact some feel that the word holistic should really be spelt 'wholistic' .An holistic approach means that the doctor is informed about a patient's whole life situation.

Keywords: Holistic Therapies for Human Health

1. INTRODUCTION

There are many terms used to describe approaches to health care that are outside the realm of conventional medicine as practiced in the United States. This fact sheet explains how the National Center for Complementary and Alternative Medicine (NCCAM), a component of the National Institutes of Health, defines some of the key terms used in the field of complementary and alternative medicine (CAM).

2. COMPLEMENTARY AND ALTERNATIVE MEDICINE?

Complementary and alternative medicine, as defined by NCCAM, is a group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine. While some scientific evidence exists regarding some CAM therapies, for most there are key questions that are yet to be answered through well-designed scientific studies—questions such as whether these therapies are safe and whether they work for the diseases or medical conditions for which they are used.

The list of what is considered to be CAM changes continually, as those therapies that are proven to be safe and effective become adopted into conventional health care and as new approaches to health care emerge. Now the question arise are complementary medicine and alternative medicine different from each other the answer comesYes, they are different.

- **Complementary medicine** is used **together with** conventional medicine. An example of a complementary therapy is using aroma therapy to help lessen a patient's discomfort following surgery.
- **Alternative medicine** is used **in place of** conventional medicine. An example of an alternative therapy is using a special diet to treat cancer instead of undergoing surgery, radiation, or chemotherapy that has been recommended by a conventional doctor.

NCCAM classifies CAM therapies into five categories, or domains:

1. Alternative Medical Systems

Alternative medical systems are built upon complete systems of theory and practice. Often, these systems have evolved apart from and earlier than the conventional medical approach used in the United States. Examples of alternative medical systems that have developed in Western cultures include homeopathic medicine and naturopathic medicine. Examples of systems that have developed in non-Western cultures include traditional Chinese medicine and Ayurveda.

2. Mind-Body Interventions Therapy

Mind-body medicine uses a variety of techniques designed to enhance the mind's capacity to affect bodily function and symptoms. Some techniques that were considered CAM in the past have become mainstream (for example, patient support groups and cognitive-behavioral therapy). Other mind-body techniques are still considered CAM,

including meditation, prayer, mental healing, and therapies that use creative outlets such as art, music, or dance.

3. Biologically Based Therapies
Biologically based therapies in CAM use substances found in nature, such as herbs, foods, and vitamins. Some examples include dietary supplements,[3] herbal products, and the use of other so-called natural but as yet scientifically unproven therapies (for example, using shark cartilage to treat cancer).

4. Manipulative and Body-Based Methods
Manipulative and body-based methods in CAM are based on manipulation and/or movement of one or more parts of the body. Some examples include chiropractic or osteopathic manipulation and massage.

5. Energy Therapies
Energy therapies involve the use of energy fields. They are of two types:

- **Biofield therapies** are intended to affect energy fields that purportedly surround and penetrate the human body. The existence of such fields has not yet been scientifically proven. Some forms of energy therapy manipulate biofields by applying pressure and/or manipulating the body by placing the hands in, or through, these fields. Examples include qi gong, Reiki, and Therapeutic Touch.
- **Bioelectromagnetic-based therapies** involve the unconventional use of electromagnetic fields, such as pulsed fields, magnetic fields, or alternating-current or direct-current fields.

3. WHAT IS NCCAM'S ROLE IN THE FIELD OF CAM?

NCCAM is the Federal Government's lead agency for scientific research on CAM. NCCAM is dedicated to exploring complementary and alternative healing practices in the context of rigorous science, training CAM researchers, and disseminating authoritative information to the public and professionals. In continuation of it NCCAM has also developing some high-quality scientific evidence of safety and effectiveness by combining main stream therapies and complementary and alternative medicine these are as follows.

Acupuncture is a method of healing developed in China at least 2,000 years ago. Today, acupuncture describes a family of procedures involving stimulation of anatomical points on the body by a variety of techniques. American practices of acupuncture incorporate medical traditions from China, Japan, Korea, and other countries. The acupuncture technique that has been most studied scientifically involves penetrating the skin with thin, solid, metallic needles that are manipulated by the hands or by electrical stimulation.

Aromatherapy involves the use of essential oils (extracts or essences) from flowers, herbs, and trees to promote health and well-being.

Ayurveda is a CAM alternative medical system that has been practiced primarily in the Indian subcontinent for 5,000 years. Ayurveda includes diet and herbal remedies and emphasizes the use of body, mind, and spirit in disease prevention and treatment.

Chiropractic is a CAM alternative medical system. It focuses on the relationship between bodily structure (primarily that of the spine) and function, and how that relationship affects the preservation and restoration of health. Chiropractors use manipulative therapy as an integral treatment tool.

Dietary supplements. Congress defined the term "dietary supplement" in the Dietary Supplement Health and Education Act (DSHEA) of 1994. A dietary supplement is a product (other than tobacco) taken by mouth that contains a "dietary ingredient" intended to supplement the diet. Dietary ingredients may include vitamins, minerals, herbs or other botanicals, amino acids, and substances such as enzymes, organ tissues, and metabolites. Dietary supplements come in many forms, including extracts, concentrates, tablets, capsules, gel caps, liquids, and powders. They have special requirements for labeling. Under DSHEA, dietary supplements are considered foods, not drugs.

Electromagnetic fields are invisible lines of force that surround all electrical devices. The Earth also produces EMFs; electric fields are produced when there is thunderstorm activity, and magnetic fields are believed to be produced by electric currents flowing at the Earth's core.

Homeopathic medicine is a CAM alternative medical system. In homeopathic medicine, there is a belief that "like cures like," meaning that small, highly diluted quantities of medicinal substances are given to cure symptoms, when the same substances given at higher or more concentrated doses would actually cause those symptoms.

Massage therapists manipulate muscle and connective tissue to enhance function of those tissues and promote relaxation and well-being.

Naturopathic medicine, or naturopathy, is a CAM alternative medical system. Naturopathic medicine proposes that there is a healing power in the body that establishes, maintains, and restores health. Practitioners work with the patient with a goal of supporting this power, through treatments such as nutrition and lifestyle counseling, dietary supplements, medicinal plants, exercise, homeopathy, and treatments from traditional Chinese medicine.

Osteopathic medicine is a form of conventional medicine that, in part, emphasizes diseases arising in the musculoskeletal system. There is an underlying belief that all of the body's systems work together, and disturbances in one system may affect function elsewhere in the body.

Some osteopathic physicians practice osteopathic manipulation, a full-body system of hands-on techniques to alleviate pain, restore function, and promote health and well-being.

Qi gong is a component of traditional Chinese medicine that combines movement, meditation, and regulation of breathing to enhance the flow of qi (an ancient term given to what is believed to be vital energy) in the body, improve blood circulation, and enhance immune function.

Reiki is a Japanese word representing Universal Life Energy. Reiki is based on the belief that when spiritual energy is channeled through a Reiki practitioner, the patient's spirit is healed, which in turn heals the physical body.

Therapeutic Touch is derived from an ancient technique called laying-on of hands. It is based on the premise that it is the healing force of the therapist that affects the patient's recovery; healing is promoted when the body's energies are in balance; and, by passing their hands over the patient, healers can identify energy imbalances.

Traditional Chinese medicine (TCM) is the current name for an ancient system of health care from China. TCM is based on a concept of balanced qi (pronounced "chee"), or vital energy, that is believed to flow throughout the body. Qi is proposed to regulate a person's spiritual, emotional, mental, and physical balance and to be influenced by the opposing forces of yin (negative energy) and yang (positive energy). Disease is proposed to result from the flow of qi being disrupted and yin and yang becoming imbalanced. Among the components of TCM are herbal and nutritional therapy, restorative physical exercises, meditation, acupuncture, and remedial massage.

The national centre for complementary and alternative medicine is providing a wide realm of Holistic therapies for human health combining conventional medicine, complementary, alternative medicine and main stream therapies for the safety protection, prevention and treatment of mankind.

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COMPARTIVE STUDY ON MENTAL SKILLS AMONG FEMALE SHOOTERS AND ARCHERS

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ABSTRACT

The main purpose of the study was to compare mental skills among female shooters & female archers of different colleges of Punjabi University, Patiala. The study was conducted on 50 female subjects in which 25 shooters & 25 archers selected as a sample. All the selected subjects were participated at least inter-university level. The age of the subjects ranged between 18-25 years. All the samples were selected as random basis. To assess mental skills of selected female Shooters & Archers, Mental Skills inventory prepared by Nelson & Hardy was adopted. This inventory measures Imagery Ability, Mental Preparation, Self- Confidence, Anxiety and worry Management, Concentration Ability & Relaxation Ability. This inventory is highly reliable & valid to assess mental skills of selected female subjects. The scoring was done according to rule led down by the authors. The't' test was used to find out significant difference among two groups i.e. Female Shooters & Female Archers. Results found that Female shooters have better overall mental skills as compared to female archers & it is highly significant difference has been found between both groups.

Keywords: Mental Skills, Female Shooters and female Archers etc.

1. INTRODUCTION

In the Modern days, a major tenet of sport and performance psychology is that mental skills are important determinants of performance involving cognitive abilities perfected through mental skills training. The intent of which is to provide a set of psychological strategies for dedicated improvement of performance, successfully recovering from sport injury, and maintaining a positive life-balance between sport and other aspects of life, including family. Professional and most collegiate athletes are familiar with the term, but may not all have the same conceptual definition of mental skills. So what do I mean by mental skills? Mental skills are internal capabilities that help an athlete improve performance by learning to control their minds efficiently and consistently as they execute attainable goals. Mental skills training is the process that provides the methods and techniques to improve performance by developing self-confidence and creating a positive mind-set through goal setting, positive self-talk, visualization, imagery, and self-efficacy.

Fitness play major role in every sports person, when it comes to shooting it also have several benefits when you play in big competition. If you are playing matches on district and state levels then fitness effect only 10% -20%, but when it comes to national, international and Olympic matches players feel more stress and hesitation. Your incomplete fitness always affects your match performance. When it comes to shooting you don't need to so much stamina as runners needed but it should be you can hold your rifle or pistol easily for at least 105 for man and 75 minutes for women's. If you are **beginner in shooting and practice any range then these shooting tips may help you a lot** and you can add some skills in your practice session at time of practice in home or range.

Shooters are generally divided into four classes: men, junior men, women and junior women. The junior classes are included in most championships, with some notable exceptions (such as the Olympic Games and the ISSF World Cup). A shooter remains a junior up to and including the calendar year in which he or she becomes 20 years of age, although a junior may opt to participate in the main class instead. In both the qualification stage and the final stage, all shooting is supervised by a Chief Range Officer, whose duties include responsibility for the correct behaviour of all personnel, dealing with technical irregularities, and cooperation with the jury. For the qualification stage, the shooters are divided as necessary into relays. Each relay starts with a ten-minute preparation time, followed by the Chief Range Officer's "Start" command, indicating the start of the competition time. Before the competition shots, but within the time limit, the shooter may fire an unlimited number of sighting

shots at specially marked targets. Men and junior men shoot 60 shots (within a maximum time of 105 minutes) at all major competitions, while women and junior women shoot 40 shots (within a maximum time of 75 minutes). At minor competitions, there may be other numbers of shots and time limits.

Most archery equipment used in Australia is imported from wither the USA, Korea or Europe. The equipment is high-tech, reliable, extremely safe, and accurate. The price of equipment is roughly equivalent to new golf gear. A considerable second hand market for archery equipment exists within most archery clubs, which trade at prices typically 50%-75% of the original cost. Some retail archery shops also sell second hand and reconditioned equipment, and occasionally offer good deals on superseded bow models. Before buying any archery equipment though, it is worthwhile consulting an accredited archery coach in order to work out all of your archery measurements and specifications. For more information contact your local archery club.

2. METHODOLOGY

The study was designed with a main objective to compare mental skills of female shooters & female archers of different colleges of Punjabi University, Patiala. Total fifty subjects (n = 50) in which 25 female shooters & 25 female archers were randomly selected as samples from different colleges of Punjabi University, Patiala. All the selected subjects were participated at least inter-university level. The age of subjects ranged between 18-25 years and all the samples were selected from random basis.

TOOLS:

To assess mental skills of selected female Shooters & female Archers, Mental Skill inventory prepared by Nelson & Hardy was adopted. This inventory measures Imagery Ability, Mental Preparation, Self- Confidence, Anxiety and worry Management, Concentration Ability & Relaxation Ability. This inventory is highly reliable & valid to assess mental skills of selected female subjects. The scoring was done according to rule led down by the authors. The't' test was used to find out significant difference among female shooters and female archers.

STATISTICAL ANALYSIS:

After the collection of relevant data, it was processed and analyzed with descriptive statistics. To compare mental skills of selected female shooters & female archers, Mean, standard deviation and t-test was employed. To test the hypothesis the significance level was set at 0.05 percent.

Table 1: Comparison between Female Shooters & Archers on Imagery Ability

Groups	Mean	SD	MD	't'
Shooters (Female) N=25	18.08	2.61	0.52	0.51
Archers (Female) N=25	17.56	2.98		

't' (0.05) = 1.98, 't' (0.01) = 2.61

From table no. 1, results indicated that female archers have poor imagery ability (M= 17.56, SD= 2.98) as compared to female shooters (M= 18.08, SD= 2.61) & the 't' value 0.51 which is less than the tabulated value so there is no significant difference has been found at 0.05 level.

Table 2: Comparison between Female Shooters & Archers on Mental Preparation

Groups	Mean	SD	MD	't'
Shooters (Female) N=25	19.04	2.38	0.92	0.27
Archers (Female) N=25	19.96	3.42		

't' (0.05) = 1.98, 't' (0.01) = 2.61

From table no. 2, results showed that female archers have more mental preparation (M= 19.96, SD= 3.42) as compared to female shooters (M= 19.04, SD= 2.38) & 't' value is 0.27 which is less than the tabulated value so there is no significant difference has been found at 0.05 level.

Table 3: Comparison between Female Shooters & Archers on Self Confidence

Groups	Mean	SD	MD	't'
Shooters (Female) N=25	17.84	2.40	1.88	0.021
Archers (Female) N=25	15.96	3.15		

't' (0.05) = 1.98, 't' (0.01) = 2.61

From table no. 3, results found that female shooters have higher self confidence (M= 17.84, SD= 2.40) as compared to female archers (M= 15.96, SD=3.15) & the 't' value is 0.021 which less than the tabulated value so there is no significant difference has been found at 0.05 level.

Table 4: Comparison between Female Shooters & Archers on Anxiety and Worry Management

Groups	Mean	SD	MD	't'
Shooters (Female) N=25	16.68	3.37	3.76	0.066
Archers (Female) N=25	12.92	3.90		

't' (0.05) = 1.98, 't' (0.01) = 2.61

From table no. 4, results indicated that female shooters have high level of anxiety & worry management (M= 16.68, SD= 3.37) as compared to female archers (M= 12.92, SD= 3.90) & 't' value 0.066 which is less than the tabulated value so there is no significant difference has been found at 0.05 level.

Table 5: Comparison between Female Shooters & Archers on Concentration Ability

Groups	Mean	SD	MD	't'
Shooters (Female) N=25	16.68	3.14	3.24	0.039
Archers (Female) N=25	13.44	4.33		

't' (0.05) = 1.98,'t' (0.01) = 2.61

From table no. 5, results showed that female shooters have more concentration ability (M= 16.68, SD= 3.14) as compared to female archers (M= 13.44, SD= 4.33) i.e. no significant difference has been found because the calculated value is less than the tabulated value, so there is no significant difference has been found at 0.05 level.

Table 6: Comparison between Female Shooters & Archers on Relaxation Ability

Groups	Mean	SD	MD	't'
Shooters (Female) N=25	17.01	2.72	0.31	0.76
Archers (Female) N=25	16.7	3.79		

't' (0.05) = 1.98,'t' (0.01) = 2.61

From table no. 6, results found that female archers have poor relaxation ability (M= 16.7, SD= 3.79) as compared to female shooter (M= 17.01, SD=2.72) & the 't' value is o.76 which is less than the tabulated value, so that there is no significant difference has been found there is no significant difference has been found at 0.05 level.

Table 7: Comparison between Female Shooters & Archers on Overall Mental Skills

Groups	Mean	SD	MD	't'
Shooters (Female) N=25	105.1	10.9	7.8	10.5*
Archers (Female) N=25	97.3	14.3		

't' (0.05) = 1.98,'t' (0.01) = 2.61

From table no. 7, results indicated that female shooters have better overall mental skills (M= 105.1, SD= 10.9) as compared to female archers (M= 97.3, SD= 14.3) i.e. The't; value is 10.5, which is greater than the tabulated value, so that it is highly significant difference has been found at 0.05 level as well as 0.01 level.

3. CONCLUSION

It is concluded that female shooters have better overall mental skills as compared to female archers & it is highly significant difference has been found between both groups.

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SPORTS MANAGEMENT IN INDIA

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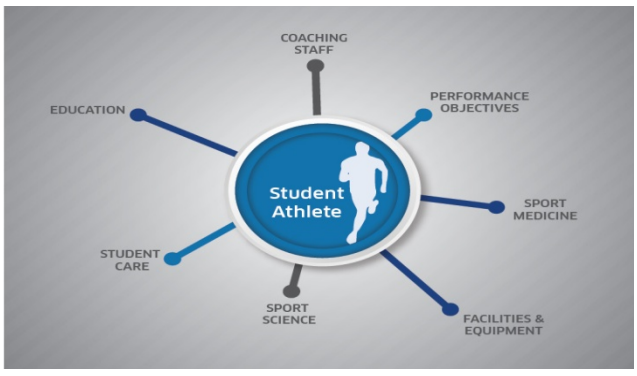
1. INTRODUCTION

Sports management is a combination of skills related to planning, directing, organizing, controlling, leading, budgeting, evaluating within the context of organization or department related to sports or physical activity. In simplest term sports management is the application of management processes to sports environments. Sports manager needs: management skills and experience and an understanding of both the sports system and value of sport in society. Sports Management has been emerged as an academic subject and many Colleges and Universities in India offers Degree and Diploma programmes. This paper also attempts to document the few leading Sports Management institutions in India. Modern day sports generate huge employment opportunities both directly and indirectly .Resources are the vital area in Management and resources can be classified into Human resources, financial resources, technological resources and natural resources. To manage an organization or institution, it needs better 'system' with better manager to lead the organization. Today many professional leagues in several sports such as Cricket, Football, Hockey, Kabaddi, Badminton, Tennis, Golf and so on are organized in India. Several corporate houses, industrialists, film personalities, television channels are promoting such leagues, which attracts more spectators and generates higher revenues. Sports not only boost the youth and instill pride among citizens, but also facilitate social and economic development of a nation. Specialization such as Sports Marketing, Event Management, Facility Management, Sports Economics and Sports Finance are also been offered in India. Some of the leading Sports Management institutions in India are listed here under National Academy of Sports Management, Mumbai

- The Institute of Sports Science & Technology, Mumbai
- Indian Institute of Social Welfare and Business Management, Kolkata
- Centurion University of Technology and Management, Bhubaneswar
- University of Technology & Management, Shillong

The future of the Indian Sports Industry seems very bright. Along with the existing league India will be hosting some of the major sports events in the world, which would give greater opportunities to our Sports Managers. Sports and games are means of mental and physical growth so we need a good sports management team. During sports we come to learn many things. We learn how to maintain mental balance in the midst of hopes and despair. They make us learn how to tackle the difficult situation. Sports develop a sense of friendliness. They develop in us team spirit. They help in developing mental and physical toughness. They shape our body and make it strong and active. They give us energy and strength. They remove tiredness and lethargy.



2. OBJECTIVES

- To explore current trends and key concepts in sport management
- To enable students to further develop analytical and decision-making skill
- To encourage reflective practice To inculcate essential business
- To provide a truly engaging and enriching experience to learners with an opportunity
- To explore variety of sports interests leading to progression.
- To introduce students to a range of concepts and theories

- To critically analyze sports organizations contexts and functions both nationally and internationally
- To enable students to recognize, plan and develop appropriate management skills
- To build a strong network in the sport industry

Boost up factors:
One factor of sports management is not only having athletes but also have a place to utilize their talents in.

Facility management and marketing play a big role in the sports and computer industry. Facility management involves the co-ordination of the physical surrounding and related services with the user's needs. In some cases, like privately owned gymnasiums, the facility itself is the service, while for other organizations, such as a boat club with a boat house, the facility is a storage place that aids the delivery of the service.

Choosing the correct real estate for a sporting facility is vital to its success. An apparent factor to contemplate is the number and proximity of prospective users. Use of a computer comes in an important role. You can use the computer to find the U.S. Bureau of Statistics printout on local government demographics to determine how many prospective users may be in the area.

Other factors to take into consideration when building and managing a facility are the direct costs such as rent, utilities, insurance, physical satisfaction of the building, proximity to staff and suppliers, transport availability, and site limitations.

Computer usage when figuring out the costs of rent, utilities, and insurance are very useful while building a facility.

3. GOALS FOR SPORT MANAGEMENT

Behavioral Dimensions in Sport

- Identify and understand the factors that shape sport in a culture
- Explain how sport mirrors society, analyze why sport is a business and how it is a catalysts for growth, describe how sport is a medium for integrating gender issues, ethnic, religious, and disabilities interests and describe sport management and the evolution this discipline as a profession.

Management and Organizational Skills in Sport

- Define and understand management and organization;
- Describe and demonstrate the skills necessary in the management of an organization.
- Apply the functions of planning, organizing, leading, and evaluating to a variety of sport organizations.
- Demonstrate the concepts of strategic planning and resource allocation and demonstrate effective knowledge of leadership theory and application.

Ethics in Sport Management

- Distinguish between the concepts of morality and ethics; describe ethical theories;
- Explain the effects personal ethics have on an organization and apply personal ethics and ethical theory to issues in the business of sport.

Legal Aspects of Sport

- Identify and apply various areas of law to the sport industry
- Describe the court system and how legal issues are decided list and explain the principles of tort liability, especially in the area of negligence**.**

Governance in Sport.

- List and describe the various agencies and their functions that govern sport; explain the governing powers each agency has assumed
- Describe the effect governmental agencies have on the roles of sport governing bodies
- Understand the social, legal, ethical, economic, and educational impact of sport organizational polices; and recognize policy components and processes in sport governing bodies.

Branch of sports management
Sport management is a branch of study about the business aspects of sport. The work of a sport manager includes activities at the front office in professional sports. It means dealing with clients, marketing, sales, services, organizing events and others.

Sport managers may work in the field of college sports, recreational and leisure time sports, sports marketing, event management, sponsorship, facility management, sports economics, finance and sports information. Sport Broadcast

Sport Broadcasting
Sport television in particular – is one of the primary driver of the business of sport. It includes sport television, sport radio and web casting. While some leagues are still gate-driven (dependent primarily on ticket sales to make a profit), leagues such as the NFL receive more money from television rights than any other revenue stream.

Sport Law
Contract management – both with highly-paid players and with sponsorship and other commercial agreements, including broadcast contracts – has become a defining characteristic of the business of sport. For that reason, in addition to increasing importance placed on finance, marketing and salary cap professionals in recent years, lawyers and legal specialists have emerged as critical players in most professional sport organizations.

Sport Licensing
Sport licensing covers everything from the licensing of merchandising rights and to the licensing of video games It entails the formal process of issuing a license, typically governing sales or marketing or branding rights. In the business of sport, licensing almost universally involves written permission or consent in the form of a license.

Sport Media
Sport Media typically includes newspapers, television, radio, magazine and their online applications. The branch of the business of sport has expanded significantly since 1995 and the rise of Internet, and with it, sport web sites and blogs. Sport Sponsorship In most sport organizations, Sport Sponsorship accounts for a significant percentage of revenues, often second only to ticketing in gate-driven businesses and third behind ticketing and broadcast in the most sophisticated of leagues which carry strong broadcast partnerships.

Sport Television
Sport television is the primary distribution channel for the sports entertainment sector and is by far the primary driver of revenues for leagues such as the National Football League in the India. It is the way most fans "consume" professional sport, in some cases.

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ROLE OF SPORTS IN SOCIETY

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ABSTRACT

Importance of sports in our life is that sports play a great role in our daily life because sports keep us healthy, wealthy and active. We can have a healthy mind only if we have a healthy body. We can achieve any goal of life if we maintain our mental and physical health well. Education is very necessary to get name, fame and money as same getting a sound mind and body everyone must involve in some type of physical activities increases mental power. Sports drive society, culture, economics and every other facet of modern society or modern life. Sports have a meaningful part of society dating back as far as written history and may be further. Perhaps the most prominent example of sport culture and society is the Olympic Games, which are more tshan 2700 years old. In fact countries must plead their cases in advance to even be considered as Olympic hosts. In fact a state has a course called "sports in society" which helps students understand the challenges in the societal constructs. This, of course, is a part of comprehensive programme filled with law, marketing, ethics and leadership courses.

For centuries sports culture has impacted society and people live in many levels, from the businesses near sporting events to even the clothes people chose to wear. Players are often treated as role models and the people who support teams, not just fans but as employees, help shape society too.

Speaking about the role of sport in modern society ,it can be argued that sport is a continuous performing developmental, educational, patriotic, communicative function and co-ordinates individuals and social groups helps the nation to develop. Sports have a significant impact on the socio-economic and political processes of any modern society.

Keywords: Sports Culture, Challenges, Social Values, Social Groups.

1. INTRODUCTION

Importance of sports in our life is that sports play a great role in our daily life because sports keep us healthy, wealthy and active. We can have a healthy mind only if we have healthy body. We can achieve any goal of life if we maintain our mental and physical health well.

In the modern society the role of sports is that is that it is performing developmental, educational, patriotic, communicative function, integrates and co-ordinates individuals and social groups ,helps the nation to develop. Sports are directly connected with the subsystems of health science, culture, upbringing and education. It has a significant impact on the socio economic and political process of any modern society.

Sports play an important role in all levels of modern society. It provides a large impact on all areas of social life. It affects nationalism, business life, people's life style, national relations, ethical values and social status and fashion forms. Indeed the phenomenon of sport has a powerful socialization force. It unite the community with a unified national idea, filled with a kind of ideology, people's desire to succeed to win, for example if there is a match between two countries the both country players unite with nationalism and desire to win their country.

Today sport emerges as an important component of socio-economic development of a country. The active participation in sports improves community health and productivity, reduces medical expenses, imbibes discipline in character and enhances social cohesion. The execution of a mega sporting event helps in developing infrastructure, generating employment, securing inflow of foreign capital and thus contributes significantly to the economic development of a country. Therefore, it can be said that the impact of sports on the society is multi-dimensional.

The government plays a crucial role in promoting sports in a country. The government and governmental organizations constitute the public sector of the sports industry, which is responsible in making sports policies, allocating grants for developing infrastructure, nurturing

talents and designing specialized programmes for overall development of sports.

Sports shape the character of a person significantly. Concentration, alertness, team-work, focus and leadership are some of the skills that sport teaches anyone. Sports develop and encourage the spirit of healthy rivalry and competition. They teach us coolness, courage and self-control. It inculcates team-spirit, a sense of comradeship and discipline. Recently, we have seen a few good initiatives have been taken up by a few leading news networks too the best example of Sports changing lives in India is the story of the state of Haryana. Nestled in the north of India, Haryana has had a tradition of producing a lot of good sportsmen; after all, India's first cricket world cup winning captain comes from that state.

While every citizen of India has a right to question, we also need to collectively shoulder the responsibility of our current standing in sports. It is up to us to build a culture of sports in India and to uplift the fledgling sporting scenario of India, and the first step towards this is to change our perception about sports.

2. HOW TO BUILD A CULTURE OF SPORTS IN INDIA

Encourage children to participate in sports: It is not necessary that every child has to become great sportsperson. Yet this will go a long way in creating a positive impression about sport in their minds, and they also get an opportunity to figure out if at all they are genuinely interested in pursuing sports. This is how children can identify their passion for a particular sport and hone their talent.

Make Local Sporting Events More Accessible and Commonplace: There are several local sporting events held in our own neighbourhood and we don't hear of it. Keep an eye out for them through your local newspapers, or the governing bodies or sports clubs in your neighbourhood. In case there's a lack of these events, people can get together and organise more of such events to give a chance to more people to participate.

Position sports stars as role models: Every child idolises a pop star, a movie star or any other celebrity. However, not every kid grows up idolising sports stars as their role models. Expose children to more success stories of sports athletes and inspire them with their talent, dedication and their success.

Perceive and respect sports as a rewarding career option: A child or a teenager will be automatically motivated to better one's game if they are nurtured with such positive thoughts about sports.

Parents and school should encourage sports: It is believed that a healthy body has a healthy mind. Anyone who has seen kids on a playground know they are the happiest moving about, active and playing. Whether it is playing informally, competitive play or even playing just for fun.

However, present day education is largely academic. Persuasively, this positioning needs to be changed for a balanced development through inculcating a health consciousness among students. This includes development at physical, social and mental levels. With increasing emphasis on academics everywhere and rapid advances in science and technology, parental pressure has been driving academic training at the cost of health and physical fitness of the youth.

Hence, parents along with schools must take initiatives to inculcate a culture of 'playing' from early childhood of a student so that it follows them throughout their lives. Parents and schools should team up to encourage sports among children. As higher percentage of children goes to schools, in this context there is now an urgency to lay a strong foundation and strengthen physical education and sports in education institutions or schools. With constant support from parents, this calls for the integration of physical education, sports and other recreation activities in schools for creating a healthier generation.

3. BENEFITS OF SPORTS

Better academic performance: The relationship between mind and body has been acknowledged scientifically. Research has proven repeatedly that physical activity can have an impact on cognitive skills and attitudes and academic behaviour, all of which are important components of improved academic performance. These include enhanced concentration and attention as well as improved classroom behaviour.

Helps to forge character: When children play with others or play with a team, it creates a sense of belonging in them and encourages them to work with others. It teaches them how to accept a win or lose graciously - building a strong team spirit within. A win – win situation indeed!

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Helps to forge character: When children play with others or play team sports, it creates a sense of belonging in them and encourages them to work with others. It teaches them how to accept a win or lose graciously - building a strong team spirit within. A win – win situation indeed!

Promotes a healthy lifestyle: Today's children may fantasise about growing up to be svelte celebrities, athletes, etc. The irony however, is that children are largely inactive and unhealthy due to the sedentary

lifestyles they are leading. Sports and physical education is the best cure for children to lead a healthy lifestyle. Regular physical activity helps control or reduces the risk of chronic diseases, such as heart disease, hypertension, diabetes and osteoporosis and improves their metabolism. Children who are physically active are more likely to grow into physically active and emotionally balanced adults.

Teaches life skills: By making physical education and sports more engaging and inclusive, one can make children learn respect for themselves and for others. It also teaches them team building skills, critical and creative thinking thereby making them more participative and responsible beings.

Holistic Education: Physical education and sports is an important part of holistic schooling. Physical education as an education tool can contribute significantly to the development and learning progress of children. It acts as a balance between a student's body and mind and hence schools and parents must give their children sufficient time to play for their all-round development.

Across the globe, implementing sports education programmes is a huge challenge, considering the various constraints we are faced with. Parents and schools together can contribute to the monitoring and support required to keep up momentum of play and sports culture. It is known that children spend a significant amount of their time in schools. The school therefore is proven to be the best place to introduce changes in the way sports or physical education is handled. Schools come with a package of a play area, infrastructure, friends, teachers, etc. and hence provide the best environment to get children to play.

Parents can contribute by encouraging their children to increase their physical activity to improve their health and displace unhealthy behaviours. Parents can assess the physical activity patterns of their children to help refer them to the appropriate physical activity programmes the school is offering. But their role shouldn't just be limited to supporting and encouraging their children to be physically active but by being physically active role models them. It's a fact, children who lead active lifestyles are likely to remain active as adults and pass on their healthy lifestyle habits to their own children. Thus, parents who endorse and persuade to be physically fit in their own lives are more likely to pass on these good habits to their children.

Adopting a sports culture in early levels of childhood clearly is a significant step. However, to attain this paradigm shift towards physical education and sports, it is of vital important to encourage the acceptance of these sports – oriented culture by parents, schools and community at large, which requires a collaborative effort. Like it's said in sports, talent wins games, but teamwork wins championships. Together everyone achieves more.

Educational value of sports: The necessity of sports is felt to be so great in life that there is ample justification for them to be introduced in the schools compulsorily. Sports and games impart a sense of discipline, fellow-feeling and togetherness.

They teach the value of time and how it is important to note how a minute, a fraction of a minute and even of second decides the fate of a young sportsman in the field of competition.

- With proper training in sports and games, students become active, sportive, dashing, daring and adventurous capable of meeting the challenges in future life.
- Sports and games are the right avenues to channelize the energy and vitality of students and make their leisure hours worthwhile.
- The spirit of competition is inculcated in most cases by sports and games.
- A forum is made available for physical fitness.
- The greatest educational value of the sports and games is to provide stimulation for study and for hard work.

4. CONCLUSION

It is not the sound and the fury that counts but effort in the right direction to make a mark. Keeping this in view, it is high time that we spot out our sports talents and provide all necessary facilities to train them properly so as to enable them to compete with world champions with no feelings of diffidence. Sports help students study better, improves concentration, problem solving, and memory.

Playing sports or engaging in extracurricular activities play an important part in one's character/personality development. One develops management skills, negotiation skills, communication skills, convincing skills, conflict management and confidence

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EFFECTS OF PRANAYAMA ON SELECTED PHYSIOLOGICAL VARIABLES OF COLLEGE STUDENTS

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ABSTRACT

The purpose of the study was to find out the effect of pranayama on selected physiological variables of college students. For this purpose the 40 college students in the age group of 19- 23 years from PG Government College Etah U.P. were randomly selected and were divided into two groups namely control and experimental group. The training programme was for a period of eight weeks. During this period, the control groups were not given any training. The data were collected on the selected physiological variables (resting pulse rate, breath holding time and vital capacity) respectively before training (pre test) as well as after eight weeks training (post test). Dependent 't' test was used to find out any significant difference between the pre- and post-test means and any significant difference that was exists between the experimental and control group on selected variables. The result of the study shows the pranayama (NadiSodhana, Anuloma&Viloma and Kapalabhati Pranayama) practice decreased the resting pulse rate and increases the vital capacity and breath holding time significantlyat 0.05 level of significance. It was concluded from the results of the study that pranayama practice has brought positive changes in resting pulse rate, breath holding time and vital capacity.

Keywords: Physiological Variables, Anuloma & Viloma and Kapalabhati Pranayama.

1. INTRODUCTION

Physical fitness of Indian college level students, today, is really questionable. Easily access of modern amenities restricts them to do hard physical labour. Gradually, they become sedentary. In their sedentary lives, physical inactivity leads towards most common metabolic disorders that may cause not only the morbidity and mortality, but also cause numerous health complications. In fact, physical inactivity among school students often carries a negative social stigma that affects health along with declined physical fitness. To achieve their normal improvement of factors of physical fitness in growing age, various researches investigated the effects of different physical activities on sports performance and associated variables of physical fitness (Sherwood and Selder, 1979; Spirduso and Clifford, 1978; Spirduso et al. 1988). Similar studies in the area of Yoga exercises also revealed that Yoga proved to be a better intervention for improving physical fitness variables of schools students (Ganguly, 1981; Gharote, 1976 b; Moorthy, 1983). Other associated reports revealed that both physical exercise, yoga and their combination showed significantly better as well as consistent results to improve the variables of health and fitness (Moorthy, 1982; Yoga is a science that has been practiced for thousands of years. It consists of ancient theories, observations and principles about the mind and body connection which is now being proven by modern medicine. Substantial research has been conducted to look at the health benefits of yoga from breathing (pranayama) and meditation. The information is group into two categories - physiological and psychological effects. Furthermore, scientists have laid these results against benefits of regular exercise. Yoga is a way of life, which can be practiced by any human being regardless of age, sex and condition of health, thus it is based on general physical and spiritual laws which operate all mankind alike. Yogic exercise is a kind of bodily movement with mental concentration. Yoga exercise can help a person to develop his health along with control at various emotions like lust, affection, anger, greediness and provide firm control over body and mind, especially to overcome most of dangerous diseases. For this reason at present scenario the importance of yoga is felt by a large number of persons in most of the nations. It is now being realized in all parts

of the globe that yoga is not only for better development of mind, socio-control and spiritual moral aspect but is also a therapy. Regardless of the testimony of celebrities or the documented physiological benefits of regular yoga or mindbody practices, even the most motivated individuals find it challenging to find time to implement any of the worthwhile yoga techniques available to them. With various organized classes ranging from 45 to 90 minutes in length, it is often difficult to incorporate a daily or weekly yoga practice given the time already appropriate to regular cardiovascular or resistance training routines. Therefore the purpose of the study was to find out the effect of selected pranayama on certain physiological variables among sedentary college men.

2. METHODOLOGY

For this purpose the 40 college male students in the age group of 19- 23 years from PG government college Etah U.P. were randomly selected and were divided into two groups namely experimental &control groups and each group had 20 subjects. The training programme was for a period of eight weeks. The experimental group only practiced pranayama **(**NadiSodhana, Anuloma&Viloma and Kapalabhati Pranayama). During this period, the control groups were not given any training. The subjects were informed about the purpose of this study in order to secure their full co-operation. The data were collected on the selected physiological variables(resting pulse rate, breath holding time and vital capacity) respectively before training (pre test) as well as after eight weeks training (post test). Resting pulse rate taken from radial artery and recorded in numbers, stop watch was used to measure breath holding time and recorded in numbers whereas dry spirometer was used to measure vital capacity and recorded in cubic centimeters.

3. RESULTS

In order to find out the effect of pranayama on selected physiological variables of college students.The data was analyzed using descriptive statistics and dependent t test was also used to find out any significant difference between the pre- and post-test data.

Descriptive statistics and dependent t test results of experimental and control group on selected physiological variables are presented in table-1

Table 1: Comparative Analysis of Selected Physiological Variables between Experimental and Control Group

Variables	Group	N	Mean		Std. Dev.		t-ratio	
			Pre	Post	Pre	Post		
Resting	Control	20	73.75	72.20	5.84	6.36	1.62	
Pulse rate	Experimental	20	71.60	66.90	5.504.82	5.93*		
Breath	Control	20	32.56	32.19	8.87	8.72	1.06	
Holding Time	Experimental	20	29.52	31.95	9.86	9.51	7.11*	
Vital	Control	20	2237.8	2238.0	461.52	459.52	.025	
CapacityExperimental		20	2281.0	2360.0	489.27	493.419	11.75*	

**Significant at the 0.05 level*

It is very clear from above table that there was a significant difference in the pre and post test performance of resting pulse rate, breath holding time and vital capacity between experimental and control group, since experimental group calculated‘t’ values for of resting pulse rate 5.93,breath holding time 7.11 and vital capacity11.75 respectively are higher than tabulated ‘t’ value of 2.09 at 0.05 level of significance.

It is also revealed from above table that insignificant difference was found in all the selected physiological variables in case of control group.

The graphical representation of mean scores of selected physiological variables of experimental and control group

is presented in Figure-1.

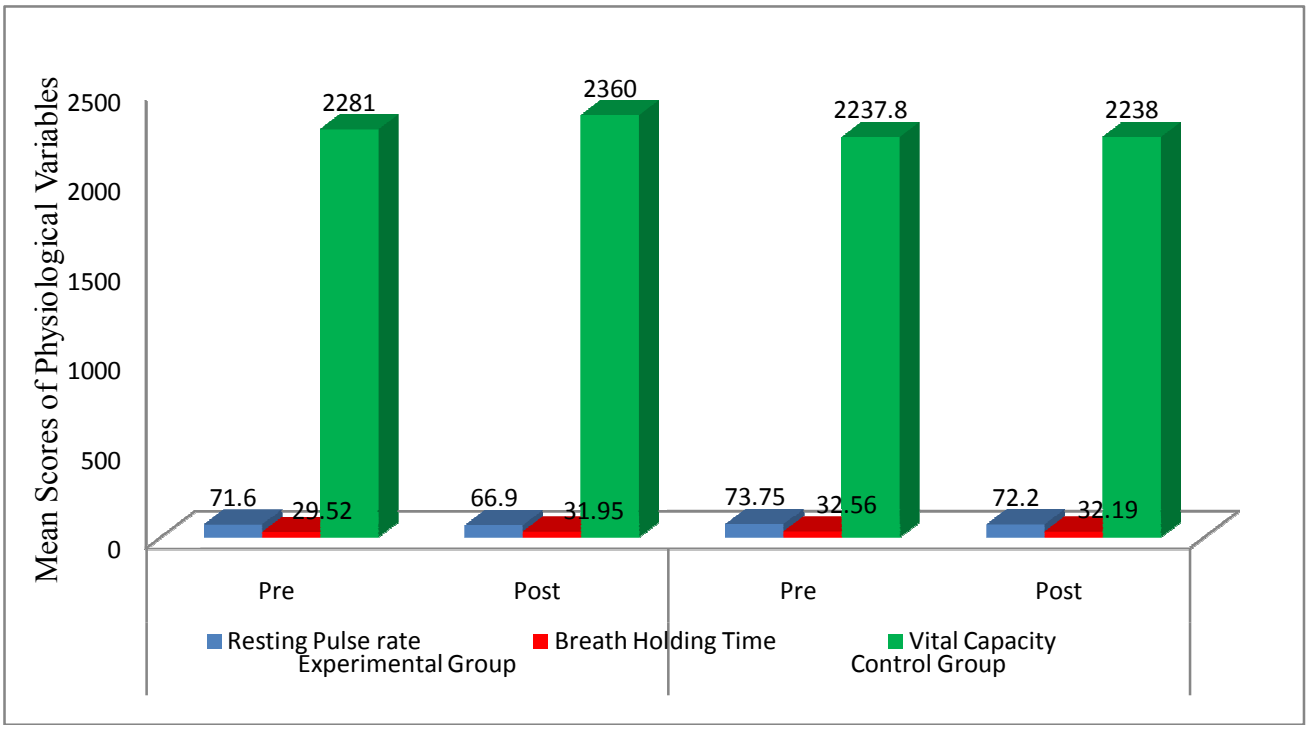

Figure 1: Graphical Comparison of the Mean Sores of Selected Physiological Variables of Experimental and Control Groupof College Students

4. DISCUSSION

The finding of the study showed that the yoga training brings out significant improvement in resting pulse rate, breath holding time and vital capacity of college students. This may be attributed to the fact that selected Pranayama practices enhance the lung capacity and cardiovascular endurance of students. Hence, it can be said that pranayama improves respiratory breathing capacity by increasing chest wall expansion and forced expiratory lungs volumes. Pranayama helps in improving the supply of the oxygen. It can immensely improve the functioning of the lungs and initiate the proper way of breathing. It can thus provide a sense of well being and help to maintain a healthy heart.

Increase in the voluntary breath holding time may be due to acclimatization of the chemoreceptors of lungs to hypercapnea and hypoxia (decreased oxygen levels) or decreased responsiveness of respiratory centre or increased development of respiratory musculature leading to increased muscle endurance and delayed fatigue. Improving in resting pulse rate may be due to fact that during pranayama the venus blood from the brain is drained very thoroughly and fresh arterial blood is supplied to the brain on a larger scale and improve the heart functioning. Pranayama powerful strokes of exhalation in quick succession with contraction of abdominal and diaphragmatic muscles train the subject to make full use of diaphragm and abdominal muscles in breathing. Through pranayama the chest is expanded to its fullest extent several times and putting the lungs on the utmost stretch. Thus these organs are better trained to perform their work efficiently during the remaining part of the day. Pranayama may allow bronchio-dilatation by correcting abnormal breathing patterns & reducing muscle tone of respiratory muscles (Grover, 1998 &Chanavirut, 2006). This may be reason for improving vital capacity of college students. The results supported by SushilLega (2010), which has revealed that there is a significant difference effects of yoga training on cardio- respiratory functions of school children. The findings of the study are in agreement with the findings of BadshahGhosh (2015), who stated that 12 weeks of asanas and pranayama training improved physiological variables of the adolescents.

Raub, (2002) reported to that Yoga may help control such physiological variables as blood pressure, respiration and heart rate, metabolic rate to improve overall exercise capacity. Harinath, (2004) also reported that yogic practices for 3 months resulted in an improvement in cardio-respiratory performance. Joshi (1992) also reported that six weeks courses in „pranayama" improve ventilatory function in the form of lowered respiratory rate, and increases in the forced vital capacity , forced expiratory volume , maximum voluntary ventilation , peak expiratory flow rate , and prolongation of breath holding time. Yadav and Das (2001) also reported significant increase in forced vital capacity, forced expiatory volume and peak expiratory flow rate and the end of 12 weeks yoga training. Future research should include gender and some other cardio training programme in the main analysis or at

least take it into consideration when interpreting data, especially between pranayama and cardio exercises.

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METHODS OF BIOMECHANICAL ANALYSIS TO IMPROVE TECHNIQUES OF SPORTS

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ABSTRACT

Biomechanics in sport incorporates detailed analysis of sport movements in order to minimise the risk of injury and improve sports performance. This paper discusses the concept of biomechanics and the different biomechanical analyses used in sports. Biomechanical analysis involves the evaluation of techniques, whether in sports, industry, or everyday life. Methods of analysis used in bio mechanics vary, from those requiring expensive and complex equipment, to techniques utilizing little more than an acute eye and an understanding of the mechanics of movement. Qualitative or subjective method of analysis describes quality without the use of number, and this is the most frequently used during direct observation of movement. Quantitative analytical method entails the collection, measurement and evaluation of data from the activities of interest and it involves the use of number. Visual observation is inadequate to solve the performer's problem, unless qualitative and quantitative analyses are combined. However, the general aim of work in predictive analysis is to use a computer model of a person or piece of equipment to predict changes which would occur in a movement as a result of alterations to the input parameters. This paper therefore recommends that tools and materials needed for biomechanical analyses should be made available to sport and exercise scientists to enable more quantitative research, for optimal performance.

Keywords: Biomechanical Analysis, Sports, Qualitative Analysis, Quantitative Analysis.

1. INTRODUCTION

Biomechanics is the study of the structure and function of biological systems by means of the methods of 'mechanics' which is the branch of physics involving analysis of the actions of forces.With in 'mechanics' there are two sub fields of study :statics, which is the study of systems that are in a state of constant motion either at rest or moving with a constant velocity and dynamics ,which is the study of systems in motion in which acceleration is present , which may involve kinematics and kinetics.

Kinematics describes motion, including the pattern and speed of movement sequencing by the body segment, which often translates to the degree of coordination an individual displays, while kinetics studies the actions of forces associated with motion.

Sport kinematics analysis studies the positions, angles, velocities and accelerations of body segments and joints during motion, while kinetic analysis studies forces that produce the movement. When people or athletes learn a new motor skill or sport skill, a progressive modification of movement kinematics reflects the learning process. Is the skill correctly reproduced at the appropriate speed or velocity, or is the form or pattern well sequentially coordinated? Are the forces applied harmonized with the movement? Answers found will determine whether the techniques were correct or not or can be improved.

Athletes and coaches are always striving to reach peak performance. The current available evidence suggests that the use of technology makes it possible for coaches to provide their athletes with the best possible opportunities to achieve maximal performance. Therefore, sports bio mechanists need to adopt the correct methods of analysis to improve skills and optimize the performance of athletes and coaches.

2. CONCEPT OF BIOMECHANICAL ANALYSIS

Biomechanical analysis is the evaluation of a technique, whether in sports, an industry, or in everyday life. Methods of analysis used in biomechanics vary, from those requiring expensive and complex equipment, to techniques utilizing little more than an acute eye and the

understanding of the mechanics of movement. The goal of sport biomechanics is to provide information to coaches and athletes on sport skill techniques that will help them to obtain the highest level of athletic performance. However, according to Glazier et a1. (2003), the concern of many influential investigators, for quite sometime now, is that biomechanical research and, more notably, sports biomechanics research, needs to move from its descriptive phase to a more analytical level; hence, the need to employ every available means to use the methods and materials for better analysis of skill and movement to improve performance. At any level of movement analysis, there is a need for interaction between the coach and bio mechanists, if maximum performance is to be achieved. Objective or quantitative evaluation of movement requires that a permanent record be collected for a number of trials, so that each can be viewed and analysed. The recording of permanent data on movements may take a number of forms; for example, cinematography, videography, electromyography (EMG), accelerometer, dynamometry, electro goniometry — though some of these techniques may not be available for general use.

3. METHODS OF BIOMECHANICAL ANALYSIS IN SPORTS

Analyses in biomechanics may be classified under three general areas: subjective, objective and predictive techniques. Most coaches and paramedics use varieties of subjective evaluation techniques during their normal interaction with athletes or patients. They watch a subject, for example, to determine whether there are any gross abnormalities in the range of movements at the joint during walking, lifting, takeoff or release of an implement, such as in a javelin throw or the ball in jump shot. Sometimes, a coach may measure the forces a high jumper exert on the ground during a take-off, by using a force platform to determine a change in the approach velocity. Predictive techniques attempt to answer the 'what if...' questions. For example, what effect would reducing the angle of ball release of a basketball player who consistently misses free throws have?

4. QUALITATIVE METHODS OF ANALYSIS

A qualitative analysis method is also referred to as subjective methods, involving a non-numerical evaluation of a skill and is most frequently performed during direct observation of movement. It is a seemingly natural characteristic of good coaches and clinicians. This is the description of quality without the use of number. This skill can be learned and improved through practice. However, Adrian and Cooper (2005) explained that, for one to be consistent and reliable both in observing a performer's learning motor skills and in evaluating movement for practical, diagnostic, clinical or research purposes (viewed either in life or film), a researcher must adopt a definite observational plan. The plan might include the following steps:

- view multiple times
- view from multiple perspectives (planes)
- focus on parts, then whole, then parts
- form a visual mental image of the performance
- use a checklist: either construct your own or use available ones.

Therefore, qualitatively describing the kinematics of a movement will entail identifyingthe joint actions, including flexion. extension, adduction/abduction, rotation and so forth. A detailed qualitative analysis might describe the precise sequencing and timing of body segment movement. This translates to the degree of skill evident on the part of the performer.

Most qualitative analyses are carried out through visual observation and, as pointed out by Hoffman (2004), performance deficiencies may result from errors in technique, perception, or decision-making. Hail (2009), therefore, added that it will require more than visual observation to solve the performer's problem, making a combination of both qualitative and quantitative analyses imperative. However, McPherson (2008) and Hay and Reid (2008) proposed the inclusion of a pre-observation phase, where a model of the skill to be analysed is developed and mechanical variables concerned and their relationships are described.

5. QUANTITATIVE METHODS OF ANALYSIS

This method is otherwise known as objective technique in biomechanical analysis. This is the collection, measurement, and evaluation of data from the activity of interest. Quantitative analysis implies that numbers are involved. According to Hall (2009), sports bio mechanists often quantitatively study kinematics features that characterize elite performance of a particular athlete. Sometimes, this type of analysis results in constructing a model that details the kinematic characteristics of sound performance for practical use by coaches and athletes

Steps in quantitative analysis include the following:

- Pre-observation stage; and this should include:
    - determination of performance goal and mechanical variables
    - identification and selection of critical variables
    - Determination of acceptable range for these variables
- Development of an observation plan; to include:
    - observation desired
    - response observed
    - response diagnosis
    - discrepancy (allow for individual variation)
    - identify errors
    - rank errors
    - remediation
    - communicate error correction strategies.

6. PREDICTIVE ANALYSIS METHODS

Computer simulation and optimization techniques have been applied widely in studies of sports and human movement to predict sports movement. Adrian and Cooper (2005) explained that researchers have combined the mathematical modelling of the anatomical characteristics of a living body with simulation techniques for the purpose of predicting performance achievements and developing new performance techniques. The general aim of work in this area is that, by using a computer model of a person or piece of equipment (the 'system') to predict changes which would occur in a movement as a consequence of alterations to the input parameters, answers are provided to such question as: 'what would happen to the movement if this factor were changed to...?'

7. SIMULATION PREDICTIVE ANALYSIS METHODS

Computer simulation is the use of a validated computer model (a set of mathematical equations describing the system of interest) to evaluate the response of the model to changes in the system parameters. Computer simulation has been used to evaluate the biomechanics of a wide variety of equipment and body movements, from an equally wide variety of approaches. It is beyond the scope of this writeup to list and comment on the approaches used and the systems modelled, but they vary from the consideration of the human body as a point mass representing the centre of gravity, to a simulation of 3D muscle mechanics and skeletal dynamics of the lower limb during walking and other movements. Most of the programmes are written specially for the system under consideration, although the use of generalized simulation packages, such as symbolic manipulation programs, is increasing (Van den et al., 2009). Schneider and Zemicke (2008) used a validated head-neck-torso model to simulate head impacts in soccer heading in order to estimate the injury risk. Critical output variables were the linear and angular acceleration of the head, and these were compared to standard head-injury tolerance levels. They concluded that head-injury risk can be reduced most effectively in all subjects by increasing the mass ratio between the head and the ball.

8. OPTIMIZATION AND OPTIMIZATION RESEARCH

Optimization is the interactive use of a computer simulation to determine parameter values or control variables which optimize (minimize or maximize) a specified criterion (the perform-acne objective). Optimization research may be categorized into two general procedures: parameter optimization and optimal control.

Parameter optimization refers to studies in which parameters are successively modified to produce optimal results, such as in the javelin study of Hubbard and Always (2007). Changes made in 2006 by the International Amateur Athletics Federation to the rules for the construction of the men's javelin prompted them to simulate the flight of the new javelin and determine the optimum release characteristics. As reported by Marshall et al. (2005), Hubbard and Alaways (2007) discovered that the range of the new javelin was decreased, and that it was less sensitive to release conditions when compared to the old one. They also showed that the optimal release conditions were velocity-dependent and concluded that 'the javelin throw has been changed from an event in which finesse and skill were important, to one for which strength and power are once again preeminent'. Gablonsky and Lang (2005) also modelled the basketball free throw shot in relation to the velocity and angle of the shot to the height of the player, to optimize performance.

Optimal control, on the other hand, refers to the technique of altering variables which control or determine the output of a system. Interpretation and appraisal of results from optimization studies are guided by the same considerations as for simulation studies, with the added need to evaluate the appropriateness of the performance objective.

9. MERITS OF COMPUTER SIMULATION OR OPTIMIZATION TECHNIQUES

The merits of using computer simulation and optimization include:

- The complete safety of the subjects
- Increased speed of assessing changes
- The potential for predicting optimal performance, and
- Reduced expense, compared to building physical models .

10. DEMERITS OF COMPUTER SIMULATION AND OPTIMIZATION TECHNIQUES

The demerits of using computer simulation and optimization include:

- The frequent need to simplify the 'real-world' system to make it amenable to modelling while attempting to maintain validity
- The expertise and computer power that are needed to develop and run the simulation/optimization model
- Difficulties with the translation of the results into practical terms.

11. CONCLUSION AND RECOMMENDATIONS

The analysis methods used in biomechanical studies include objective, subjective and predictive methods. The tools used in the study of biomechanics of sports movement help determine the types of analysis that are possible and the selection of tools depends on the types of measurements that are needed and their availability. Therefore, there is a need to ensure that appropriate tools are selected for a particular research analysis and the desire, type, precision and amount of data needed should dictate the selection of tools.

This paper would, thus, recommend that the tools for biomechanical analyses should be made readily available to sports scientists, especially with regard to the cost, so as to place quantitative and predictive analyses in a prominent place across the globe, rather than the current thrust in theoretical frameworks.

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STATUS OF PHYSICAL FITNESS OF COLLEGE GOING RURAL WOMEN OF WESTERN UP

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1. INTRODUCTION

Over the years, studies have found that staying physical fit can boost mind functioning and energy. Regular physical activity is vital for good physical and mental health. It helps improve your overall health and fitness.

Physical fitness is a state of health and wellbeing and more specifically, the ability to perform aspect of sports occupation and daily activity. Physically fitness is generally achieved through proper nutrition moderate vigorous exercise, and sufficient rest.

Women is the back bone of every family so it is important for every women to be physically fit for successfully run their daily schedule. Fitness is also important for all women regardless of their occupation .Whether pulling bucket from well, or cutting the crop from field, bending down to pick up children etc., women use large and small muscles throughout their bodies to do every day task, staying physically fit can aid in every moves made throughout the day.

In India most of women suffered from savior back pain, obesity, blood pressure, high cholesterol, diabetes and so on. The higher fitness women can protect their self from these problems than lower fitness women. There are so many physical fitness test are constructed to check their fitness level are;cooper's 12min.rin/walk test is available to test cardio endurance, standing broad jump test for explosive leg strength sit and reach test for flexibility etc. Through these test women can easily know their fitness status and can work out to achieve higher level of fitness.

The aim of study is to investigate the statusof rural college going women in physical fitness.

2. MATERIAL AND METHOD

A total of 50 college going women of 18-21 years were randomly selected as sample from different government colleges ofwesternUP .The data were collected with the assistance of coaches and assistant professors in Physical Education of various colleges. The tests used for the purpose of study included: 1.Cooper's 12min.run test for cardiorespiratory endurance, 2. 10*4 shuttle run test to measure the agility 3. Sit and reach test to measure the flexibility of the lower back 4. Standing Broad Jump Test to measure the explosive strength, and 5. 50m Sprint to measure the speed. The tests and purpose of the study were explained to the students. They were given sufficient time for warming up and readying themselves for testing. Tests were administrated in proper sequence. Only standard equipmentwas used for the tests. In this study descriptive and inferential statistic were used to analyze data. Means and standard deviations described physical fitness profiles of subject.

3. RESULT

Fifty college going women were investigated in this study. In relation to flexibility the observed mean, standard error, median, mode, standard deviation, sample variance, kurtosis, skewness, range, minimum value, maximum values are: 7.77; 0.35; 8;9;1.73;3.02; -0.65;-0.56; 6;4;10 respectively.

Table 1: Descriptive Measures related to Flexibility

Measures	Flexibility (in Cm.)
Mean	7.77
Standard Error	0.354
Median	8
Mode	9
Standard Deviation	1.73
Sample Variance	3.021
Kurtosis	-0.65
Skewness	-0.56
Range	6
Minimum	4
Maximum	10

In relation to standing broad jump the observed mean, standarderoror, median, mode, standarddeviation, samplevariance, kurtosis, skewness, range, minimum

value, maximum values are:1.63; 0.04; 1.55; 1.550, 196; 0.038; 1.00; 0.61;0.6;1.4;2 respectively.

Table 2: Descriptive Measures related to standing broad jump

Measures	SBJ (in Mts.)
Mean	1.63
Standard Error	0.040
Median	1.55
Mode	1.55
Standard Deviation	0.196
Sample Variance	0.038
Kurtosis	-1.00
Skewness	0.61
Range	0.6
Minimum	1.4
Maximum	2

In relation to speed the observed mean, standard eroror, median, mode, standard deviation, sample variance, kurtosis, skewness, range, minimum value, maximum values are:9.86;0.10;10;0.50;0.25:-0.57;-0.054;1.7;9;10.7 respectively.

Table 3: Descriptive Measures related to Speed

Measures	Speed (in Sec.)
Mean	9.86
Standard Error	0.10
Median	10
Mode	10
Standard Deviation	0.50
Sample Variance	0.25
Kurtosis	-0.57
Skewness	-0.054
Range	1.7
Minimum	9
Maximum	10.7

In relation to endurance the observed mean, standard eroror, median, mode, standard deviation, sample variance, kurtosis, skewness, range, minimum value, maximum values are:2031.25; 70.44; 2025; 1800; 345.093; 119089.67; -0.44; -0.129; 1300; 1400; 2700 respectively.

Table 4: Descriptive Measures related to Endurance

Measures	Endurance (In Mts.)
Mean	2031.25
Standard Error	70.44
Median	2025
Mode	1800
Standard Deviation	345.093
Sample Variance	119089.67
Kurtosis	-0.44
Skewness	-0.129
Range	1300
Minimum	1400
Maximum	2700

Table-3

Descriptive Measures related to Agility

In relation to agility the observed mean, standard eroror, median, mode, standard deviation, sample variance, kurtosis, skewness, range, minimum value, maximum values are:13.06; 0.177; 12.85; 13;0.871 ;0.759; 0.593; 3; 12; 15 respectively

Measures	Agility (in seconds)
Mean	13.06
Standard Error	0.177
Median	12.85
Mode	13
Standard Deviation	0.871
Sample Variance	0.759
Kurtosis	-0.723
Skewness	0.593
Range	3
Minimum	12
Maximum	15

4. DISCUSSION

The aim of present study was to investigate the status of physical fitness of college going rural women of western up. In flexibility, as per the norms of www.Topendsports.com all the subjects were lie in the category of average. Since the average score of flexibility was found 7.77.

There is need to improve the flexibility of rural college going women of western up. Though flexibility is inborn gift, but some extent they can improve it after doing regular flexibility exercises to achieve the level of excellent.

In explosive leg strength the status of rural college going women was lie on below average level, according to standard norms of www.Topendsports.com. Since the average score were found in the study was 1.63m.Here also they need to improve their explosive leg strength after engaging in some leg strengthening exercises like squats, leg press etc.

As per the norms of www.Topendsports.com.the subjects conside on speed is at below average level, but the average

score were 9.86sec. To achieve the target of excellent, the subjects need to do hard work on their speed factor.

In endurance the subjects lie in the category of average as per the norms of cooper's 12 min. run /walk test since the average score was found 2031.25.

Rural Women of 18 to 25 age group should engage themselves in endurance activity to achieve level of excellent.

According to the standard norms of agility drawn by NSCA"sGuide to programme design published by Funny Kinetics, all subjects coside on excellent category, since the result was found 13.06.among all fitness variables rural college going women age 18 to 25 is found best in Agility.

5. CONCLUSION

- Regarding flexibility the average score were found 7.77 with range of 6.
- In explosive leg strength or standing broad jump test the average score were 1.63mwith the range of 0.6.
- The average speed of rural college going women was found 9.86 with the range of 1.7sec.
- Endurance or cardio respiratory endurance of rural college going women in average was found 2031.25 with the range of1300m.
- Regarding the agility status of rural college going women in average was found 13.06 with the range of 3

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PROMOTING HEALTH AND FITNESS

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1. INTRODUCTION

The most widely accepted definition of health is that of the world health organization. It states health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity (World Health Organisation 1946). In more recent years, this statement has been amplified to include the abililty to lead a "socially and economically productive life. Some argue that health cannot be defined as a state at all, but must be seen as a dynamic process of continuous adjustment to the changing demands of living. The most solid aspect of fitness that fit firmly in the realm of medicine are the environmental health, nutrition, disease prevention and public health matters that can be investigated and assist in measuring well-being.

2. DISCUSSION

Regular sports and exercise protect against many physical and psychological illness. However, most of the Indian population do too little exercise. At the same time, Indians are more active than in previous years, with more and more people getting involved in exercise and sports.

More specifically, key factors that have been found to influence whether people are healthy and fit, include the following:

- Income and social status- High income and social status have a positive influence on health and fitness because such families can avail nutritious food, treatment, vaccinations etc.
- Social support networks- A person with strong social network is usually healthy and fit. It also provides strong emotional support which enhances health and fitness.
- Education and literacy- Education and literacy provides knowledge about health and hygiene and this contributes to health and fitness.
- Employment / working condition- Employment and good working condition contributes to stress-free life and freedom from disease causing elements. This is again related to health and fitness.
- Social environment- Stress-free, safe and healthy social environment contribute to health and fitness.
- Physical environment- Healthy physical environment and absence of disease-causing elements in physical environment is related to health and fitness.
- Personal health practices and coping skills- Personal health practices include hygiene, exercises etc and coping with the stress and tension is also responsible for health and fitness.
- Healthy child development- A child who is reared in a healthy way like hygienic conditions, vaccinations, nutritious food etc enjoy a better health and fitness.
- Biology and genetics- Hereditary traits like good physical and mental health canbe transmitted rto future generations ensuring their health and fitness.
- Gender- Females are generally physically weak and after childbirth, their health further deteriorates.
- Culture – Humans of certain culture enjoys better health than that of others.

Advantages of health and fitness:

- Being healthy and fit helps in controlling weight.
- It helps in combating with health disorders and seasonal problems.
- It helps in improving mood and boosts energy level.
- It promotes better sleep every night without negative thoughts.
- It regulates cardiovascular and metabolic health.
- It promotes bone strength.
- It promotes mental health.
- It provides longevity without ageing problems.
- Being healthy and fit reduces the risk of cancer.

Proven ways to promote physical health and fitness:

- *Exercise regularly*- Exercise is any bodily activity that enhance or maintains physical fitness and overall health and wellness. It is performed for many reasons including strenghtening muscles and the cardiovascular system, having athletic skills, weight loss or maintenance and mental health including the prevention of depression. Frequent and regular exercise boosts immune system and helps prevent the "disease of affluence" such as heart disease, cardiovascular disease, Type 2 diabetes mellitus and obesity.
- *Don't smoke*- Smoking is bad for just about every aspect of physical health. It is especially damaging to

the lungs, it also increases the risk of heart attacks, strokes and various forms of cancer. Many tobacco-related diseases, such as chronic obstructive pulmonary disease, can cause difficult symptoms for years.

- *Get enough sleep*- Studies have found that chronic sleep deprivation is linked to increased cardiovascular disease, increased level of inflammatory blood markers and decreased immune function. Being sleep-deprived also causes fatigue, which can make it hard to be physically active (and is bad for mood too).
- *Avoid chronic stress*- Feeling chronically stressed has been linked to physical health problems such as cardiovascular disease, insulin resistance and decreased immune function. Research suggest that this maybe because stress can accelerate "cellular ageing" and also may promote inflammatory markers in the body.
- *Maintain a healthy weight*- Obesity is a major risk factor for disability in late life. Obesity usually defines as having a body mass index (BMI) of 30 or more worsens arthritis. It's also been linked to many health problems such as cardiovascular disease, diabetes and glucose intolerance, certain types of cancer and sleep relates breathing disorder.
- *Eat a healthy diet*- We know that for many people, the way they eat can affect certain aspects of physical health. A healthy diet is one that doesn't provoke negative health effects, such as being prone to take on extra weight, develop insulin resistance, develop artherosclerosis or have uncomfortable symptoms in the belly or bowels.
- *Tinker with your nutrition or your microbiomes*- Recent research suggest that a person's health can be significantly influenced by the bacterial community (the microbiome) we all carry within our guts and in our body. The microbiome itself seems to be influenced by one's diet as well as other factors.

Students interested in promoting health enjoy professional opportunities that serve a variety of populations. The most visible opportunities are in corporate/worksite settings or are connected to clinical settings (hospitals, health maintenance organizations and sport medicine centres). Many programs and opportunities are also available in the private sectors (health clubs, fitness chains and private health promotion/fitness businesses), community agencies (municipal parks and recreation, YMCA/YWCA, voluntary health agencies), and government agencies (local, state and federal health agencies, military and law enforcements). Students may elect to pursue special certification as a certified health education specialist (CHES) and/or pursue graduate degrees in health promotion or related fields of study such as public health, physical therapy, nursing or nutrition. A multitude of opportunities exist for students to gain on-the-job learning experiences in a wide variety of settings.

Careers:

- Health promotion/health education-specialist in worksite settings, community settings or voluntary or official health agencies.
- Worksite, corporate or community wellness direction.
- Patient educator in clinical/hospital settings.
- College/university professor.
- Public health programming.
- Personal trainer.
- Fitness coach.
- Fitness coordinator.
- Exercise specialist
- Fitness instructor
- Strength and conditioning specialist
- Strength coach
- Wellness coach

3. CONCLUSION

We cannot achieve success in our life without health and fitness. It may harm to a big extent if we ignore our physical and mental health and fitness. In order to get great results in all areas of our life, we need a healthy and active body as well as a sound mind. There are only few people having both, physical and mental fitness. This is why because only few people know the real advantages of good health and fitness. The person who is more fit has more energy and patience to tackle with problems in life. Health and fitness gives energy which improves confidence level to complete a task. Good health and fitness gives a self-replenishing energy which help us in achieving the goal with required energy level.

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YOGA AND TOURISM IN INDIA : A CONCEPTUAL STUDY OF NORTH INDIA

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ABSTRACT

A generally accepted idea by the foreigners is, that India is a land of billions of people, of millions of gods, of great variety of religions, of enormous number of temples, of philosophers and Sadhus or saints, of festivals and fares, of deserts and hills, of cows and snakes etc. etc. India is a country which is world renowned for being a spiritual one and also as birthplace of yoga and meditation. India is a perfect destination for yoga and meditation. One can avail kinds of therapies and treatments to rejuvenate oneself. India is as much known for Yoga & Meditation as it is known for its Taj Mahal and tigers of Ranthambore. India is a natural choice because it is a leader in Ayurveda, Yoga and Meditation. From low costs asharms to a multiple star meditation retreats, India's holy cities promise what everyone wants today – thousands of years old recopies for eternal youth.

Keywords: History of Yoga, Cultural Impact, Cure, Economic Importance and Current Scenario.

1. INTRODUCTION

The word Yoga is derived from the Sanskrit root 'Yuj', meaning 'to join' or 'to yoke' or 'to unite'. It is essentially a spiritual discipline based on an extremely subtle science, which focuses on bringing harmony between mind and body. It is an art and science of healthy living. Yoga is a group of physical, mental, and spiritual practices or disciplines which originated in ancient India. Yoga is a Hindu spiritual and ascetic discipline, a part of which, including breath control, simple meditation, and the adoption of specific bodily postures, is widely practiced for health and relaxation.

2. HISTORY OF YOGA

The development of yoga can be traced back to over 5,000 years ago, but some researchers think that yoga may be up to 10,000 years old. Yoga's rich history can be divided into four main periods of innovation, practice and development.

Pre-classical: Period of pre-classical yoga was marked with the creation of Upanishads. There are many forms of pre-classsical yoga, but most of the initial yoga in this period was associated with vedic yoga. Pre –classical yoga consists of many techniques of deep meditations to surpass the body and mind and get connected with divine powers to discover the true self.

Classical: Yoga Sutra that standardized the classical yoga had been written by Patanjali around second century. The word 'sutra' means thread and here it means 'thread of memory'. Around 195 sutras make the eight fold path of yoga that consists of yama (ethnic values), niyama (personal observance of purity), asanas (physical exercise), pratyahara (preparation for meditation), dharana (concentration), dhyana (meditation) and samadhi (ecstasy).

Post-classical: Post classical yoga focused on all the schools of yoga that came into existence after the Patanjali yoga-sutra. Post-classical yoga, focuses on the ultimate unity of everything. Yoga took an interesting turn during this period in which hidden potential of the body were probed. It led to creation of hatha-yoga that is amateur version of present day yoga.

Modern: Modern yoga is believed to begin with the Parliament of Religion held in Chicago in 1893. There, the young Swami Vivekananda made a lasting impression on the American public. He then attracted the students of yoga and Vedanta. After him , another popular yoga teacher was Parmahansa Yogananda.

3. CULTURAL IMPACT

Yoga is spreading around the world. It has now become a global practice. The Beatles' trip to Rishikesh with Maharishi Mahesh Yogi in 1969 is a very famous example to showcase the weight India carries in a world which is

concerned not only about its mental and physical fitness but also about its spiritual growth and development. The celebrities of modern times, such as Mia Farrow, Oprah and British Royal Couple – Prince Charles and Camilla also flocked to Indian Yoga and Meditation retreats looking to immerse in their tranquility and change their lives forever.

4. HEALTH BENEFITS

- **Pain Reliever**: Yoga shows promise as a treatment for relieving certain kinds of chronic pain. Iyenger Yoga with a self-care exercise program among people with chronic neck pain, they found that yoga reduced pain scores by more than half.
- **Ray of light**: In a small study in 2007, UCLA researchers examined how yoga affected people who were clinically depressed and for whom antidepressants provided only partial relief. After eight weeks of practicing Iyengar Yoga three times a week, the patients reported significant decreases in both anxiety and depression.
- **Stay Sharp**: Asans, pranayams, and meditation helps your brain work better. Research has shown that part of cerebral cortex – an area of the brain associated with cognitive processing that becomes thinner with age- tend to be thicker in long term meditators, suggesting that meditation could be a factor in preventing age related thinning.
- **Younger-Looking DNA:** Recent studies suggest that yoga and meditation may be associated with cellular changes that affects the body's aging process. Each of our cell include structures called telomeres, bits of DNA at the end of chromosomes that gets shorter each time a cell divides. When telomeres get too short, the cells can no longer divide and they die. Yoga may preserve their length.
- **Immune Activity**: Yoga can fortify the body's ability to ward off illness. Breathing exercise alters the expression of dozens of immune-related genes in blood cells.
- **Your spine on yoga**: Vertebral disks of a group of yoga teachers were compared with scans of healthy, similar-aged volunteers. The yoga teacher's disks showed less evidence of the degeneration that typically occurs with age. Nutrient migrate from blood vessels through outer layer of the disk; bending and flexing may help push more nutrient through this outer layer and into the disks, keeping them healthy.
- **Healthy Heart**: Yoga and meditation may help reduce many major risk factors for heart disease; in fact studies concluded that yoga shows promise as a safe, effective way to boost heart health. Iyengar Yoga significantly cut the frequency of episodes of arterial fibrillation, a serious heart-rhythm disorder that increases the risk of strokes and can lead to heart failure.
- **Control Blood Pressure and Diabetes:** Yoga and meditation, by slowing the heart rate and inducing the relaxation response, may help bring blood pressure down to safer levels. Adults at risk of type 2 diabetes who did yoga twice for three months showed reduction in risk factors including weight and blood pressure.
- **Power Source**: Standing poses, inversions, and other asans challenge muscles to lift and move the weight of your body. Muscles respond by growing new fibers, so that they become thicker and stronger and maintain fitness and function throughout life.

5. MARKETING

Tourism in India has been rising since the 2002 'Incredible India' ad campain, which targeted higher-yield (red 'wealthier') tourists. Wellness travel includes Yoga and meditation as well as spa and massage experience to reduce one's stress and improve one's health holistically. Unsurprisingly, it is one of the fastest –growing wellness destinations of the world- with a projected growth rate of 22% per annum. The popularity of yoga is evident with the fact that when UN passed the resolution of celebration June 21 as the World Yoga Day in December 2014, all 193 countries of the world passed it unanimously, and as many as 177 countries co-sponsored it.

6. CURRENT SCENARIO

The modern day lifestyle is such where humans struggle with physical and physiological stress in their lives. People have realized up to the therapeutic benefits of this life science and now are making it a part of life. More than a discipline to stay fit and healthy, Yoga acts a link between an individual and his true inner self. Today's picture is very different. As yoga has become an increasingly integral part of 21st century life, scientists, armed with new tools that allow them to look ever deeper into the body, have been turning their attention to what happens physiologically when we practice yoga- not just asana but also pranayama and meditation. These physicians, neuroscientists, phychologists, and other researchers are uncovering fascinating evidence of how the practice affects us mentally and physically and may help to prevent and assist in the treatment of a number of the most common ailments that jeopardize our vitality and shorten our lives.

7. CONCLUSION

It is a great achievement for India that an art form of Indian origin is bringing together different continents, communities, nations and beliefs under a holistic belief. Be it a child or adult, young or old, everybody is practicing the postures and improving their way of life. More than a discipline to stay fit and healthy, Yoga acts as a link between an individual and his true inner self. This ancient science has brought time tested ways to treat stress and ailments gifted by the modern lifestyle. This is the main reason why people across the globe are resorting to yoga asanas, mudras and pranayama. This old Indian science is still relevant in serving the modern day world. The day chosen for Yoga day celebration. i,e, June 21st,

also hold special significance in many parts of the world. This is the longest day of the year in the Northern Hemisphere. So, time-wise, the day gives people across the world a perfect chance to practice Yoga in their space comfortably.

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A COMPARATIVE STUDY OF LONG TERM MEMORY AND BODY FLEXIBILITY AMONG YOGIC AND NON YOGIC GRADUATE STUDENTS

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1. INTRODUCTION

Undisturbed calmness of mind is attained by cultivating friendliness toward the happy, compassion for the unhappy, delight in the virtuous, and in difference toward the wicked. Yoga is another technique that involves elements of meditation and mindfulness. In Western cultures the practice of yoga is often used for fitness training, in which different physical poses are practiced in order to build strength and stretch the muscles of the body. However, there is more to yoga than the physical poses that are associated with the practice (Feurstein, 2003). As mentioned previously, yoga also includes elements of meditation where individuals focus on bringing awareness to their mental and physical state as well as concentrating on their breath. Yoga expands on meditative practices to not only bring moment-to-moment awareness to a person's mental state, but to create connections between the mind, body and spirit through concentration on physical poses, meditative states, and spiritual inquiry.

There are eight limbs of yoga, which illustrate the connection between mindfulness and the practice. Yoga techniques help to develop the power of concentration like a muscle by exercising it. If sufficient concentration can be developed the brain can pass from the emission of beta waves, associated with the everyday wakeful state and conscious attention, to the emission of alpha waves, associated with passive awareness, a relaxed state of mind and greater receptivity to the learning process. This is when optimum learning can take place. Visualizations can be very useful for the presentation or revision of certain topics. A mental trip to a vegetable garden exploring the senses of different fruits and vegetables will motivate them to write and to learn the vocabulary of this topic. It is during pauses between phases of deep attention, that the brain fixes knowledge just acquired .It has been scientifically proved that it is important to have pauses in learning sessions. When we stop talking to our students and presenting them with information, the brain continues to analyze the content of the given material. It is necessary to teach young people that to intersperse periods of work with periods of rest is the most efficient way to process information. Short relaxation, presented in different ways during a learning session, helps the brain to digest information.

The ability of an organism to record information about things or events with the faculty of recalling them later at will. In psychology memory is broken into the stage encoding stage and retrieval. Long term memories are all those memories we hold for longer periods of time. Long term memories are limitless and can last for quite some time. There are two primary categories of long term memories: declarative, also called explicit memories and non- declarative memories. Explicit memories are those of facts and events. The paradigm patient HM, Described below, was unable to acquire new explicit memories due to the hippocampus damage, however he was able to acquire new implicit memory that HM was able to acquire was to learn new procedural motor tasks, while he was unable to recall latest that he had learned them.

Flexibility or limberness refers to the absolute range of movement in a joint or series of joints, and length in muscles that cross the joints to induce a bending movement or motion. Flexibility varies between individuals, particularly in terms of differences in muscle length of multi-joint muscles. Flexibility in some joints can be increased to a certain degree by exercise, with stretching a common exercise component to maintain or improve flexibility[4].

Quality of life is enhanced by improving and maintaining a good range of motion in the joints. Overall flexibility should be developed with specific joint range of motion needs in mind as the individual joints vary from one to another. Loss of flexibility can be a predisposing factor for physical issues such as pain syndromes or balance disorders. Gender, age, and genetics are important for range of motion. Exercise including stretching often improves flexibility.

Many factors are taken into account when establishing personal flexibility: joint structure, ligaments, tendons, muscles, skin, tissue injury, fat or adipose tissue, body temperature, activity level, age and gender all influence an

individual's range of motion about a joint. Individual body flexibility level is measured and calculated by performing a sit and reach test, where the result is defined as personal flexibility score.

2. OBJECTIVE OF THE STUDY

The specific objective of the study was to compare the long term memory and body flexibility among yogic and non yogic graduate students of Swami Vivekanand Subharti University, Meerut, Uttar Pradesh.

Selection of Subjects: For the purpose of the study forty students from Swami Vivekanand Subharti University having age range between 18-25 years were selected. These subjects were randomly selected Twenty each from yogic graduate students and Non yogic Graduate students and further equality divided in ten male and ten female in each group.

Selection of Variables and Tools: Long term memory was assessed with the help of the questionnaire developed by B.B. Asthana and Body flexibility was measured by sit and reach test and recorded in nearest centimeters.

Statistical Technique: The data obtained for long term memory and body flexibility were analyzed by using the Mean, Standard deviation and Chi- Square.

3. RESULTS

Table 1: Comparison of Long Term Memory among Yogic and Non Yogic Male Graduate Students

Long Term Memory	Repetition (One time)	Repetition (Two time)	Repetition (Three time)	Repetition (Four time)	Total	X^2	Significant Difference
Yogic Male	3.1	3.5	3.9	3.1	13.6	11.34	Yes
Non Yogic Male	2.3	2.9	3.1	2.5	10.8		

df-3, significant level-0.05, table value- 7.815

The Yogic male and Non yogic male subjects were compared in relation to long term memory and the result was presented in Table 1.The average values of data pertaining to long term memory of yogic male graduate students from repetition one, two, three and four time were found 3.1, 3.5, 3.9, 3.1 respectively. Whereas the average values of data pertaining to long term memory of Non Yogic male graduate students from repetition one, two, three and four time were found 2.3, 2.9, 3.1, 2.5 respectively. The calculated chi-square value of 4x2 was found 11.34. The degree of freedom- 3, significant level at 0.05 and table value 7.815 is less than the calculated value. The significant difference was found in long term memory of Yogic male and Non yogic male, hence, the hypothesis number one is rejected. The long term memory of yogic male was found higher in comparison of non yogic male graduate students.

Table 2: Comparison of Long Term Memory among Yogic Female and Non Yogic Female Graduate Students

Long Term Memory	Repetition (One time)	Repetition (Two time)	Repetition (Three time)	Repetition (Four time)	Total	X^2	Significant Difference
Yogic Female	3.5	3.6	3.5	14.1	24.7	12.73	Yes
Non Yogic Female	2.5	2.6	2.7	2.9	10.7		

df-3, significant level-0.05, table value- 7.815

The Yogic female and non yogic female subjects were compared in relation to long term memory and the results were presented in Table 2. The average values of data pertaining to long term memory of yogic female from repetition one, two, three and four time was found 3.5, 3.6, 3.5 and 14.1 respectively. Whereas the average values of data pertaining to long term memory of Non yogic female from repetition one, two, three and four time was found 2.5, 2.6, 2.7 and 2.9 respectively. The calculated chi-square value of 4x2 was found 12.73. The degree of freedom 3, significant level at 0.05 and table value 7.815 is less than the calculated value. The significant difference was found in long term memory of Yogic female and Non yogic female, hence, Hypothesis number two is rejected. The long term memory of yogic female was found higher in comparison of non yogic female graduate students.

Table 3: Comparison of Long Term Memory among Yogic Male and Yogic Female Graduate Students

Long Term Memory	Repetition (One time)	Repetition (Two time)	Repetition (Three time)	Repetition (Four time)	Total	X^2	Significant Difference
Yogic Male	3.1	3.5	3.9	3.1	13.86	13.86	Yes
Yogic Female	3.5	3.6	3.5	3.5	14.1		

df-3, significant level-0.05, table value- 7.815

The Yogic male and yogic female subjects were compared in relation to long term memory and the result was presented in Table 3. The average values of data pertaining to long term memory of repetition one, two,

three and four time average value was found 3.1, 3.5, 3.9 and 3.1 respectively. Whereas the data of yogic female in relation to long term memory of repetition one, two, three and four time was found 3.5, 3.6, 3.5 and 3.5 respectively. The calculated chi-square value of 4x2 was found 13.86. The degree of freedom 3, significant level at 0.05 and table value 7.815 is less than the calculated value. The significant difference was found in long term memory of Yogic male and yogic female, hence, the hypothesis number three is rejected. The long term memory of yogic male was found higher in comparison of yogic female graduate students.

Table 4: Comparison of Long Term Memory among Non Yogic Male and Non Yogic Female Graduate Students

Long Term Memory	Repetition (One time)	Repetition (Two time)	Repetition (Three time)	Repetition (Four time)	Total	X^2	Significant Difference
Non Yogic Male	2.5	2.6	2.7	2.9	10.7	10.7	Yes
Non Yogic Female	2.3	2.9	3.1	2.5	10.8		

df-3, significant level-0.05, table value- 7.815

The Non yogic male and Non yogic female subjects were compared in relation to long term memory and the result was presented in Table 4. The average values of data pertaining to long term memory of Non yogic male repetition one, two, three and four time was found 2.5, 2.6, 2.7 and 2.9 respectively. Whereas the average values of data pertaining to long term memory of Non yogic female from repetition one, two, three and four time was found 2.3, 2.9, 3.1and 2.5 respectively. The calculated chi-square value of 4x2 was found 10.7. The degree of freedom 3, significant level at 0.05 and table value 7.815 is less than the calculated value. The significant difference was found in long term memory of Non yogic male and Non yogic female, hence, the hypothesis number four is rejected. The long term memory of Non yogic male was found higher in comparison of Non yogic female graduate students.

Table 5: Comparison of Effect of Body Flexibility on Long Term Memory among Yogic Male and Non Yogic Male Graduate Students

Body Flexibility Level	Category	1st	2nd	3rd	4th	Total	X^2	Significant Difference
High	Yogic Male	3	3.6	3.8	3	13.4	12.06	Yes
	Non Yogic Male	2.25	3.5	2.75	2.5	11.1		
Middle	Yogic Male	2.66	3.3	4	3	12.96	12.04	Yes
	Non Yogic Male	2	2.75	3.5	2.5	10.75		
Low	Yogic Male	4	3.5	4	3.5	15	13.43	Yes
	Non Yogic Male	2.5	3	4	1.5	11		

df-3, significant level-0.05, table value- 7.815

The effect of Body flexibility on Long term memory of Yogic male and Non Yogic male graduate students was compared at High, Medium and Low level which was presented in Table 5. The average values of collected data from yogic male graduate students of repetition one, two, three and four at High level were found 3, 3.6, 3.8 and 3. At middle level were 2.66, 3.3, 4, 3 and at low level 4, 3.5,4, 3.5 respectively. Whereas the average values of collected data from Non yogic male graduate students of repetition one, two, three and four at High level were found 2.25, 3.5, 2.75 and 2.5. At middle level were 2, 2.75, 3.5, 2.5 and at low level were found 2.5, 3, 4, 1.5 respectively.

The calculated chi-square value of 4x2 at high level, middle level and low level were found 12.06, 12.04, 13.43 respectively. The degree of freedom 3, significant level at 0.05 and table value 7.815 is less than the calculated value at high level, middle level and low level. The significant difference were found in the effect of Body flexibility on long term memory of Yogic male and Non yogic male graduate students at all levels, hence, Hypothesis number five is rejected. The effect of Body flexibility on long term memory of yogic male graduate students was found higher in comparison of non yogic male graduate students at all the levels.

Table 6: Comparison of Effect of Body Flexibility on Long Term Memory among Yogic and Non Yogic Female Graduate Students

Body Flexibility Level	Category	1st	2nd	3rd	4th	Total	X^2	Significance Difference
High	Yogic Female	3.6	3.6	3.6	3.6	14.4	11.20	Yes
	Non Yogic Female	2.4	2.2	2.8	2.2	9.6		
Middle	Yogic Female	3.33	4	3.33	3.66	14.32	13.50	Yes
	Non Yogic Female	3.5	3.33	2.33	3.33	12.49		
Low	Yogic Female	3.5	3	3.5	3	15	13.19	Yes

	Non Yogic Female	3	2.5	3	4	12.5		

df-3, significant level-0.05, table value- 7.815

The effect of Body flexibility on Long term memory of Yogic and Non yogic female was compared at High, Medium and Low level which was presented in Table 6. The average values of collected data from yogic female graduate students of repetition one, two, three and four at High level were found 3.6, 3.6, 3.6 and 3.6. At middle level were 3.33, 4, 3.33, 3.66 and at low level were found 3.5, 3, 3.5, 3 respectively. Whereas the average values of collected data from Non yogic female graduate students of repetition one, two, three and four at High level were found 2.4, 2.2, 2.8, 2.2. At middle level were found 3.5, 3.33, 2.33, 3.33 and at low level were found 3, 2.5, 3, 4 respectively.

The calculated chi-square values of 4x2 at high level, middle level and low level were found 11.20, 13.50, 13.19 respectively. The degree of freedom- 3, significant level at 0.05 and table value 7.815 is less than the calculated value at high level, middle level and low level. The significant difference was found in the effect of Body flexibility on long term memory of Yogic female and Non yogic female graduate students at all levels, hence, Hypothesis number six is rejected. The effect of Body flexibility on long term memory of yogic female graduate students was found higher in comparison of non yogic female graduate students at all levels.

Table 7: Comparison of Effect of Body Flexibility on Long Term Memory among Yogic Male and Yogic Female Graduate Students

Body Flexibility Level	Category	1st	2nd	3rd	4th	Total	X^2	Significance Difference
High	Yogic Male	3	3.6	3.8	3	13.4	24.31	Yes
	Yogic Female	3.6	3.6	3.6	3.6	14.4		
Middle	Yogic Male	2.66	3.3	4	3	12.96	13.74	Yes
	Yogic Female	3.33	4	3.33	3.66	14.32		
Low	Yogic Male	4	3.5	4	3.5	15	14.10	Yes
	Yogic Female	3.5	3	3.5	3	13		

df-3, significant level-0.05, table value- 7.815

The effect of Body flexibility on Long term memory of Yogic male and Yogic female graduate students compared at High, Medium and Low lavel which was presented in Table 7. The average values of collected data from yogic male graduate students of repetition one, two, three and four at High level were found 3, 3.6, 3.8 and 3. At middle level were found 2.66, 3.3, 4, 3 and at low level were found 4, 3.5,4, 3.5 respectively. Whereas the average values of collected data from Yogic female graduate students of repetition one, two, three and four at High level were found 3.6, 3.6, 3.6 and 3.6. At middle level were found 3.33, 4, 3.33, 3.66 and at low level were found 3.5, 3, 3.5, 3 respectively.

The calculated chi-square values of 4x2 at high level, middle level and low level were found 24.31, 13.74, 14.10 respectively. The degree of freedom - 3, significant level at 0.05 and table value 7.815 is less than the calculated value at high level, middle level and low level. The significant difference were found in the effect of Body flexibility on long term memory of Yogic male and yogic female graduate students at all levels, hence, Hypothesis number seven is rejected. The effect of Body flexibility on long term memory of yogic female graduate students was found higher in comparison of yogic male graduate students at high & middle levels- but the effect of body flexibility on long term memory of Yogic female graduate students was found lesser in comparison Yogic male graduate students at Low level.

Table 8: Comparison of Effect of Body Flexibility on Long Term Memory among Non Yogic Male and Non Yogic Female Graduate Students

Body Flexibility Level	Category	1st	2nd	3rd	4th	Total	X^2	Significance Difference
High	Non Yogic Male	2.25	3.5	2.75	2.5	11	10.26	Yes
	Non Yogic Female	2.4	2.2	2.8	2.2	9.6		
Middle	Non Yogic Male	2	2.75	3.5	2.5	10.75	11.76	Yes
	Non Yogic Female	3.5	3.33	2.33	3.33	12.49		
Low	Non Yogic Male	2.5	3	4	1.5	11	11.84	Yes
	Non Yogic Female	3	2.5	3	4	12.5		

df-3, significant level-0.05, table value- 7.815

The effect of Body flexibility on Long term memory of Non yogic male and Non yogic female graduate students was compared at High, Medium and Low label which was presented in Table 8. The average values of collected data

from Non yogic male graduate students of repetition one, two, three and four at High level were found 2.25, 3.5, 2.75, 2.5. At middle level were found 2, 2.75, 3.5, 2.5 and at low level were found 2.5, 3,4, 1.5 respectively. Whereas the average value of collected data from Non yogic female graduate students of repetition one, two, three and four at High level were found 2.4, 2.2, 2.8, 2.2. At middle level were found 3.5, 3.33, 2.33, 3.33 and at low level were found 3, 2.5, 3, 4 respectively.

The calculated chi-square values of 4x2 at high level, middle level and low level were found 10.26, 11.76, 11.84 respectively. The degree of freedom 3, significant level at 0.05 and table value 7.815 is less than the calculated value at high level, middle level and low level. The significant differences were found in the effect of Body flexibility on long term memory of Non yogic male and Non yogic female graduate students at all levels, hence, Hypothesis number eight is rejected. The effect of Body flexibility on long term memory of Non yogic male graduate students was found higher in comparison of Non yogic female graduate students at high levels. But the effect of Body flexibility on long term memory of Non yogic male graduate students was found lesser in comparison of Non yogic female graduate students at middle level and low level.

4. CONCLUSION

- The long term memory among Yogic and Non Yogic male graduate students was compared and found that the long term memory of yogic male graduate students was higher in comparison of non yogic male graduate students.
- The long term memory among Yogic and Non Yogic female graduate students was compared and found that the long term memory of yogic female graduate students was higher in comparison of non yogic female graduate students.
- The long term memory among yogic male and yogic female graduate students was compared and found that the long term memory of yogic male graduate students was found higher in comparison of yogic female graduate students.
- The long term memory among Non yogic male and Non yogic female graduate students was compared and found that the long term memory of Non yogic male graduate students was found higher in comparison of Non yogic female graduate students.
- The effect of Body flexibility on long term memory among Yogic male and Non Yogic male graduate students was compared and found that the effect of Body flexibility on long term memory of yogic male graduate students was found higher in comparison of non yogic male graduate students at all the levels.
- The effect of Body flexibility on long term memory among Yogic female and Non Yogic female graduate students was compared and found that the effect of Body flexibility on long term memory of yogic female graduate students was found higher in comparison of non yogic female graduate students at all levels.
- The effect of Body flexibility on long term memory among Yogic female graduate students and Yogic male graduate students was compared and found that the effect of Body flexibility on long term memory of yogic female graduate students was found higher in comparison of yogic male graduate students at high & middle levels, but the effect of body flexibility on long term memory of Yogic female graduate students was found lesser in comparison Yogic male graduate students at Low level.
- The effect of Body flexibility on long term memory among Non yogic male graduate students and Non yogic female graduate students was compared and found that the effect of Body flexibility on long term memory of Non yogic male graduate students was found higher in comparison of Non yogic female graduate students at high levels. But the effect of Body flexibility on long term memory of Non yogic male graduate students was found lesser in comparison of Non yogic female graduate students at middle level and low level.

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RESILIENCE AND SOCIAL LIFE : A STUDY YOGIC METHODS TO ENHANCEMENT OF RESILIENCE FOR SOCIAL LIFE

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ABSTRACT

The study was design towards analysis of clear understanding of resilience for people with different aspects. The study based upon the benefit of eight steps of yogic methods of resilience for social life. The study is based on available literature in terms of research paper, journals. Articles etc. result and findings suggest the role of yogic methods and their effect on enhancement of resilience for social life. The role of patanjali sutra to the enhance resilience and the role of resilience for improvement of social life of individual.

Keywords: Resilience, Yogic Methods, Social Life, Exercise.

1. INTRODUCTION

We are living in a world where we have to face many challenges in our daily life. Some time we overcome the situation and some we become fail. Success always brings many positive things to us, but the other side failure always takes us back toward two steps. Every people in this world daily face this kind of situation in their life. Some people who become fail to handle failure in their life, other side many people able to handle this kind of situation anyhow. The ability to handle this kind of situation in favor in known as resilience, where a person handle themselves from coming out to positive from failure.

Resilience is both the capacity of individuals to navigate their way to the psychological, social, cultural and physical resources that sustain their well-being, and their capacity, individually and collectively, to negotiate for these resources to be provided and experienced in a culturally meaningful way (Ungar, 2008). Resiliency is the ability to overcome challenges of all kinds–trauma, tragedy, personal crises, plain 'ole' life problems–and bounce back stronger, wiser, and more personally powerful. Resilience is The current theoretical understanding of resilience points towards an ecological model and the adaptation of bio-, micro-, meso-, exo- and macro systems as opposed to changes only at the individual level (Ungar, Ghazinour, & Richter, 2013). It also requires an appreciation of the multiple reciprocal relationships among elements of the individual's environment (Lemoine, 2014).

The literature demonstrate that resilience focused on the building child or adolescent's social, emotional or personal competence were efficacious for building resilience at the level of individual. For the specific at-risk group of youth in foster care, helping them to define their own outcomes and contribute to the development of the services they receive can build self-esteem and self-efficacy, and in turn build resilience.

Research demonstrate that early childhood experiences from environment can provide a conducive environment for developing resilience for individual like overcome the situation.

Research demonstrate that early childhood experiences from environment can shape the development of resilience factors for individuals such as coping and problem-solving skills in the face of adversity. Research demonstrates that early social experiences can influence gene expression in the developing brain, contributing to the idea. At family level, social relation with others create great impact on improving resilience. Effective interventions included family-centered concepts such as positive parenting training, family management, bonding and parent-child communications (Davies, Thind, Chandler, & Tucker, 2011).

In our modern world, it is widely understood and accepted that the practice of yoga makes us feel good. Many people practice yoga on various place and summed it up to feeling stretched out and relaxed. Many people don't know that

that feeling is a result of the fact that they spent an hour consciously breathing, accessed and hit the calm button on their nervous system, and released tension and stress from their bodies and minds through a combination of breath paired with physical postures (Ambassador, 2016).

In the other part of the study yogic methods act as intervention program. Research and findings suggest that yoga directs the individual to adopt humane values and virtues (yama and niyama). Yoga entails daily nurture by introducing: physical exercise and movement; breathing exercises; relaxation and meditation. Yoga practice nurtures a healthy lifestyle, as well as the "cleanliness" of body, mind and psyche. Yoga represents a multidimensional practice which can be adapted to suit the needs of each individual (Wahbeh et al, 2008). The potential benefits yoga can bring to many areas of medicine are causing ever-growing interest. Yoga meditation can be a reliable instrument for reducing stress in both men and women – a kind of "gym for the mind". During yoga practice, key changes unfold within areas of the brain responsible for attention, learning and regulating emotions. Yoga meditation was proven to be successful in reducing depression and anxiety, as well as in treating pain experienced by specific clinical population. There is an increase in the number of studies pointing to the significant contribution yoga practice has made when dealing with various chronic medical conditions, including chronic lumbar pain, osteoarthritis, rheumatoid arthritis, hypertension and asthma (Vallath,2010; Petrović, 2016).

Literature approved that most yoga programmes counter against stress and calm down the nervous system from stress full event. Research explore that yoga helps a person to reorganize themselves from negative situation to positive. While this is effective and beneficial, there is another component of yoga which focuses on enhancing performance on the job, in relationships, and in life in general. This is what we refer to in the Yoga for First Responders (YFFR) approach as resiliency (Ambassador, 2016).

In the light of evidence review says that the eight steps of patanjali can be a strong support to patients in overcoming pain or negative situations. Research concerning the adequate application of yoga methods with the goal of producing positive influence on the level of pain perception and modulation is yet to be undertaken (Petrović, 2016).

2. OBJECTIVE OF THE STUDY

- The present study was conducted to find out the path of yoga for modern life style within the context of new era.
- The present study will also provide a layout with the support of available literature, for coping-up with resilience for individual or group.

3. METHODS

Research methodology

The study was design to identify role and effect of yogic exercise for improvement of resilience for social life laid upon various available research literatures. The various kind of challenges for resilience-Trauma, tragedy, personal crises, and life problems. We provide examples of evidence-based interventions, including those with demonstrated cost-effectiveness. Informed by these data, we make recommendations for the practice of adolescent medicine and further research focused on physician involvement in strengthening family and community resilience and social capital to improve the lives of young people (Davies et al., 2011).

Fig. 1 : Eight steps of yogic methods (Petrović, 2016)

Research concerning the adequate application of yoga methods with the goal of producing positive influence on the level of pain or negative situation perception and modulation is yet to be undertaken (Petrović, 2016).

This study is evidence for yogic method to enhancing resilience for better social life. And provide support to individual.

Procedure of data collection and analysis
This present study is resulting of reviewing of available literature about yogic methods, and resilience. Data was collected from various research papers, journals, books and other source of literature and compiling after analysis for present study. The available literature act as example of evidence for present study, and provide a base.

4. RESULT AND DISCUSSION

This study supported by examples of evidence based review. Resilience is much more demanding aspect to all individuals. On the basis of reviews and literature, yogic methods are provide help and support to an individual for overcome and get exit from the negative situation.

5. CONCLUSION AND RECOMMENDATION

On the basis of findings, it is concluded that resilience is more than that demand, which we are expecting now a days in social life and society. The help and support of yogic methods boost the ability of resilience for individuals. Resilience can improve the life in better ways after negative situations for an individual. The individual can recover quickly from bed situation to good, and get engage back themselves in society. The resilience can quickly heal the wounds of negative time and improve social life of individual (Ambassador, 2016)(Ungar et al., 2013). Resilience helps a person to get social again and get healthy environment around themselves. Resilience can rebuild a person for complete their task.

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EFFECT OF PRANAYAMA ON GENERAL ENDURANCE OF RURAL AREAS BOYS

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ABSTRACT

The aim of the present study was to study the "Effect of Pranayama on general endurance. On regular practice of pranayama enables human being to have a control over his breathing pattern. Such practice certainly increases general endurance of boys being and helps to understand his or her breathing pattern which can be implemented on the ground. The pranayama practice is very essential for general being as well as sportsmen i.e. long distance runners and cyclists as it improves general endurance. For the study was conducted on 60 male boys age between 16 to 18 years of Block Machhra (District Meerut ,(U. P) data was analyzed with the help of Mean and Standard deviation and t-test to see the effect of Anulom Vilom Pranayam programme, the level of significant chosen to the test the hypothesis was at .05. The grouping of subjects into control and experimental were done with equaling their pre test performance the selected physical fitness variable (Endurance).

It was observed that there was significant difference in relation experimental group and control group.

Keywords: Yoga, Pranayama, Anulom-Vilom, Physical Fitness, Endurance.

1. INTRODUCTION

The great Indian seer Patanjali (200 BC) has compiled and codified the knowledge regarding yoga. Yoga means the experience of oneness or unity with inner being. This unity comes after dissolving the quality of mind and matter into the supreme reality. It is a science by which the individual approaches truth, the aim of all yoga practice is to achieve truth where the individual soul identifies itself with the supreme soul of god.

2. PATANJALI DEFINED PRANAYAMA

Pranayama means control and regulation of breathe. "prana" is a Sanskrit word which means 'Vital force'. It also signifies 'life' or breathe. Ayam means the control of the prana so prananyama means the control of the vital force (prana) by concentration and regulated breathing. The science of pranayama deals with the knowledge, control and enrichment of this vital force which results in rhythmic respiration, calm and alert state of mind. As a deep breathing technique, pranayama reduces dead space ventilation and decreases work of breathing. It also refreshes air throughout the lungs, in contrast with shallow breathing that refreshes air only at the base of the lungs. For fitness variable Endurance we can choose Anulom and Vilom Paranayam **(Anulom Vilom** Pranayam is an alternate breathing technique. Close your eyes. Breathe in from left nostril closing right nostril with thumb and breathe out from right nostril closing left nostril with ring finger and middle finger.)

3. TECHNIQUES ANULOM VILOM

Sit comfortably in any meditative posture. Sit erect keep the left hand on the left knee in gyan mudra. Fold the index and middle fingers of the right hand to touch the palm. Close the right nostril with the right thumb. Exhale through the left nostril and immediately inhale forcefully. Quickly open the right nostril by closing the left nostril and repeat the procedure. Keep repeating this pattern quickly gradually increasing the speed of inhalation and exhalation. Simultaneously contract and export the abdominal muscles and slowly return to the initial.

Meaning of Endurance: Endurance is the ability of an organism to exert itself and remain active for a long period of time, as well as its ability to resist, withstand, recover from, and have immunity to trauma, wounds, or fatigue

4. METHODOLOGY

The study was conducted on 60 male boys age between 16 to 18 years of Block Machhra, (District Meerut (U. P) data was analyzed with the help of Mean and Standard

deviation and t-test to see the effect of Anulom-vilom Pranayam programme, the level of significant chosen to the test the hypothesis was at .05. The grouping of subjects into control and experimental were done with equaling their pre test performance the selected physical variable (Endurance).

5. EXPERIMENTAL DESIGN

The subjects were selected for the studies were divided into experimental group and control group according to equaled group design. The experimental group was imparted thirty minutes of daily training of Anulom-Vilom Pranayama for six week under the proper supervision and guidance of the investigator while no training was imparted to control group. At the end of six weeks training, post test was conducted for the groups.

6. ANALYSIS AND INTERPRETATION OF DATA

Table 1.1: Significance Difference between Control and Experimental Group before (Anulom-VilomPranayama) Training Programme

Variable	Group	N	Mean	S.D	S.Ed.	t-ratio	Level of significance
Endurance	Control	30	12.40	6.40			
	Experimental	30	12.20	8.30	1.91	0.41	Not sig.

** Significant difference at .05 level of confidence.*

Table 1.2: Significance Difference Between Control and Experimental Group after (Anulom-Vilom Pranayama) Six WeeksTraining Programme

Variable	Groups	N	Mean	S.D	S.Ed.	t-ratio	Level of significance
Endurance	Control	30	67.47	8.25			
	Experimental	30	67.27	8.19	2.12	0.09	Not Sig.

** Significant at .05 level of confidence.*

7. RESULTS AND DISCUSSION

The t-test was used for finding the effect of Anulom-Vilom Pranayama on male students of college. It was observed that there was significant difference in relation experimental group and control group. More over the duration of training period was six weeks might be too short periods for bringing any significant change in Endurance capacity.

8. CONCLUSION

It was observed that there is significant difference in Endurance capacity relation to experimental group and control group.

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ROLE OF YOGA IN EDUCATION

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ABSTRACT

Yoga not only provides techniques for the growth of human beings from their animal level to heights of perfection, it carves out a way of life for them. Yoga way of life is characterized by peace and tranquility, harmony and health, love and happiness, precision and efficiency. The drive for such a way of happy life is not an indiscriminate instinctive drive of an animal-man. The drive is featured by discrimination, right understanding of happiness and harmony and a calculated adoption of a suitable value system congenial to the accomplishment of increasing happiness. The drive and the norms are prescribed by the Universal law.

We need education to understand the value of education and subsequently future education. Since values are caught rather than taught, it is imperative to devise other meaningful and pragmatic strategies to help in personal evolution, embracing all aspects of existence. There is no concentrated effort made anywhere to bring about internal change in an individual. Anything good must sprout from inside so that the external body can reflect the beauty of it in all its glory. This harmony between inner and external process is termed as 'Spiritual Civilisation'. We need to catch them young by physical deviations like games, Yoga, dance, gymnastics which helps them to inculcate values in their lifes. Academics and Co-curricular Activitiesboth help in teaching values. Meditation, Value Based Education, Music, Self analysis, Positive affirmations and Resolutions help in improving our character. The learned have only read the books.The practical man has tasted the spirit of the books, hence the "learned teachers" are like sign posts by the road, to tell us where the road leads to. The present generations are more for material benefits than spirituality which is mistook as a cup of tea for saint or guru's, hence the proper balance between the materiality and spirituality should be arrived which can be done with the help of Yoga

Keywords: Role of Yoga in Education

1. INTRODUCTION

Yoga: meaning

The term Yoga has its verbal root as Yuj in Sanskrit. Yuj means joining (Yujyate anena iti Yogah). Yoga is that which joins. What are the entities that are joined? In the traditional terminology it is joining of the individual self with the universal SELF. It is an expansion of the narrow constricted egoistic personality to an all pervasive, eternal and blissful state of REALITY.

Pātañjala Yoga is one among the six systems of Indian philosophy known as Ṣaḍdarśanas. One of the great Rishis (Seer), Patañjali, compiled the essential features and principles of Yoga (which were earlier interspersed in Yoga Upaniṣads) in the form of 'Sūtras' (aphorisms) and made a vital contribution to the field of Yoga, nearly 4000 years ago (as dated by some famous western historians). According to Patañjali, Yoga is a conscious process of gaining mastery over the mind field (The Citta).

The scope of Yoga as portrayed in the Bhagavadgītā and Upaniṣads is far more comprehensive. As Swami Vivekananda puts it "It is a means of compressing one's evolution into a single life or a few months or even a few hours of one's bodily existence". In general, there is a growth process due to interactions with nature in all creation. But it may take thousands and millions of years for this natural growth; that is the long, instinctive way in animals. Manas, endowed with discrimination power, conscious thinking faculty, the intellect (Buddhi) and well-developed voluntary control systems, aspires to accelerate his growth. Yoga is that systematic conscious process which can compress the process of man's growth greatly.

Sri Aurobindo emphasizes on all-round personality development; at the physical, mental, intellectual, emotional and spiritual levels. He means by Yoga a methodical effort towards self-perfection by the development of the potentialities latent in the individual. It is a process by which the limitations and imperfections can be washed away resulting in a Super human race.

Thus, Yoga is a systematic process for accelerating the growth of an individual in his or her entirety. With this growth, one learns to live at higher states of consciousness. Key to this all-round personality

development and growth is the culturing of mind.

2. DEFINITIONS OF YOGA

Yoga – mastery over the mind

As mentioned earlier, Patañjali defines Yoga in his second aphorism – Yogaśchittavṛtti nirodḥ (Yoga Sūtra: 1.2). Yoga is the control, the modifications and operations of the mind-field. Yoga is a process of gaining control over the mind. Control involves two aspects – a power to concentrate on any desired subject or object and a capacity to remain quiet for quite some time. All of us have been developing the first aspect namely concentration. Rarely, the second capacity of man, to remain calm and silent, has been harnessed. Hence, Yoga mainly emphasizes, this second aspect. In Yoga-Vāsiṣṭha, one of the best texts on Yoga, the essence of Yoga is beautifully portrayed thus, 'manaḥ praśamanopāyaḥ Yoga ityabhidhīyate' – Yoga is called a skilful technique to calm down the mind. It is an (Upāyaḥ), a skilful subtle process and not a mechanical gross effort to stop the thoughts of the mind.

Yoga is a physical, mental, and spiritual practice or discipline which originated in India. There is a broad variety of schools, practices and goalsin Hinduism, Buddhism and Jainism.The best-known are Hatha yoga and Rāja yoga.

In Vedic Sanskrit, yoga (from the root yuj) means "to add", "to join", "to unite", or "to attach" in its most common literal sense. By figurative extension from the yoking or harnessing of oxen or horses, the word took on broader meanings such as "employment, use, application, performance" All further developments of the sense of this word are post-Vedic. More prosaic moods such as "exertion", "Endeavour", "zeal", and "diligence" are also found in Indian epic poetry.There are very many compound words containing yoga in Sanskrit. Yoga can take on meanings such as "connection", "contact", "union", "method", "application", "addition" and "performance". In simpler words, Yoga also means "**combined**".

For example, guṇáyoga means "contact with a cord"; chakráyoga has a medical sense of "applying a splint or similar instrument by means of pulleys"; chandráyoga has the astronomical sense of "conjunction of the moon with a constellation"; puṃyoga is a grammatical term expressing "connection or relation with a man", etc. Thus, bhaktiyoga means "devoted attachment" in the monotheisticBhakti movement. The term kriyāyoga has a grammatical sense, meaning "connection with a verb". But the same compound is also given a technical meaning in the Yoga Sutras, designating the "practical" aspects of the philosophy, i.e. the "union with the Supreme" due to performance of duties in everyday life.

In action, Yoga is a special skill which makes the mind reach its subtler state: 'Yogaḥ karmasu kauśalam' (Gītā 2.50). Yoga is dexterity in action. The dexterity is in maintaining relaxation and awareness in action. Relaxed action is the process. Efficiency in action is an outcome. Thus, Yoga is a skilful science of gaining mastery over the mind. Yoga is popularly known as a process or a technique to reach the ultimate state of perfection. However, Yoga is sometimes defined even as the states of higher powers and potentialities and even as ultimate state of SILENCE. Further Yoga is also described as the power of all creative endeavors and creation itself. We will now see how Yoga is described as a state and a power in various Yoga and Upaniṣadic texts.

Yoga – a state

A person leaps into higher states of consciousness and learns to stay and act tuned to these states. Yoga often refers to these subtle layers of the causal states of our mind,

Yogasthaḥ kuru karmāṇi saṅgaṁ tyaktvā dhanañjaya Siddhyasiddhyoḥ samo bhūtvā samatvaṁ Yoga ucyate. (Gītā 2.48)

Perform action, 0h, Dhanañjaya, being fixed in Yoga, renouncing attachments and staying even minded in successes or failures. Evenness is verily Yoga.

Thus, the subtle state of mind featured by 'Steadiness' is referred to as Yoga. Yoga is a state of great steadiness at emotional level; balance of concentration and detachment at mental level and homeostasis at body level. It integrates the personality by bringing body-mind coordination in a well-balanced way.

Thus, Yoga is:

- A process for elevating oneself through calming of mind,
- Also the very states of higher, subtler layers of mind, and
- Conceived as a creative power in man and that of the reality itself.

Objective:

Yoga has five principal meaning:

- Yoga as a disciplined method for attaining a goal.
- Yoga as techniques of controlling the body and the mind.
- Yoga as a name of one of the schools or systems of philosophy (darśana).
- Yoga in connection with other words, such as "hatha-, mantra-, and laya-," referring to traditions specialising in particular techniques of yoga.
- Yoga as the goal of Yoga practice.

3. BENEFITS OF YOGA IN EDUCATION

1. Self- Education (education of self-realization)

Yoga renders self-education. Yoga is nothing but the education of self-awareness. Yoga teaches how to live with wisdom, not with the worldly orientations. Present education system causes orientation towards external world to such an extent that one gradually starts losing the awareness of his being i. e. self-awareness.

2. Pursuit of the Transcendental State of Psyche
The paramount aim of Yoga system is the pursuit of the transcendental state of psyche i.e. Nidhidhyasana, assumed as an essential aspect of the ancient Indian system of study and education. Samadhi leads to the Nididhyasana state which further escorts the wisdom. Here one thing should be clear that the path for transcendental state of psyche is a continuum, as mentioned in the Yoga-Sutra (2/27), not an "all or none" phenomena, as it is commonly understood.

3. Development of General Awareness (Attention Vs Awareness)
The objectives of Yoga, besides causing physical, mental and spiritual unfoldment in an individual, are also the inculcation of social and ecological awareness within oneself.

4. Promotion of Uniqueness
While discussing the role of Yoga in education, the individual difference and uniqueness of a person should be given due place. When supreme consciousness is reflected through the individual uniqueness of sundry souls, it gives an exclusive pleasure and vividness in the creation. Otherwise the world will be monotonous. Yoga believed in the uniqueness of the individual soul, that's why in Yoga, many a paths and practices were prescribed for aspirants for their spiritual development.

5. Unfoldment of Creative Consciousness
Eventually the practice of Yoga may make one self-centered and introverted. This is not always a good direction. There is a difference between yoga and spirituality. In spirituality we are centered on internal aspect of our existence but really in yoga, to attain the internal bliss, peripheral aspects of life are not neglected. In yoga we start with discipline of the peripheral aspect and then with the help of peripheral aspects we proceed for getting internal development. Creativity is the fragrance of internal development. As one's inner-self effloresces, one starts emitting some goodness in his surrounding, in the things present around him.

6. Promotion of Will Power and Perseverance
The path of Yoga is a life-long pursuit in the development of psyche. It needs sincere practice of Eightlimbic system of Yoga starting with the practice of abstinence and observance (Yama and Niyama), including the yogic exercises of postures and breathing practices and finally leading to the meditation. Without inclusion of ethical values and virtue, the agile tendencies may create tension and cause hindrances in the perfection of Dharana that requires a determination for compliance of ethical and spiritual values.

7. Treatment of Physical Difficulties
From the period of later Upanishads and Yoga-Samhitas, it was duly emphasized that the practice of yogic postures and yogic breathing, in addition to mental and ethical disorders are also able to alleviate physical pains and problems.

Efficacy of Yogic Therapy in Treatment of Various Physical Difficulties:

- Effect on Musculo-skeletal System
- Effect on Respiratory System
- Effect on Cardiovascular System
- Effect on Neuro-Endocrine System

8. Management of Stress Disorders
Stress can be controlled by recommended Yogic technique. The Yoga along-with recommended Yogic diet, reduces tension. The practice of Pratyahara controlling the activities of senses, at both internal and external levels, manages the stresses of personal life and brings composure. The meditation on respiration, as in Vipasana of Bauddha system, was found to modify the state of mind.

4. CONCLUSION

One may want to see if the attentional effects of yoga are still present several days or weeks after the yoga has ended and determine the duration of the effects. It has been mentioned that physical activity has an effect on attention. Yoga helps students to aid their attention in a variety of tasks, to introduce yoga to students in the hopes that they will realize the benefits to be derived from its practice. Yoga helps in development of inner-self and physical growth. Thus helps in inculcation of values essential for co-existence in a society.

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RELATIONSHIP OF SPECIFIC KNOWLEDGE OF VOLLEYBALL WITH PLAYING ABILITY

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ABSTRACT

Volleyball is the game of power and tactics and it's played at a faster pace and this calls sharper thinking, high standard of skill and tactical application from the application of knowledge. Technical skill are not sufficient to produce winning combination, Volleyball players now receive adequate mental preparation with proper guidance of their coaching. Fitness and skill mark slight difference in performance but application of skill in particular situation, determination, confidence, anxiety and temperament plays a decisive role in performance. So keeping in mind the researcher conducted this study. Twenty(20) male subjects were selected from Volleyball match practice group from Lakshmibai National Institute of Physical Education (Deemed University) Gwalior for this study. Specific knowledge in Volleyball determined through specific knowledge test (K.P.Singh) and Playing ability was determined by administered the AAPHER Volleyball skill test. "Pearson's product moment" was employed to determined the relationship between specific knowledge and playing ability of volleyball. The relationship between them found significant(0.616*). The data reveals that Successful of Volleyball players depends not only the practical application of the technique in the dynamic competitive situation but also should have theoretical knowledge base regarding basic, advanced and tactical concept of application of technique in to practical competitive situation.

Keywords: Relationship of Specific Knowledge of Volleyball with Playing Ability

1. INTRODUCTION

Volleyball is the game of power and tactics and it's played at a faster pace and this calls sharper thinking, high standard of skill and tactical application from the application of knowledge. Technical skill are not sufficient to produce winning combination, Volleyball players now receive adequate mental preparation with proper guidance of their coaching. Fitness and skill mark slight difference in performance but application of skill in particular situation, determination, confidence, anxiety and temperament plays a decisive role in performance. So keeping in mind the researcher conducted this study. The purpose of the study was to find out the degree of relationship between specific knowledge and playing ability of volleyball.

2. METHODS

Twenty (20) male subjects were selected from Volleyball match practice group from Lakshmibai National Institute of Physical Education (Deemed University) Gwalior for this study. All the subjects were residents of the institute and they had the similar routine of work. The age of the subjects were ranged between 20-25 years.

- Specific knowledge was determined by specific knowledge test in Volleyball (K.P.Singh)
- Playing ability was determined by administered the AAPHER Volleyball skill test.

To see the significant relationship between the specific knowledge of volleyball with playing ability "Pearson's product moment" correlation was applied at .05 level of significance.

3. RESULTS

The analysis of data reveals that there was significant relationship between specific knowledge and Volleyball playing ability of LNIPE male Volleyball players as the calculated value of correlation co-officient is 0.616, which is higher than tabulated value 0.444 required to be significant at 0.05 level.

4. DISCUSSION

The analysis of data reveals that there was significant relationship between specific knowledge and volleyball playing ability. As we know that every work or task requires certain level of knowledge, if it is to be performed efficiently and successfully. Same in the case of volleyball

game. The game of Volleyball also requires a specific knowledge with regard to use of his tactics, techniques, rules and other performance related aspects. This might be due to the fact that skilled player have better knowledge regarding techniques, skills, strategy and rules of the game which contribute quite a lot to performance in Volleyball.

Successful of Volleyball players depends not only the practical application of the technique in the dynamic competitive situation but also should have theoretical knowledge base regarding basic, advanced and tactical concept of application of technique in to practical competitive situation.

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EFFECT OF SELECTED YOGIC EXERCISES ON CARDIOVASCULAR ENDURANCE AND LUNG CAPACITY OF PRIMARY SCHOOL CHILDREN

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ABSTRACT

The purpose of the present investigation was to find out the effect of selected yogic exercises on Cardiovascular Endurance and Lung Capacity among secondary school children. To achieve this purpose 50 randomly children were selected as sample from K L International School, Meerut. Their age ranged from 08 to 12 years. They were divided into two groups of 25 subjects each and assigned to experimental group and control group. In a week the experimental group underwent selected yogic exercises and control group was not given any specific training. All the subjects underwent tests namely Lung Capacity and Cardiovascular Endurance. They were assessed before and after the training period of eight weeks. Dependent 't' test was used to analyze the data. The study revealed that cardiovascular endurance and lungs capacity were significantly improved due to the influence of eight weeks of yogic exercises on secondary school children.

Keywords: Yogic Exercises, Lung Capacity, Cardiovascular Endurance.

1. INTRODUCTION

Yoga was first summarized and systematized around the second century A.D by patanjali and his yoga sutra is still regarded as the classic work on the subject. Hence patanjali is known as the father of yoga. He has formed a number of yoga sutras regarding yoga. Yoga is universal without distinction of religion, nation, caste, language, colour, age or sex. It is common to all. Yoga is science. Yoga controls one's sense resulting in an integrated personality. Behavior can also be molded properly leading to balanced personalities. Yoga has complete message for humanity. It has a message for the human mind, and it has also a message for the human soul. The changes and developments of modern life has made mobility and physical activities inevitable necessities. Doing sports improves our performance and efficiency and strengthens and rehabilitates our internal organs including the nervous system, muscular, heart and vascular, and skeletal system, urinary system and temperature and breathing system in particular.

Asana means holding the body in a particular posture to bring stability to the body and poise to the mind. The practices of asana bring purity in tabular channels firmness to the body and vitality to the body and the mind. (Sharma, 1984). Yoga and yogic practices and their contributions towards the well being of human beings are gaining momentum and have attracted worldwide attention. Yoga has a universal appeal and proposition. It can be practiced, by every human being irrespective of age and sex, which provides total fitness for every individual.

Yoga is the most ancient form of India's culture. In ancient days the Rishis considered the human body as the temple of the learning spirit and believed that it should be brought to the highest state of perfection. Yoga as spiritual, mental and physical culture is considered as one of the rich heritages of our country. The types of yoga are raja yoga, Karma yoga, Bhakti yoga, Kriya Yoga, Jnana Yoga, Mantra Yoga and Hata Yoga. Yoga is one which is concerned with physical and mental well being. (Sundar Raj Urs, 2001) Kuvalyananda states that yoga has a complete massage for humans; it has a message to the human body, mind and soul. He believes that yogic saints cultivated muscles for physiological perfection. The yogic system of physical culture is an ideal system of body building and it has, perhaps the best aim for being called a system of physical culture in the modern sense of the world. It not only aims at the physiological perfection of human body as a whole, but it also pays adequately proportionate attention to the different systems working in the human organism. It is capable of increasing the vitality instead of lowering it and requires only the minimum expenditure of energy for undergoing the exercises. One

will not only be blessed with health and longevity but will also find his brain working with the greatest efficiency. Surya Namaskar provides all of the key health benefits of yoga in a very succinct package. It is a holistic exercise that provides physical health benefits, but also mental or emotional as well as spiritual benefits

2. METHOD & MATERIALS

To achieve this purpose 50 randomly children were selected as sample from K L International School, Meerut. Their age ranged from 08 to 12 years. They were divided into two equal groups of 25 subjects each and assigned to experimental group and control group. 5 days in a week the experimental group underwent selected yogic exercises namely Tadasana, Vakrasana, Padahastasana, Trikonasana, Padmasana, Paschimothanasana, Vajrasana,Ustrasana, Shasankasan, Gomukhasana, Mathsyasana, Sarvangasana, Salabasana, Halasana, Dhanurasana, Shavasana and Suryanamaskar and control group was not given any specific training. All the subjects underwent two areas of test namely Lungs Capacity (Peak Flow Measurement) and Cardiovascular Endurance (Harvard Step Test). They were assessed before and after the training period of six weeks. The analysis of dependent 't' test was used to analyze the data. The study revealed that cardiovascular endurance and lungs capacity were significantly improved due to the influence of eight weeks of yogic exercises on secondary school children.

3. RESULTS AND DISCUSSIONS

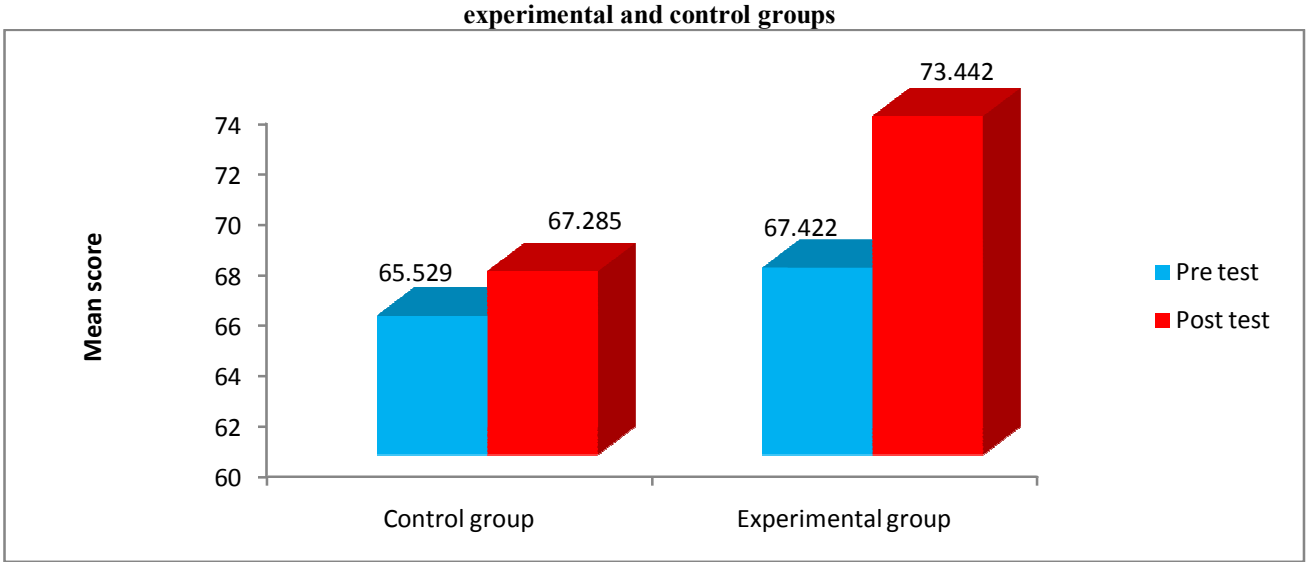
After the six weeks of yogic exercises there would be significant improvement in selected physiological variables of secondary school students.The data on Lung Capacity before and after the yogic training of experimental and control groups are analyzed and presented in Table-1.

Table 1: Significance of differences between pre test and post test scores of Lung Capacity among experimental and control groups (N=25 each group)

Test	Group	Mean	Standard Deviation	MD	't' value	Level of Significance
Pre Test	Control	2005.666	353.219	35.666	0.318	Not Significant
	Experimental	1979.000	518.382			
Post Test	Control	2025.666	335.240	215.667	2.010	Significant at 0.05 level
	Experimental	2243.333	84.431			

From the above table, it can be observed that the obtained't' value 0.318 is less than Table value 2.00 at 0.05 level of significance in the pre test scores. Hence it was not significant on lung capacity among the control and experimental groups of pre test scores. It was assumed that the two groups started out with equivalent mean scores. It can also be observed from the above table that the obtained't' value 2.010 is greater than Table value 2.00 at 0.05 level of significance in the post test scores. Hence the stated hypothesis is accepted that there was a significant effect of yogic exercises on Lung capacity among control and experimental groups. Hence, the hypothesis is statistically proved and stated hypothesis accepted. The comparison of lung capacity mean scores of pre and post tests among groups is shown in graphical representation in Fig.1.

Figure 1: Graph showing comparison of lung capacity pre and post test mean scores of Lung Capacity among experimental and control groups



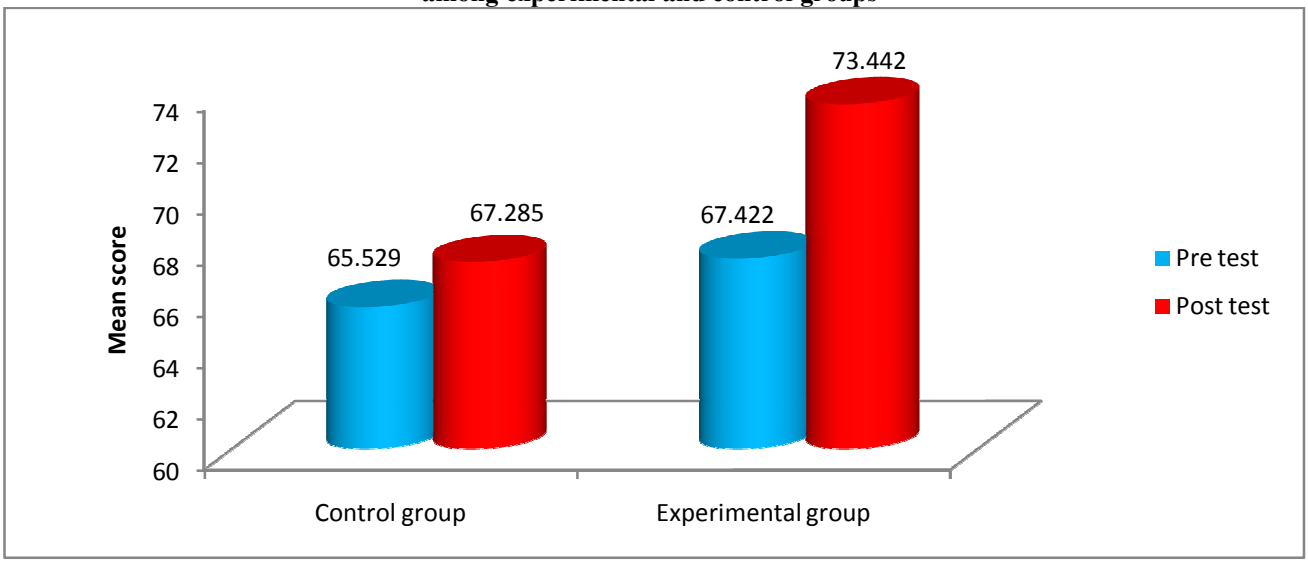
The data on Cardiovascular Endurance before and after the yogic training of experimental and control groups are analyzed and presented in Table-2.

Table 2: Significance of differences between pre test and post test scores of Cardiovascular Endurance among experimental and control groups (N=25 each group)

Test	Group	Mean	Standard devation	MD	't' value	Level of Significance
Pre test	Control	65.529	9.738	1.892	0.875	Not Significant
	Experimental	67.422	6.733			
Post test	Control	67.285	8.084	4.617	2.131	Significant at 0.05 level
	Experimental	73.442	8.675			

From the above table, it can be observed that the obtained't' value 0.875 is less than the Table value 2.00 at 0.05 level of significance in the pre test scores. Hence it was not significant on cardiovascular endurance among the control and experimental groups of pre test scores. It was assumed that the two groups started out with equivalent mean scores. It can also be observed from the above table that the obtained't' value 2.131 is greater than Table value 2.00 at 0.05 level of significance in the post test scores. Hence the stated hypothesis is accepted that there was a significant effect of yogic exercises on Cardiovascular Endurance among the control and experimental groups. Hence, the hypothesis is statistically proved and stated hypothesis accepted. The comparison of cardiovascular endurance mean scores of pre and post tests among groups is shown in graphical representation in Fig.2

Figure 2: Graph showing comparison of lung capacity pre and post test mean scores of Cardiovascular Endurance among experimental and control groups



4. CONCLUSION

There was a significant difference between the control and experimental group on selected physiological variables namely Lung Capacity and Cardiovascular Endurance. 2. There was significant improvement noticed on selected Physiological variables namely Lung Capacity and Cardiovascular Endurance due to six weeks practice of yogic exercises among secondary school children.

The result emphasizes the change of physiological parameter like lung capacity and cardiovascular endurance. This may be attributed to the fact that selected yogic exercises enhance the lung capacity and cardiovascular endurance of children keeping them physiologically fit.

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EDUCATION AND HEALTH IN DEVELOPING ECONOMIES

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ABSTRACT

This paper reviews recent research on the relationship between education and health in poor countries. Multiple causal pathways link the two domains, across different phases of an individual's lifecycle and across generations in a family. Within an individual, childhood health enhances schooling outcomes, longevity incentivizes human capital investment, and education improves adult health. Across generations, the health and education of parents particularly mothers boost both outcomes in their children.

Keywords: Education and Health in Developing Economics

1. INTRODUCTION

In the course of development, few processes are as intertwined with economic growth as human capital accumulation. Schooling makes workers more productive, speeds the development of new technologies, and better equips parents to raise skilled children, all of which promote economic growth. Growth, in turn, incentivizes investment in human capital. Causal links point in every direction, traversing phases of the lifecycle as well as generations.

The entangled role of human capital is not limited to aggregate income growth, however. Education exhibits complex dynamic relationships with several components of wellbeing, including health. For example, education affects health in adulthood; life expectancy affects educational investment in childhood; and the health and education of parents particularly mothers affect both outcomes in their children. Just as with income, these relationships are likely to be especially important in developing countries, where levels of both schooling and health are low but have risen rapidly over the past half-century (Becker et al. 2005, Barro and Lee 2011).

This chapter gives an overview of the current state of knowledge on the relationships linking health and education in developing countries. To emphasize the dynamic aspects of these relationships, the chapter will trace them out first within a generation, between childhood and adulthood, and then across generations, from parents to children. It will focus on reduced-form evidence of these effects rather than efforts to precisely pin down mechanisms, for two reasons.

First, the existing literature especially that on developing countries has simply generated more evidence on these reduced-form relationships. Mechanisms have received some attention (see, e.g., Cutler and Lleras-Muney 2010), but the evidence comes primarily from wealthy countries, and even that evidence remains sparse.

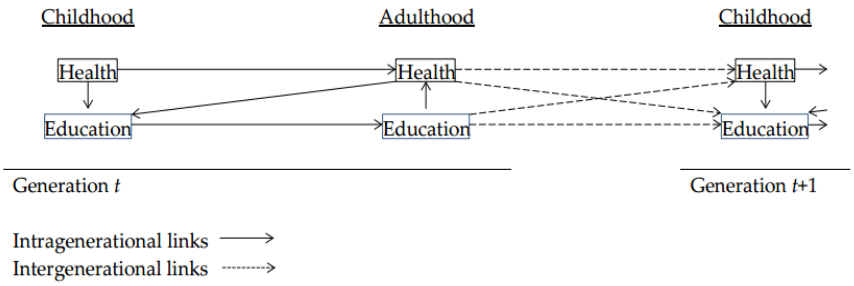
Second, the reduced-form evidence on dynamic links casts in stark relief the potential joint role of education and health in accounting for the intergenerational persistence of disadvantage. That is to say, the children of unhealthy and uneducated parents grow up to be unhealthy and uneducated parents themselves. Others have proposed similar arguments about the intergenerational dynamics of the relationship between health and socioeconomic status, more broadly construed (Cutler et al. 2011, Currie and Vog forthcoming). But the links between education and health, which typically lie at the crux of these arguments, can by themselves account for the dynamics. Given the current extent of inequalities in income, human capital, and health in developing countries, the links between education and health may prove important in shaping long-term trends in the levels and distributions of both variables.

Associations between health and education are not new, but with such tangled causal pathways, these associations sometimes prove to be uninformative. The recent literature in economics has made its main contribution in causal inference. Analyses of natural experiments and prospective trials have shed new light on long-standing hypotheses. They have also improved our ability to interpret careful associational studies, which are in many cases more generalizable than experimental studies but less internally valid. These advances have been key to identifying both the direction and the timing of effects in the causal system linking education and health.

2. MAPPING THE RELATIONSHIP BETWEEN EDUCATION AND HEALTH

With its numerous pathways, the causal system linking education and health may seem convoluted. However, one can represent it in a simple but informative diagram. Figure 1 traces out the links between education and health, first over the lifecycle and then across generations. Each arrow represents a causal link that has empirical support in the literature. The solid lines signify intragenerational links in other words, causal links that operate within a single person while the dashed lines correspond to links that work across generations within a family.

Figure 1: Causal Links between Health and Education



The system lays out a roadmap for the rest of the chapter. In childhood, good health improves educational outcomes. Additionally, the expectation of good adult health increases schooling investments in childhood. Both health and education persist from childhood to adulthood, at which point education boosts health. But adults are also parents, so their circum-stance in middle age spills over onto the next generation. Healthier mothers have healthier children and more educated children. Conversely, parental education promotes both the health and the education of the next generation. At this stage, the causal system repeats in the next generation. In the remainder of the paper, I will focus on the subset of the arrows in Figure 1 that connect health and education.

3. EFFECTS OF CHILDHOOD HEALTH ON EDUCATIONAL OUTCOMES

Educational Outcomes in Childhood:

We begin in childhood, where abundant evidence suggests that health affects school enrollment and academic achievement. Health enables children to travel to school, concentrate, and think clearly, all of which may improve educational outcomes. Until recently, the evidence has primarily taken the form of cross-sectional associations between children's health and their educational outcomes. Behrman (1996) surveys several such studies from the 1980s and 1990s, which show strong positive relationships between anthropometric measures of child health such as height and schooling outcomes in a wide range of settings. But Behrman ultimately critiques these studies for inadequately addressing issues of causality and omitted variables.

A few analyses published at the same time or after Behrman's critique make some headway on these issues by focusing on within-family variation. Analyzing data from Ghana, Glewe and Jacoby (1995) estimate models with family fixed effects, finding that shorter siblings start school later than their taller brothers and sisters. More recently, Bharadwaj et al. (2010) analyze twin pairs and sibling sets in Chile, showing that twins or siblings born at higher birth weight perform better on exams. Within-family comparisons of this type eliminate concerns about family-level omitted variables, although they leave some concern about how parents allocate scarce resources among children with observably different health.

In addition to these innovative ways to glean causal effects from observational data, the past decade has seen a series of randomized controlled trials testing the effect of child health on schooling outcomes.

Educational Outcomes in Adulthood:

The fact that education is relatively fixed by adulthood facilitates the study of its relationship with health. Coupled with retrospective measures of child health, data on adult educational attainment can shed light on the effect of health on education in childhood. For example, just as height and schooling outcomes are associated in children, so too are they related in adults. Adult height positively predicts educational attainment in nationally representative data from Mexico (Vogl 2012), as well as in data on urban populations in Barbados, Mexico, Cuba, Uru-guay, Chile, and Brazil (Maurer 2010).

Effect of Life Expectancy on Investment in Education:

Unlike the effect of child health on education, which is rooted in the technology of skill formation, the effect of life expectancy on human capital investment is at its core about optimizing choices by households and individuals. According to the standard reasoning, if an individual expects a longer time horizon to reap the returns to human capital, then that individual will invest more. Analyses of macroeconomic data offer limited support for this hypothesis. Although adult mortality is negatively associated with secondary school enrollment, Lorentzen et al. (2008) find that the relationship is not robust to the

inclusion of covariates. However, given the paucity of high-quality data on adult mortality in most countries and the difficulty of assessing causality from crosscountry associations, the macroeconomic patterns are suggestive.

Effect of Education on Health in Adulthood:
A long-standing literature reports positive associations between education and health in adults in wealthy countries. As Cutler and Lleras-Muney (2008) note in their survey chapter on the topic, the mechanisms linking the two variables are not fully known. To the extent that the association reflects an effect of education on health, important mediators of this effect may include income, working conditions, health-related knowledge, cognitive ability, patience, attitudes towards risk, and cultural capital (especially in interactions with health providers). Similar associations are evident in data from developing countries, although studies are rarer.

Both natural experiments and prospective trials suggest that while education can affect health, such effects may depend on characteristics of the population and the material being taught in school. Several studies use compulsory schooling laws in India and Europe as instruments for education, with mixed but mildly positive results; some indicate positive effects on health and longevity, while others indicate no effect.

However, longitudinal follow-up of the recent spate of education-related randomized controlled trials in developing countries has begun to yield useful results on health behavior in young adulthood. In one study, the information led the boys to stay in school longer, to delay the onset of heavy drinking, and to reduce smoking at age 18. Across the India and Asian countries estimate the effects of a program that sought to provide adolescent girls with both vocational training and information about risky health behaviors. Together, some studies suggest that keeping boys 'off the streets' and equipping girls with health information may be key to any effect of education on health in young adulthood.

Effect of Parental Education on Child Health:
In the context of poor countries, by far the most widely studied education-health association is that between maternal education and child health. Following Caldwell's (1979) canonical study of child mortality in Nigeria, a large literature has emerged on this topic. The literature bares widespread correlations between maternal education and child health, measured by illness, anthropometry, or death.

Based on data on Brazilian children's heights, Thomas et al. (1991) argue that educated women's access to information explains much of the correlation.

On the other hand, several studies question the extent to which the correlation reflects a causal effect running from maternal education to child health, as opposed to omitted variables. Desai and Alva (1998) show that the relationship is not always robust to the inclusion of socio-economic and community-level covariates. Wolfe and Behrman (1987) and Strauss (1990) find that it weakens upon the inclusion of a fixed effect for the mother's sibship or for a multifamily household. However, one could interpret many of Desai and Alva's covariates as mediators of the relationship rather than confounders, and the inclusion of fixed effects exacerbates problems related to measurement error. The results of the revisionist literature are therefore inconclusive.

Analyses of natural experiments support a causal interpretation. But some results are also available for developing countries. Among Indonesian women, for example, exposure to a school construction program reduced mortality rates among their children.

Parental Health Affects Child Education:
Parental health also affects children's schooling outcomes. Two mechanisms stand out in the literature. The first is indirect: healthier mothers have healthier children, who in turn become better-educated adults (Almond and Currie 2011). This effect implies that a mother's health is key to the skill development of her child.

The literature also highlights a second mechanism through which parental health affects child education: parental death. Across India, orphans have lower school enrollment rates than the biological children of their caretakers. Furthermore, in South Africa and Kenya, the timing of parental death is associated with the timing of school dropout. The same is true in Indonesia, where parental deaths typically have little to do to HIV/AIDS. One can thus view the African results as representing a more general effect of losing a parent. Nevertheless, given the scope of the continent's orphan crisis, the results are most relevant there.

4. CONCLUSION

The existing literature fills in many of the links sketched in Figure 1. For one, the distinction between aggregate and individual educational attainment has received little consideration but is almost certainly relevant for health systems in developing countries. How important is a country's education system in producing health professionals to support its health system? Additionally, the potential for the backwards intergenerational transmission of health information from children to parents remains underexplored. Concerning intergenerational dynamics in the other direction, from parents to children, the literature would benefit from more focus on how parental behavior reinforces or compensates for exogenous changes in the health environment or educational opportunity.

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HOLISTIC THERAPIES USEFULLNESS FOR HUMAN HEALTH

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ABSTRACT

This research paper details about Holistic Therapies and their importance in human life by reducing day to day stress, tension, depression, anxiety etc. and making their life more meaningful both in personal and professional upfront. This article also covers different techniques used by the therapists to treat their clients and also by individuals themselves to improve the overall quality of life in this fast moving world. These therapies are gaining a lot of popularity day by day in all sections of society. Schools are introducing meditation prayer periods, exercises in various forms like gymnastic, yoga etc. for students of all classes. On the other hand these therapies also accepted as a carrier option by many fresher's in order to become professional trainers in this field. These are also widely accepted by women as they act as a catalyst where orthodox medicines are not giving much benefit to them in issues associated with delivery, infertility, miscarriage. There has also been some criticism associated while applying these different therapies. These therapies do not give much authenticity in terms of timelines to recover from a particular disease and even whether recovery is guaranteed. It may even become difficult for masses to prevail the benefits of these therapies as some of the techniques are costlier and not available in remote and lesser developed regions. In spite of all the critiques, these therapies are slowly becoming part and parcel of human life.

Keywords: Holistic Therapies Usefullness for Human Health

1. INTRODUCTION

It is one of the most important topic to be discussed in today's life, as in everyday life with increasing technology and upgradation of standard of living the overall human life is suffering. The whole concept is like a game as every coin has two sides one head versus tail similarly as we are progressing mechanically day by day on the other hand are human health is being suffered. As human health is very precious so its need of an hour to have holistic approach towards it that why holistic therapies are being introduced to our life but first of all its important to understand the whole thing for that we need to know the meaning of holistic that is :

2. DEFINITION OF HOLISTIC

- Of or relating to holism
- Relating to or concerned with wholes or with complete systems rather than with the analysis of, treatment of, or dissection into parts holistic medicine attempts to treat both the mind and the body

Holism is an important concept in the sciences and social sciences, and especially in medicine. Holistic medicine tries to treat the "whole person" rather than focusing too narrowly on single symptoms. It relates the connections between the mind and the body, avoids the overuse of drugs, and has borrowed such practices from Eastern traditions as acupuncture and yoga. Basically, holism concept focuses on the idea of studying the whole book instead of reading few chapters in order to clear the exam.To understand the topic more clearly we need to undergo some latest examples:

McElmurry said, "The industry needs to take a holistic approach to its labor challenges and address low wages, demanding or unsafe working conditions and high worker turnover in addition to immigration reform".

Alexia Elejalde-Ruiz, chicagotribune.com, "Hospitality industry needs more immigrant workers to survive, report says," 24 Aug. 2017.

Check out the full video below: This holistic approach applied to young children is apparently controversial in some quarters.

Barb Darrow & Fortune, "Bill Gates Gets a Lesson From Washington State's Teacher of the Year," 22 Aug. 2017

And so that's where my focus has been and always will be: about creating a holistic approach, to give everyone a chance to succeed in society.

Rebecca Nelson, Cosmopolitan, "She Ran" Let Girls Learn. "Now She's Running for Governor." 17 Aug. 2017

Holistic therapies are a way to enhance general health and wellbeing, by having interest in the human body. It is a desire to connect with others and help others in a calm environment, either as part of a team or working alone. A Holistic/Complimentary Therapist will use therapies to enhance the mind, body and soul of their clients to maximize vitality. Holistic therapy is also known as alternative therapy as it involves different method to heal the pain, in general, this term refers to any health treatment not standard in Western medical practice. It encompasses practices spanning diet and exercise changes, we can also refer as a complementary medicine too. Suppose the person is suffering from head ache now in order to relief him there are different ways one is to give a particular medicine refer by doctor, on the other in case of this holistic therapy we undergo the reason first to find the head ache that can be any it may be due to physical health or related to tension either in personal or professional life. Accordingly therapy will be applied to finish the disease from the root but not temporarily. One thing is very important in this is that it requires patience and determination.

3. HOW HOLISTIC THERAPY WORKS

The basic step in holistic therapy is always for the therapist to know the client, for this coordination and communication has to be there between both ends. In order to heal the person it's important to know him first. The below points help in knowing the client:

- Life.
- Relation with other family member.
- Work place environment.
- Client's childhood, past trauma, past and current relationships.
- Clues about the person's issues etc.

In order to get the significant input from the client, trust may need to be built to get honest answers as to what is troubling the individual. Once more is known, the therapist can then determine the best course of treatment. This often helps the therapist to determine the best treatment course.

APPROACH, METHODS, TECHNIQUES OF HOLISTIC THERAPY

- Psychotherapy
- Gestalt therapy
- Art therapy
- Cognitive Behavioral Therapy
- Meditation
- Hypnotherapy
- Family therapy
- Journal keeping
- Guided imagery
- Assertive training
- Anxiety management

To understand this topic properly it's very important to understand all the approaches in detail.

1. Psychotherapy:

It is one of the most important and a famous approach that is being today, it helps in solving and preventing any pain or injury. Overall it helps in strengthen the muscles and improve the function of the body. There is a wide variety of injuries with which physiotherapists deal with like:

- Sports injuries (e.g. ligament tears)
- Headaches
- Spinal pain and injuries
- Arthritic conditions
- Post-surgical rehabilitation

Basically it includes massage and joint mobilization, as well as muscle stretching which physiotherapists achieve using a wide variety of techniques further.

2. Gestalt therapy:

Gestalt is also known as the "Law of Simplicity" or the "Law of Pragnanz" (the entire figure or configuration), which states that every stimulus is perceived in its most simple form. It includes:

- Visual perception
- Concerned with the relationship between the parts and the whole of a composition.
- It is an attempt to understand the laws behind the ability to acquire and
- Maintain meaningful perceptions

3. Art therapy:

Art therapy uses the creative process of making art to improve a person's physical, mental, and emotional health. It helps in improving one's emotional and mental state of mind by relieving stress tension. It acts as a mode of self-discovery. The patients who feel difficulty in expressing their emotions through talking communication, art therapy give them the freedom of through any form of artlike:

- Painting
- Drawing
- Photography
- Sculpture
- Variety of other types of visual art expression.

4. Cognitive Behavioral Therapy:

It's the most frequently used to treat anxiety and depression. This theory help us to know that our thoughts, feelings, physical sensations and actions are interconnected, and that negative thoughts and feelings can trap you in a vicious cycle, that can put an adverse effect on whole body which further invite more diseases .Various diseases with which this therapy deals with are:

- Stress disorder
- Phobia
- Obsessive Compulsive Disorder (OCD)
- Sleeping problem
- Problems related to alcohol misuse

In this patients have sessions with a therapist once a week or once every two weeks. The course of treatment usually lasts for between five and 20 sessions, with each session

lasting 30-60 minutes. This therapy is helpful in cases where medication alone doesn't work.

5. Meditation:
It is a technique which gives deep rest to the body, mind, and soul. It creates connection of body with its inner self and thus creates peace. It is an essential practice for mental hygiene.Some of the benefit of meditation is:

- The ability to connect to an inner source of energy
- Clarity of perception
- Inner strength
- A calm mind

Thus this should be the regular practice followed by everyone in order to have a proper work life balance.

6. Hypnotherapy:
In this therapy imagination is used in an attempt to help with a variety of problems. First the nature of problem is determined, then the induction of hypnotic state in client is done in order to increase motivation or alter behavior pattern. The therapist leads the patient to positive change towards life. Some of the benefits of hypnotherapy are:

- Stop self-destruction
- Stop addictive habits like smoking,drinking,drugs
- Curb the urge to eat for overeaters
- Stop bed-wetting
- Minimize anxiety

7. Family therapy:
Family therapy is a type of psychological counseling (psychotherapy) that can help family members improve communication and resolve conflicts. Basically it concentrate on relations as today in busy life everybody is busy in own self , so thus this therapy try to interlink and interconnect the members by improving their relations between themselves and also in removing generation gap between parents and their kids.

8. Journal keeping:
Keeping a diary, or journaling, writing down day to day activity of your life is also one of the best technique to heal from day to day tension, stress of life. Writing forces you to examine your thoughts more critically and logically and thus create clarity on the ideas, thoughts.

9. Guided imagery:
Guided imagery is a gentle but powerful technique that focuses the imagination in proactive, positive way. Its three important principles are:

- Mind-body connection
- Altered state
- Locus of control

It is a form of meditation, and can be used interchangeably with the term Guided Meditation.

10. Assertive training:
It seeks to maintain an appropriate balance between passivity and aggression, action and reaction. This training is based on the principle that we all have a right to express our thoughts, feelings. Effectiveness of this therapy are:

- Treatment for certain conditions, such as depression, social anxiety,
- Solution to the problems resulting from unexpressed anger.
- Improve interpersonal skills and sense of self-respect.

11. Anxiety management:
Anxiety is disease which can put a very adverse effect on the health of the person, and increase lot of physical problems too. Different ways by which we can manage anxiety are:

- Breathe
- Be realistic
- Reduce over activity
- Make a plan and practice
- Exercise

4. CRITICISM OF THERAPY

This therapy is also associated with certain criticisms:

- The medical and surgical treatments are studied carefully and tested extensively prior to being used. Alternative techniques do not go through the same type of scrutiny, therefore there is about the legitimacy and safety of some of these techniques.
- Specific treatments may lack evidence of effectiveness
- Therapies sometime are at best of uncertain benefit, at worst quackery, harmful, and usually costly.
- The treatments are still not available in all the regions especially remote areas.
- The quality of treatment also varies across regions. E.g. a city more advanced will have best and most advanced techniques available to a lesser developed city.

5. CONCLUSION

Holistic ecology views humans and the environment as a single system .In order to implement all these different therapies proper knowledge, way, procedure should be known by the practioners so that best outcome can be avail. The main aim of all these therapies is to promote optimal health and wellness through non-traditional therapies and techniques, so that adverse effect should be reduced by maximum level. Many of these are recognized as powerful tools in the fight against sickness and disease, injuries either related to mind, body or soul. In order to give optimal result various medicine are also introduced with these therapies like Naturopathy, Massage Therapy, Homeopathy, Acupuncture, Reflexology etc.

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A STUDY OF RELATIONSHIP OF INTELLIGENCE WITH VOLLEYBALL PLAYING ABILITY AND SKILL LEVEL OF PLAYERS PARTICIPATING AT UNIVERSITY LEVEL

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ABSTRACT

The purpose of the study was to investigate the relationship between volleyball playing ability and skill test with intelligence of university level volleyball players. For the collection of data 25 Players served as the subject for the study. To investigate intelligence DR S.Jalota questionnaire was implemented and for skill test Brady Volleyball test was used. Playing ability was judged by the experts. The data was analyzed by using Pearsons product moment correlation analysis to study the relationship between volleyball playing ability and intelligence.

Keywords: Volleyball, Skill, Intelligence, Playing Ability.

1. INTRODUCTION

Among the many sports activities volleyball possesses its own unique effectiveness in terms of skill and play characteristics. Originally called mintonette, Volleyball is an excellent all-round team sport and has been widely accepted as a highly competitive game. It has not only developed from a slow moving game into fast one, but has also become a game of high interest and joy to the players and spectators alike. It is interesting to note that the speed of a powerfully spiked ball in the game of volleyball is about 45 meters per second which is much faster than the movement of the ball in most other games. The game offers a wide opportunity for the development of strength, speed, endurance, agility, neuro-muscular skills and co-ordination of all parts of the body by the actions involved in the game. The six basic volleyball skills are passing, setting, spiking, blocking, digging, and serving. Passing is often thought of as the most important skill in volleyball. This is key if you want to have highly successful volleyball teams. Volleyball is a skillfull game, acquiring the ability to master a ball within the limits of a restricted playing field along with a net. For effective performance in the game it is necessary for a player to have a certain level of physical fitness and ability to execute the skills involved in the game according to the playing conditions. Skills concerned here are passing, setting, spiking, blocking, digging and serving. For a good performance strength and flexibility in arms, shoulders, hip and at the same time agility and good reaction time are a must to have. Today traditional as well as beach volleyball have become two of the most popular games in the world.

Volleyball as a team- game has developed into a fast and highly skillful sport. Wherein players are generally divided into two categories as offensive and defensive players. Offensive player need more aggressiveness where as defensive player requires calm and cool approach while defending. The term 'intelligence' comes from a Latin Word coined by Cicero to cover all cognitive processes. It was assumed that this capacity of cognition was something inherent in human nature (and possibly in animals). It was recognized that every man was born with a general cognitive capacity which was conveniently termed intelligence. Just like the concept of energy in physics, the term intelligence also is only a convenient label to designate a cognitive ability which is innate and general. Spencer regarded intelligence as a capacity of organism to adjust itself to an increasingly complex environment. Intelligence is a term, which is so commonly used and yet rather difficult to define in a precise and generally accepted form. This difficulty of definition is not perhaps because in recent years psychologists have gathered so much material about it by the use of intelligence tests that we find it difficult to adopt a simple and comprehensive

meaning of the term. Intelligence basically should not be confused with intellect though it is related to intellect or knowledge. It is quite possible though it may not happen often that a man with a high degree of intelligence may be poor in intellect simply for the reason he never attempted to use his intelligence and build up his intellect. Every man is intelligent in his own usual self because his correct response to a given situation itself shows his basic intelligence. Again it doesn't mean that he may give a correct response to each and every situation being exposed to him. Thus we can give a statement that every individual has basic intelligence but in varying degree. This degree is what psychologists have been trying to find out, so that they can categorize certain category of people. The field of intelligence is slowly spreading its tentacles into other fields where human interaction with his environment is more. Sports are another such field where intelligence is required to a greater extent. But unfortunately the study in this field in relation to intelligence is still raw researchers are still groping around in darkness. The role of physical activity in the lines of individuals and groups within the normal intelligence range, within gifted children and within retarded children has been evaluated in terms of the extent of their physical activity as well. Their relative success in such activity. More intelligent Students seem to have greater activity interests than Individuals with lower Intelligence. The psychological elements concerned with intellectual behavior and emotional development are important aspects of physical education. These elements are more difficult to identify, and apply in the field because they are mostly covert in their origin though they take external manifestations. Hence, the physical educationist should know the nature and relationship between the physical education and psychological aspects like intelligence, motivation, practice, method of learning, guidance, knowledge of results, transfer of training, etc. so that the roles and responsibilities are characterized, through appropriate action for the expected goals. Some of the important, psychological elements and forces, which influence the performance in physical education, are motivation. 'Individual differences in potentialities, intelligence and maturation and so on. Psychological elements seem to be the underlying covert factors which directly and indirectly influence 'the performance and achievement of the students and either facilitate or hinder their performance.

2. METHODOLOGY

The purpose of the study was to find out the relationship of intelligence with playing ability and skill level of volleyball players. The subjects chosen for the study were twenty five university male volleyball players of Madhya Pradesh.

The following variables were selected for the purpose of study.

1. Intelligence
2. Skill
3. Playing ability in volleyball

To measure intelligence twenty five subjects were randomly selected. Test of Intelligence which is constructed by Dr. S.Jalota in English was administered. It could be used on college adults. Each item was framed in a selected form providing four alternatives to each question. This test consisted of subjects mainly finding relations odd one out, vocabulary similar or opposite and mathematical ability. The answer sheets were scored with the help of a scoring key provided for this purpose. Brady Volleyball test was administered to evaluate the skill of subjects. The scores were recorded separately. Performance in playing ability was determined by judge's rating of skills during tournaments that how efficiently the skills were executed and general game sense. The average of the three judge's ratings provided the measure of playing ability. For analysis and interpretation of data and to find out the contribution of intelligence to volleyball playing ability and skill the Pearson's Product Moment Correlation was applied. The analysis of data revealed the significant relationship of intelligence to volleyball playing ability where as no relationship was found when intelligence was related with skill level.

3. DISCUSSION OF FINDINGS

The analysis of data reveals that there is significant relation between playing ability and intelligence. This may be due to the fact that in playing ability the situation changes very frequently and players have to use their general intelligence at very rapid speed and with regular practice and experience their gained intelligence related to game of volleyball could be acquired.This may be the reason why intelligence is significantly related to the playing ability of the volleyball players. The results of the present study reveal that there is no significant relationship between general intelligence and skill abilities of volleyball players. The reason may be the fact that in skill testing set format is used to assess the skill which does not require any general or specific intelligence, player's are mentally and physical ready to perform the artificial situation created to asses this skill, this may be the reason for that there is no significant relationship between skill ability and intelligence of players participating at national level.

4. CONCLUSION

On the basis of the analysis and the results of the study the following conclusions were drawn that Intelligence contributes positively towards performance in volleyball playing ability. Intelligence does not contribute significantly to skill ability of volleyball players.

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RELIABILITY OF HINDI VERSION OF SPADI SCALE IN OVERHEAD ATHLETES WITH SHOULDER IMPINGEMENT SYNDROME

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ABSTRACT

Shoulder impingement syndrome is a pathological conditions where the cumulative loading in overhead sports results in rotator cuff getting impinged in the coracoacromialspace. SPADI scale is a useful tool which has been tested in various populations. However inspite of the development of SPADI (Hindi) scale it has not been been measured for reliability on athletes with shoulder impingement syndrome. **Aim-** To establish reliability (internal consistency and test - retest) for the measurement of shoulder pathologies impact on pain and function. **Materials and methods-** Seventy university athletes aged 17-35 years who areplaying overhead sports were enrolled in study as per inclusion criteria. They filled the form at baseline and two days later for investigating reliability. **Results-** The results yielded excellent test retest reliability (ICC – 0.99) and good internal consistency (Cronbach alpha 0.754) for the SPADI Hindi scale. **Conclusion-** The findings establish the reliability of Hindi SPADIscale for the quantification of shoulder pain and disability arising due to shoulder impingement syndrome in overhead athletes.This scale will also help to guide and monitor the physiotherapy treatment program in over headathletes

Keywords: SPADI Hindi Scale, Shoulder Impingement Syndrome, Reliability.

1. INTRODUCTION

SPADI is a self- reported outcome measure use by patients having shoulder pathologies. As per IOM (institute of medicine) model there are 3 underlying components of disability . The pathology least to impairment followed by functional limitation. SPADI scale helps to quantify the impact of pathology on the patient/client. PROM (patient reported outcome measure) have become an essential component in evidence base medicine. This also serves to match improvement of patient after treatment intervention.

Shoulder problems form a major proportion of clinical practice[1, 2]. SPADI scale was developed by Roach in 1991[3]. The SPADI contains 13 items that measure two indices ; a 5-item subscale that measures pain and an 8-item subscale that measures disability.

The clinical relevance of any scale can only be established by its measurement properties such as reliability analysis .reliability means a property where a scale gives same result for same quantifiable trait repeatedly. Numerous studies have reported the psychometricproperties of SPADI scale across different pathologic conditions.

Hindi is a national language of India spoken by people. Around 490 million people speak Hindi across world. Hindi is the third most spoken language in the world[4]. There existed a Hindi version of SPADI (2010) but its reliability has not been researched. This limits the ability of therapist to adequately check disability of the Hindi speaking patients[5].

Shoulder pain is a major proportion of physical therapy practice which is routinely encountered. Around 14.7 new cases per 1000 patients per year visit physician for management. Of all shoulder pathologies seen by clinician, shoulder impingement syndrome comprises 44-65% of the patient load. Shoulder impingement syndrome is a cluster of signs and symptoms caused by compression of the rotator cuff within subacromialspace. The compressive causes can be intrinsic, extrinsic or both[6].

The present study has two objective .first being to check internal consistency of scale. Secondly to check test retest reliability of SPADI (hindi) in patients with shoulder impingement syndrome.

2. METHODS

2.1 study population-

The study population consisted of 70 overhead athletes with an average age of 19.15 years (SD=2.13) with shoulder impingement syndrome lasting for at least 1 month. The patients were assessed for study after

physician referral.

Inclusion was done if 2 out of 5 understated points were met:

- Positive Neer sign
- Positive Hawkins sign.
- Positive Jobe's sign
- Apprehension test positive
- Positive relocation test

No subjects will be included in the study based on last 2 criteria alone[7].

Exclusion criteria-

- Subjects who had dislocation in the same or opposite shoulder priorly.
- Subjects who have isolated AC Joint pathology which is reproduced with AC joint palpation.
- Symptoms from cervical spine ie radiculopathy
- Subjects with prior shoulder surgery on symptomatic side.
- Full thickness rotator cuff tear evidenced by drop test.

The study was approved by the institutions research ethics board. Awritten informed consent was taken from all the patients.

2.2 Measures:

SPADI (hindi) scale- SPADI is a 13 item measure scale. There are 2 subscales of pain and disability. The 5 item pain subscale evaluates pain of patient during activities. There are two extremes of scale with no pain on one end and worst pain at other. The disability subscale is 8 items with similar extreme anchoring. Higher score on subscales indicate greater pain and disability[7].

2.3 Data analysis

Descriptive statistics included mean and standard deviation for the continuous variables.Internal consistency of the SPADI (Hindi) is measured by Cronbachs alpha. This measures the reliability of a scale after single administration. This test also downplays the measuring trait of a scale that changes with time. The Cronbach alpha values of >0.7 are considers to be indicating good reliability.

Test retest reliability was quantified with intra class coefficient (ICC), This measure the stability of result over a course of time. The ICC value range from 0 (no agreement) to 1 (perfect agreement) .as per Fleiss ICC > 0.75 denote excellent reliability , 0.4 – 0.75 acceptable to good reliability and below ICC below 0.4 is poor reliability[8 9].

3. RESULTS

Reliability

The internal consistency consisted of calculated cronbachs alpha valuesof 0.754. The results indicate that the scale has good reliability (internal consistency). Item to total correlation apex value was 0.54, showing acceptable correlation between the questions of the questionnaire. Reliability data and item to total correlation values is presented in Table 1 and Table 2 Intraclasscoffiecient (ICC) of the SPADI (HINDI) scale was found to be 0.994(95% CI 0.990- 0.996) for pain and 0.998 (95% CI 0.997- .999) for disability , while a value of 0.99 (95% CI 0.997- 0.99) for total SPADI (hindi) was found.The results are in table 3.

Discussion

This study provides preliminary findings regarding the psychometric properties of theHindi SPADI scale in overhead athletes diagnosed with shoulder impingement syndrome.TheHindi speaking shoulder musculoskeletal injury patients have to have a lot of subjective and objective assessment. There was a lack of standardised reliable tool for assessment of shoulder impingement syndrome especially for overhead athletes. This research bridges the gap of estimating the reliability of a Hindi SPADI scale.

There have a lot of researches on test retest reliability of the English SPADI and its translated versions. The ICC values of SPADI for shoulder pathologies has been found to be somewhere between 0.77- 0.98. The shoulder tendonitis values were 0.91. Although Hindi SPADI was developed earlier but its reliability had never been measured. The reliability evaluations have a context specific nature ietheir implications are limited to specific conditions being tested.

The ICC value measures the variances between and within subjects over a test and retest interval.However changes in patient status due to extraneous factors can affect the measurement of ICC. In our study to prevent extraneous factors to have impact on the test rerest value the measurements were done after 2 days time .this time duration hardly has an effect on patient condition.

In conclusion, this s tudy tested the already developed Hindi SPADI and found it to reliable for internal consistency and test retest reliability. Since SPADI is context specific therefore this hindispadi scale has been found reliable for athletes with shoulder impingement syndrome. The result of the study support spadi HINDI as a reliable tool for analysis.

Table 1

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.754	.749	13

Table 2

Item-Total Statistics					
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Item-Total Correlation**	**Squared Multiple Correlation**	**Cronbach's Alpha if Item Deleted**
qp1	70.5143	216.080	.082	.505	.763
qp2	70.4000	208.041	.173	.327	.759
qp3	70.6857	187.668	.544	.540	.722
qp4	70.9429	186.663	.521	.568	.723
qp5	70.5714	204.190	.226	.367	.754
qd1	71.8571	182.588	.453	.556	.730
qd2	70.8143	191.516	.417	.435	.734
qd3	71.7429	189.353	.342	.569	.744
qd4	72.0571	184.200	.479	.512	.727
qd5	72.6143	193.197	.368	.485	.740
qd6	71.0714	194.734	.362	.441	.740
qd7	70.9000	194.236	.378	.456	.739
qd8	71.5429	185.933	.517	.463	.724

Table 3

Intraclass Correlation Coefficient							
	IntraclassCorrelation[a]	**95% Confidence Interval**		**F Test with True Value 0**			
		Lower Bound	**Upper Bound**	**Value**	**df1**	**df2**	**Sig**
Single Measures	.996[b]	.994	.998	502.013	69	69	.000
Average Measures	.998[c]	.997	.999	502.013	69	69	.000
Two-way mixed effects model where people effects are random and measures effects are fixed.							

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ENHANCEMENT OF PHYSICAL FITNESS COMPONENTS THROUGH DANCE THERAPY

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ABSTRACT

Dance is a performing art. It is also physical education. When a student attends dance classes, both of these subjects are addressed. If your regular exercise routine is repetitive and boring, you may want to consider learning how to dance. Dance is a challenging form of exercise that requires coordination, full-body movements, stamina, flexibility and agility for extended periods of time. Solo dances like tap and jazz and partner dances like the waltz and swing require cardiovascular fitness and endurance for athletes and non-athletes like. Dancing is the most vibrant and beautiful form of art. Besides this, it's a great way of social interaction and provides a fun workout, which increases flexibility and cardiovascular health. Dance is always bliss to watch in terms of costumes, elegant moves and music. Merging aerobic exercise with the fun of dance is a great way to keep fit and achieve health through dance. We all know good cardiovascular exercise is a vital element of any health and fitness strategy. But for most of us "workout boredom" can manifest itself from time to time. With twice weekly trips to the gym to pound the treadmill and work the exercise machines it's not surprising that the appeal can diminish quickly, and something you really don't want when you're attempting to firm up and lose weight is to lose your motivation. So why don't you incorporate physical exercise with enjoyment and sign up for a dancing class? Dance fitness, also referred to as "beat based" fitness. Dancing is a great overall exercise. It can be done in the comfort of your home and doesn't cost any money to do. There are many benefits to starting a dance fitness program. And just remember enjoying yourself is great for you. It helps reduce stress, tension, and boredom due to the release of endorphins, plus dance can help reduce blood pressure. Speak with your doctor before beginning a new exercise or dance program. Your doctor can help you find appropriate dance styles that are suitable for your current physical condition.

Keywords: Enhancemetn of Physical Fitness Components through Dance Therapy.

1. INTRODUCTION

Dancing can be a most enjoyable form of exercise. But, what most people don't know is that it also has a large number of health benefits. Dancing is a great full out mind and body workout. It can make your body and soul feel good in a way that no other exercise can. The benefits of dancing are like no other. It can help you lose weight, strengthen and tone your body, increase stamina and flexibility, improve balance and posture, and produce confidence among other things. Dancing can be used in place of regular low – impact exercises such as cycling, walking, or aerobics. Depending on the form of the dance, you can actually burn a large amount of calories doing it. An excellent 30 minute workout raises the heartbeat, clears the lungs, burns stout, releases endorphin; feel excellent substances into the blood so you come away feeling on top of the world. Research shows that a 150pound adult can actually burn approximately 150 calories doing 30 minutes of social dancing. Dance is a major part of many cultures throughout the world. Often looked upon as a form of art and expression, dance also requires a great amount of athleticism. According to the "Journal of Physical Education and Recreation," dance develops strength, endurance, body type, flexibility, coordination, speed, agility, balance, intelligence and creativity. Dancers can gain many of the same cardiovascular benefits as individuals who participate in regular exercise regimens.Dance is a performing art. It is also physical education. When a student attends dance classes, both of these subjects are addressed. Dance classes definitely play a role in attaining fitness. The term fitness is broadly used and often vaguely defined. Many people perceive health and fitness as one and the same, yet there is a definite distinction between the two concepts. Health reflects a person's state of being; it is typically viewed as the presence or absence of disease.Dance is one of the most beautiful forms of art that has grown in leaps and bounds., dance therapy is very much in vogue these days simply because the experience of dancing helps a person to heal from within and dance is also a form of expression. If your regular exercise routine is repetitive and boring, you may want to consider learning how to dance.

Dance is a challenging form of exercise that requires coordination, full-body movements, stamina, flexibility

and agility for extended periods of time. Solo dances like tap and jazz and partner dances like the waltz and swing require cardiovascular fitness and endurance for athletes and nonathletic alike. If you are starting a new exercise program or are a novice to certain dance styles, it is important to understand and master the basics before advancing to more complicated movements. Properly performing movements can reduce your risk of injury and help you gain the maximum health benefits from the exercise. Dancing is a great way for people of all ages to get and stay in shape. Besides being fun, dancing has many positive health benefits. Following are the top 5 health benefits of dance

1. Flexibility

Flexibility is an important part of being healthy. Dance requires a great amount of flexibility. Most dance classes begin with a warm-up including several stretching exercises. Dancers must strive to achieve full range of motion for all the major muscle groups. The greater the range of motion, the more muscles can flex and extend. Most forms of dance require dancers to perform moves that require bending and stretching, so dancers naturally become more flexible by simply dancing. Some of the best athletes are those who get injured the least. Injury prevention is a crucial part of being a top-performing athlete. If you're injured, you can't participate in your chosen sport until you recover and, when you do, it typically takes time to get back to your pre-injury level. The flexibility that you gain from dance class will help prevent sports-related injuries, according to Dr. Peter Brukner, author of "The Encyclopedia of Exercise, Sport and Health.

2. Strength

Strength is defined as the ability of a muscle to exert a force against resistance. Dancing builds strength by forcing the muscles to resist against a dancer's own body weight. Many styles of dance, including jazz and ballet, require jumping and leaping high into the air. Jumping and leaping require tremendous strength of the major leg muscles. Ballroom dancing builds strength. Consider the muscle mass a male ballroom dancer develops by lifting his partner above his head! Strength is the ability of a muscle or a group of muscles to exert a force against a resistance in one all-out effort. The body needs muscular strength for several reasons. First, strong muscles increase joint stability, which makes the joints less susceptible to injury. Second, improved muscle tone helps prevent common postural problems. For example, strong abdominal muscles can help alleviate postural problems associated with the back. Third, the body needs muscular strength because it contributes to agility, helps control the weight of the body motion, and helps the body maneuver quickly.

3. Endurance

Dance is physical exercise. Exercise increases endurance. Endurance is the ability of muscles to work hard for increasingly longer periods of time without fatigue. Regular dancing is great for improving endurance, especially vigorous dancing such as line and ballroom dancing. Elevating the heart rate can increase stamina. Just as in any form of exercise, regular dancing will build endurance.Endurance is the ability of a muscle or group of muscles to perform work for a long time. With endurance, a muscle is able to resist fatigue when a movement is repeated over and over or when a muscle is held in a static contraction. There are two types of endurance: muscular and cardiovascular.

Endurance is critical in many sports, including football, basketball and track and field. Your performance suffers if you can't endure running back and forth on a basketball court or driving down the field to score a touchdown. Taking a dance class assists with building endurance. The conditioning it provides helps your body build the stamina needed for athletic activity, according to Franklin. Because endurance training is essential to most sports, the stamina you build from dance class can help you perform better.

4. Coordination Abilities

Ballet dancers are known for their physical grace — the ability they have to move precisely and smoothly from one motion to the next. This poise does not only come because they practice constantly, though. A new study published in the Journal of Neurophysiology reported that professional ballet dancers' many years of training have enabled their nervous systems to coordinate their muscles to a better level than individuals without dance training.

A study published in the "European Journal of Applied Physiology and Occupational Physiology" observed the maximal oxygen intake, body composition via skinfold tests and vital signs of 12 female dancers and 12 sedentary females. The study concluded that the dancers had significantly lower weight, lower resting heart rate and lower diastolic blood pressure. Maximal oxygen intake, an indicator of cardiovascular fitness that measures the body's efficiency of taking in and using oxygen in the bloodstream and tissues, was also higher in dancers. The American College of Sports Medicine and the American Heart Association recommend doing 20 to 60 minutes of aerobic activity, which is activity that requires oxygen, three to five days a week. The ACSM also recommends that you exercise intensely enough to raise your heart rate to between 55 and 90 percent of your maximum heart rate.

Therefore, to achieve greater cardio benefits from dance, choose moderately intense to intense dances such as ballet, tap, salsa, hip-hop or ballroom that are quick moving and require greater physical exertion. Speak with your doctor before beginning a new exercise or dance program. Your doctor can help you find appropriate dance styles that are suitable for your current physical condition.

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A COMPARATIVE STUDY ON FLEXIBILITY OF DIFFERENT ATHLETES OF BALLGAME AND INDIGENOUS GAME

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ABSTRACT

The purpose of the study was to compare the Flexibility of different body parts between the athletes of Ball game and Indigenous game. The study was confined to sixty college level players randomly selected as subjects from, age ranging from 22 to 28 years from Department of physical education Subarthi University .Meerut. Out of sixty, two groups was formed of which thirty was selected from ball games and the remaining thirty was selected from indigenous games. The variables undertaken for the said research under Flexibility were hip and back flexion as well as extension of the hamstring muscles of the legs which was measured by the modified sit-and-reach test, Hyper extensibility of spine was measured by the Bridge-up test, Extension of the leg from front to rear was measured by the Front to rear splits test, Extension in spreading the legs apart was measured by the Side splits test, Shoulder and Wrist Flexibility was measured by the shoulder-and-wrist elevation test, Trunk and Neck extension ability was measured by the Trunk-and-neck extension test, Extension of Shoulder was measured by the Shoulder rotation test, Ankle extension ability was measured by the Ankle extension (plantar flexion) test, Ankle flexion ability and stretching the gastromenius (calf) and heel cord was measured by the Ankle flexion (dorsi flexion) test. The statistical Student 't' test was applied to calculate the collected data at 0.05 level of significance. The result ultimately shows that there was no significant difference in respect to flexibility of different body parts between Athletes of Ballgame and Indigenous game.

Keywords: Flexibility, Ballgame, Indigenous Game.

1. INTRODUCTION

Performance, in the history of the world is crucial and it depends upon individual characteristically related matter. Better performance is required to become successful in our life. It was proved that, in the past, human being motivated in their physique and cultured to improve their fitness for every success, especially in wars. Physical quality is important to conquer and rule the country. It is a symbol of brave and courage. This type of quality is directly or indirectly depends upon culture, tradition, genetics and way of leaving. Today, everything is quite change, but fitness has marked its importance in modern generation. Its unique role cannot be criticized. Physical fitness is a broad thing and each and every component has its importance and necessity.

The word flexibility is not new in literature or use. It is likely that it derives from a mixture o£ the words flexion and capability. One of its first uses was for describing toe touching with the arms fully extended either standing or sitting, with anterior trunk flexion and the legs kept straight. Kinesiologically, flexion is not the only possible movement-it is also possible to, perform extension, adduction and abduction in the body joints but nonetheless, the original association of the word flexion remains in the term flexibility (Araujo, 1956)

From the above point of view it can be indentified that flexibility is one of the main fitness components, where it works as an important key for achieving success in many sports. In many other sports, including team field sports, good flexibility is an important part of the overall fitness profile. It is also important for injury prevention. Even though after knowing all the important information about flexibility it is also important to find out the quality of flexibility among different individual so that the unknown result or conclusion can be obtained. So, the present study is an attempt by the investigator to compare the flexibility of different body parts between ballgame and indigenous Games.

2. METHODOLOGY

The study was confined to sixty college level players randomly selected as subjects from, age ranging from 22 to 28 years from department of physical education Subarthi University ,Meerut. Out of sixty, two groups was

formed of which thirty athletes was selected from Ball games and the remaining thirty athletes was selected from Indigenous games. The students were tested on "Flexibility test of different body parts" in the university campus of Subarthi University. In the present study the hip and back flexion as well as extension of the hamstring muscles of the legs was measured by the modified sit-and-reach test, Hyper extensibility of spine was measured by the Bridge-up test, Extension of the leg from front to rear was measured by the Front to rear splits test, Extension in spreading the legs apart was measured by the Side splits test, Shoulder and Wrist Flexibility was measured by the shoulder-and-wrist elevation test, Trunk and Neck extension ability was measured by the Trunk-and-neck extension test, Extension of Shoulder was measured by the Shoulder rotation test, Ankle extension ability was measured by the Ankle extension (plantar flexion) test, Ankle flexion ability and stretching the gastronemius (calf) and heel cord was measured by the Ankle flexion (dorsi flexion) test were considered for the measurement of flexibility of different body parts.

3. FINDINGS

Analysis of data clearly reveals that there were no significant differences on the flexibility of different body parts between the Athletes of Ballgame and Indigenous Game of department of physical education Subarthi University ,Meerut as per the statistical computation of student's't' test result is concerned.

Table 1: Significance of Difference of Means on the Flexibility of Different Body Parts between the Athletes of Ballgame and Indigenous Game

S. No	Variables	Ball Games		Indigenous Games		't' ratio
		Mean	SD	Mean	SD	
01	Hip and back flexion	16.66	1.64	16.72	1.69	0.14
02	Hyper Extensibility of Spine	15.65	3.14	14.41	2.73	0.78
03	Extension of the leg from front to rear	8.38	3.33	8.74	3.49	0.77
04	Spreading the legs apart	9.32	2.56	10.51	1.87	1.95
05	Shoulder and wrist flexibility	15.27	3.72	14.60	3.82	0.67
06	Trunk and neck extension ability	11.07	3.06	11.16	3.43	0.10
07	Extension of shoulder	19.97	6.89	20.62	4.72	0.37
08	Ankle extension ability	0.32	0.40	0.30	0.29	0.22
09	Ankle flexion ability	23.79	4.18	24.15	4.28	0.63

Tabulated't' value required to be significant at 0.05 level with 58 degree of freedom was 2.00

4. DISCUSSION OF FINDINGS

The researcher attributed after observing the result of the study that athletes of the ballgame taken as the subject for the said study are under the same type of schedule and physical conditioning as of the athlete of the indigenous game as they resides in the same institution. Though it might be hypothesized earlier that the difference in flexibility may be identified but as per concern it was identified that both the athletes of ballgame as well as indigenous game have same type of food, staying in the same environment, maintaining same type of daily routine i.e. morning conditioning, theory classes as well as activity and in the afternoon, free practices where both the group participate combine by doing different exercises and movements of the body. For the above said reason, results do not show any significant difference. As it was identified that, both the groups were from university sports background having basic physical fitness which are required in their specific game, might have some difference but here during the course of B.P.Ed, M.P.Ed, they are not given separate training or coaching for their respective games to enhance their performance. It is well known that gains in flexibility involve biomechanical, neurological and molecular mechanisms that determine myofibrillogenesis as a long- term result (Deyne, 2001; Galdosik, 2001; Coutinho et al., 2004). The gains in flexibility can also be associated with increased tolerance to pain and increased viscous elastic properties of the muscle-tendon units (Shrier and Gossal, 2000).

The selection of flexibility exercises should be based on the demands of the competitive event and upon the level of performance of the sportsperson. Training frequency for flexibility development should be high. Flexibility can be developed quickly if there are one or two training sessions per day (uppal, 2001).

For good effect each muscle group must be stretched several times. Several experts have recommended at least 10-15 repetitions for each muscle group. Number of repetitions is more in ballistic method. Flexibility should be improved systematically. To start with passive stretching exercises should be used gradually to be replaced by active and dynamic flexibility exercises. The exercises should be rich in variation, thereby enabling the sportsman to do the movement with greater amplitude under different conditions (Singh, 1991).

The result shows that both the groups have better flexibility but the difference is not significant. The result of the study is in consonance with the findings of Probst et

al., Bimal and Naitiksmh, Chan and Hong, Demura et al., Rahnama et al.

The results ultimately shows, no significant difference in respect to flexibility between two groups as because of same type of life leading and maintained habits in Subarthi University, Meerut.

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WOMEN LIBERATION THROUGH SPORTS

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ABSTRACT

If gender is understood as a social construction, gender differences are not 'natural' but acquired and enacted, and also vary according to the particular social and gender order. Currently observable in many respects is a tendency towards 'gender bending' and gender play. One reason for this has to be that the very presence of women in the male-dominated sports world has always been a social question as much as an athletic question. There are many reasons due to which a Girl child is forced to leave Sports. But in India the status of women in sports is worse.

Keywords: Liberation, Gender, Discrimination, Masculinity and Femininity.

1. INTRODUCTION

The UN-Decade for Women (1975-1985) helped to foster a greater awareness of the need to integrate gender analysis not only in policy-making, in programs and projects, but also in research. Much has changed in the past two decades. Scholars, practitioners and politicians have been advancing the concept "women in development" (WID) considerably. Since gender roles and relations are deeply embedded in social structures, the analytical framework of WID gradually changed to GAD meaning "gender and development" (Touwen, 1996).

Even though more and more conferences on this "triad" are taking place in developing countries or in the "North" with Third World participation, people from the grassroots level, especially women are rarely actively involved. Representatives of developing countries are often still members of social elite, which enables them to travel, receive education, publish books etc. Therefore, local voices from the "South" have to be sought out and empowered to play an active role in this debate.

Thinking in terms of gender requires a mindset removed from stereotyping male and female roles in society. A complicating factor is that ideas about gender roles and gender relations are often deeply engrained in educational systems and social structures. Within many communities, conforming to typically male or female gender roles were and often still are signs of respectable individuals.

In 2004 UN Secretary-General Kofi Annan declared sport as a universal language that can bring people together. In his conviction, sport can support the work for peace and help to achieve the Millennium Development Goals.

Despite this broadly shared international enthusiasm, there is still a considerable entanglement between commonly assumed and expected benefits and evidence-based knowledge of measurable positive outcomes directly linked to sport, development and its specific impact on gender topics.

Sports in India have always been identified with men. Women living in this country are not encouraged to actively participate in sports! The conditions of women in India who take up sports are sub-par when we examine it with the international level.

So what are the reasons for such discrimination, one wonders. As one of the leading newspapers recently claimed, "Sports is ultimately about the human body, which is why it is a remarkable barometer of the physical differences between men and women and the social perceptions about these differences."

Where sports and women are concerned, many believe that males are better sportspersons than their counterparts as the male body on an average is bigger built and weighs more than the female body.

Males are believed to have a heart that is larger and about 30 per cent stronger. The greater concentration of testosterone in their bodies is also believed to make males better sportspersons than their counterparts.

Then, of course, there is a difference in their reproductive

roles: Females achieve puberty at least two years earlier than men. Their ability to give birth is also believed to impact on their ability to participate in sports.

However, despite these biological differences, India has seen pioneers who have championed the cause of sports for women. For example, during Independence, leaders like Rajkumari Amrit Kaur realized the importance of women's participation in sport for nation building.

An avid tennis player herself, Amrit devoted a lot of her time to sports. She was the President of the National Spors Club of India and also started the Rajkumari Sports Coaching Scheme.

In more recent times, India committed itself to the Beijing Platform where governments are encouraged to enable girls to participate in sport and physical activity on par with their male counterparts with the help of programs in schools, workplace and in the community.

What India needs is many more legendary people like Amrit who will fight the cause for Indian sportswomen so that they are as glorified as their male counterparts. We need to applaud our sportswomen just the way we idolize our cricketers. Only then will we see many more Sania Mirzas and P.T Ushas.

The finest of sports women in India have faced discrimination at some level in their sports career, be it at the hands of authorities, selection teams, coaches, governments, or even their own families.

The situation has not changed much till now, but I think we are headed towards betterment with so many talented sports women in India reaching the peaks. We're all rooting for Mary Kom, Saina Nehwal, Shakshi Malik, Geeta Phogat, Mithali Raj and P V Sindhu amongst many others.

2. UNDERSTANDING AND OVERCOMING BARRIERS

Arguments of female asportism by nature reflect reality just as little as beliefs that women are incapable, and therefore should not be involved e.g. in politics. Both sport and politics are historically largely male-dominated areas. Accordingly, apparent female asportism and apolitism are due to a lesser extent to women's lack of interest than to traditionally patriarchal structures, cultures and social systems, and are therefore acquired, not inborn. While contemporary claims for women's political participation are basically recognised. around the world (although with some persistent exceptions), women's involvement in sport is still viewed as "unfeminine", and females are largely under-represented at all levels in sport (athletes, coaches, referees, managers, media coverage, etc.).

Various issues that prevent women and girls from getting involved in sport activities:

- Socio-economic barriers
- Safety concerns
- Material, infrastructural and technical barrier
- Socio-cultural barriers
- Lack of female role models
- Ideals of masculinity and femininity

It's the Center, State, Local administration and above all we "Physical Education Fraternity" has to take responsibility and initiative to deal with various issues in uplifting the Women participation in Sports. Here some of the recommendations need to be followed:

- Girls should be encouraged to play an organized team sport or even an individual sport from a very young age.
- Not saying anything about competitive Sports but for Health reasons like "Right to Play" should be introduced in Education system. More girls should play more games-.Sport for Health.. Girls should be educated and made aware of the health benefits of sport.
- A talent search should take place very frequently in all the games all over India, and mainly in the rural and semi-rural regions.
- Girls should be allowed to make a choice of their game.
- Parents should be made aware of the benefits and facilities available for a girl player.
- We need to encourage and also run a special programme so that more and more of them
- Become coaches and referees. Most of the girls in our sample have suggested that they are
- Happy and comfortable with female coaches.
- The state federations and also the national federations of women's sport have more male office
- Bearers than female. This proportion and system should change. Female office bearers should
- Be more in number and rules should be made to that effect.
- Ex-players should be elected or nominated to the federations, just like the Indian Ladies Cricket Association. We have seen that the condition of Ladies Cricket and also their performance has improved tremendously because of this.
- Girls are asking for more competitions in their respective games. They should be provided with opportunity to play in more competitions.
- Girls should be provided with better security when they are travelling for competitions.
- Special training should be provided to coaches, referees and association people on the problems of female players.
- Girls would be made aware of the various career choices they can have related to the field of sport.
- More jobs should be generated and reserved for women players.
- It is apparent that there is still scope for much more informed research within the area of gender and sports. The focus of this discussion paper is a clear indication that further research needs to be generated

from other areas of the world. The absence of women's voices from different places is relevant.

We have begun to raise daughters like sons.....but few have the courage to raise our sons more like Daughters. In our society what we need to give regards not only to our Heroes but also our **'She-Heroes.'**

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[11] http://www.ews-online.org/
[12] Gender, Sport and Society Forum (GSSF)
[13] http://www.gssf.co.nr

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A COMPARATIVE STUDY OF ANXIETY AMONG SPORTSMEN AND NON- SPORTSMEN OF K. (PG) COLLEGE, MAWANA

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ABSTRACT

The present study was undertaken to compare the anxiety level between sportsmen and non-sportsmen of K. (PG) college Mawana, Sportsmen participate at the inter collegiate level tournament. For this purpose sixty students (30 sportsmen and 30 Non- sportsmen) studying in K.(PG) college Mawana which affiliated to Chaudhary Charan Singh University Meerut were randomly selected to act as subject the age of subject was 18-24 years for the purpose of data collection use of Hamilton anxiety rating scale (HAM-A) model develop by Nista and Diehi (1990). Mean and standard deviation used as a Statistical technique to draw mean of total scores of each variable between subjects and independent t- test was also used to find out significance difference, in the result significance difference was found regarding Anxiety between sportsmen and Non–sportsmen.

Keywords: Anxiety Sportsmen and Non- Sportsmen.

1. INTRODUCTION

Anxiety is a state of mind in which the individual response with discomfort to some event that has occurred or going to occur. The person's worries about the event, their occurrence and consequence is general are the sources of anxiety however the anxiety can be either somatic or cognitive in nature

It is generally recognized that psychological factors are of crucial importance to achieve high number in any type of examination. The relationship between anxiety and achieve marks in any examination has been the subject of any through researches. (Akhtor Ali 2011 ; SyedaUzma Zaidi 2011; RizwanAkramRana and Nasir Mohmmood 2007;) it is a fact that a Nations Progress depend upon its students academic Achievement and development. That's why every nation emphasizes student: Academic Achievement.

The academic achievements of the students are badly affected due to increase Anxiety in the Society. There is no denying to the fact that anxiety has increased in the Society it not only effects education but also students' personalities which linger throughout their lives.

Today Anxiety is a common phenomenon of everyday life. It paly a Crucial role in humanlife because all of us are the victims of Anxiety in different way. Generally, anxiety can either be a trait Anxiety or state anxiety. Trait anxiety is a stable characteristics or trait of the person. State anxiety is one which is aroused by some temporary conditions of the environment such as examination, accident, Punishment etc. Academic Anxiety is a kind of state anxiety which relates to the impending danger from the environment of academic institutions including teacher certain subjects like English, science and mathematics etc

2. MATERIALS AND METHOD

The sample of the study consisted 60 students of K. (PG) college Mawana which affiliated to CCS University Meerut (30 Sportsmen and 30 Non-sportsmen) sportsmen participate in the inter- collegiate tournaments. The age range of subject was 18 to 24 years.

Tool: For the purpose of Data collection use of Hamilton Anxiety Rating Scale (HAM-A), Doveleped by Nista and Diehi (1990). The tool consisted 10 items to be answered by putting a mark of X. Each statement consisted of their Response; Never, Really, Some time, often, and always, the Respondents makes a Cross(X) mark on any one of the Response that fitted to them. The separate method was used for Never, Really, Some time, often, and always Statement: The score for Never Statement are awarded by given 'I' marks, for Really Statement '2' Score, for Sometime Statement '3' for often statement '4' for always statement '5' marks.

Procedure: Purpose for this study, list of students (30 Non sportsmen and 30 sportsmen – who participate at the inter-collegiate tournament) was prepared by using method of randomly sampling. In order to ensure the full

co-operation from the subjects. The Researcher had a meeting with, presence coach/mangers of sportsmen. All subjects voluntarily agreed to extend full cooperation and coach/mangers of sportsmen. Ensured that the subjects were made available for collection of Data.

Statistical Analysis: For the statistical analysis of the data mean, sum of squares, degree of freedom, and mean squares were computed in order to estimate the difference among the groups. The t-test was used to compare the groups and for testing significant of the values (t=0.05) for sportsmen and Non-sportsmen.

Result: The data analysis revaluated that the mean of anxiety score of sportsmen and non sportsmen were 21.46 and 25.86 respectively. The significance difference (t-ratio) of anxiety between sportsmen and non sportsmen of K.(PG) college Mawana is 2.31 which is over than required value at 0.05 level of significance (t-2.000) it show there is significance difference regarding anxiety between the sportsmen and non sportsmen. Significance difference between the mean of anxiety of sportsmen and Non sportsmen of K. (PG) College Mawana given in the following table.

Table 1

Group	Mean	S.D.	Df	t-ratio
Sportsmen	21.46	3.97		
Non-sportsmen	25.86	6.24	58	2.31

Significant at 0.05 level t 0.5 (58) =2.000

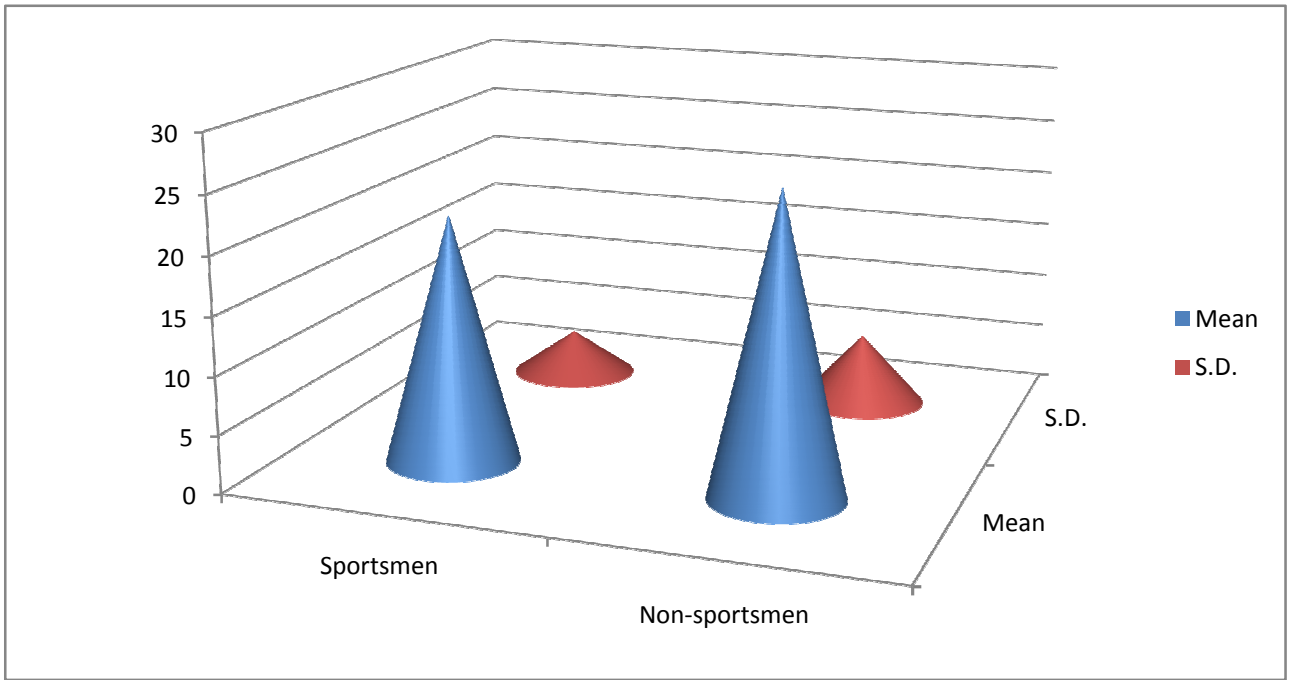

Figure 1: Shows the mean value of anxiety Non-sportsmen & sportsmen

3. DISCUSSION AND CONCLUSION

On the whole, students who participate in inter collegiate sports have difficulty in forming well made educational plans as aspirations. Sports participation itself can become an additionalstressor that traditional college student do not experience but it is also proved that participation in sports can serve as buffer to stressor (Kimball & freysinger, 2003).

It is concluded that there is significant difference regarding anxiety between sportsmen and non sportsmen of K. (PG) collegeMawana. It shows that anxiety level is higher in non sportsmen than sportsmen of K. (PG) collegeMawana and sportsmen have more courage than sedentary students. They can bear both load sports as well as education.

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IMPACTS AND ROLE OF PRE-COMPETITIVE ANXIETY IN SPORTS

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ABSTRACT

This present study discussed pre-competitive anxiety in sports and how it affects both psychological and physiological measures of anxiety among sport persons. Pre-competitive anxiety in sports is considered as an important issue for players. Pre-competitive anxiety refers to a kind of nervous and fear emotion appeared due to frustration of self-esteem and self-confidence, increasing fear of failure and guilty, that results the players being unable to achieve goals or to overcome obstacles at the right time. The paper traced what is the pre-competitive anxiety, its role in sports competition and impacts on performance.

Keywords: Pre-Competitive Anxiety, Emotional Experience, Pitfalls, India.

1. INTRODUCTION

Pre-competitive anxiety

Pre-competitive anxiety is one of the most common factors influencing sports performance, a state of helplessness and insecurity in which a sportsperson feels tension, worry and fear. Prior to any competition, player starts to think and worry whether he will perform well or not. According to Cox (2002), anxiety is of two types: state anxiety and trait anxiety. State anxiety is an immediate emotional state response to specific situation having the characters of feeling of apprehension, tension, fear, and increase in physiological arousal. While in the Trait anxiety, person feels an experience of anxiety over a long period of time towards the stressful environments (Filaire et al., 2001). According to Moran (2004), pre-competitive anxiety, is a cause in sport performance in which a player has unpleasant, negative feelings before their competition and fear of failure and lack of confidence.

2. PRE-COMPETITIVE ANXIETY: ROLE IN SPORTS

Pre-competitive anxiety plays an important role in sports. It is the challenge for players to control themselves during sports participation which produces anxiety. It's a major question that how a player cans handles the pre-competitive anxiety before competition and determines how successful he/she would be. Pre-competitive anxiety can be a positive motivating force or it can interfere with successful performance in sports events. The degree of pre-competitive anxiety also varies person to person with a number of different conditions. Pre-competitive anxiety is common in great sport stars also, as world record holder, "Usain Bolt", admits that he feels nervous before competitions although he know that other competitors are far behind him during a race. In pre-competitive anxiety, the player's are under high psychological pressures to struggle with negative consequences and experience fear before, during and after events as also studied by various workers: Lizuka 2005, Levy et al., 2011, Balaguer et al., 2012, Kumar (2016, 2016, 2016, 2017). Pre-competitive anxiety necessitates a series of physiological symptoms that are automatically produced by the demands of competition and is characterized by perceived feeling of tension. So, pre-competitive anxiety plays an important role in sports that increases physiological changes when exposed to a certain pressure, due to expected or unexpected situations with signs such as: perspiration, heart palpitations, shaky voice, throat dryness, abdominal muscles cramps, trembling etc.

3. PRE-COMPETITIVE ANXIETY AFFECTS PERFORMANCE LEVER OF PLAYERS

Pre-competitive anxiety is one of the factors to decrease player's performance by creating situations like feelings of tension, thinking of upcoming events in their mind, nervousness, worry. Besides this, physiological changes such as increased in heart rate response are also common response prior to the competition with the feelings of fear, unhappiness and their common interaction. Pre-competitive anxiety can affect competitive efficacy in various ways like guilt, discouragement, and focus distraction. Moreover, pre-competitive anxiety has been found to bring to bear a powerful influence on player's performance according to Krane (1994). Pre-competitive anxiety symptoms are too immense; they may seriously interfere with player's ability to compete in a competition

that required coordinated movements for events when the body is in a tense state.

4. CONCLUSION

In conclusion, the study suggest that to increase sport success is to accept the fact that anxiety exists, but the players also should to keep it at optimum level that is positive pre-competitive anxiety. It can be concluded that worry and fear related to the pre-competitive anxiety are basic obstacles to the sport achievement. But if players should know about the effect of pre-competitive anxiety on sport performance and the techniques, they can overcome and deal with it. It can be done by teaching the player's to know what are fear, visualization, goal setting, and relaxation of the body, increase self confidence, distracting oneself and focusing on that which could be controlled.

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EFFECT OF MEDICINE BALL EXERCISES ON SELECTED PHYSICAL FITNESS COMPONENTS OF PHYSICAL EDUCATION STUDENTS

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ABSTRACT

The purpose of the study was to find out the effects of training by using medicine ball as a training device on selected physical fitness components. For achieve this purpose 30 male Physical Education students were selected from Department of Physical Education , JSM college Meerut, the subjects age ranged between 21 to 25years. The necessary data on physical fitness was measured by using through measuring the selected physical fitness components like speed, explosive strength & muscular endurance and these physical fitness components were tested by 50 meter run, vertical jump & times sit ups, These subjects were divided into two groups, Group-I experimental group (15 players) and group II control group (15 players). In this study, various exercises with the medicine ball were performed on Monday, Wednesday and Friday are unchanged throughout the training period. Here, only the weight of the medicine ball was changed, as mentioned in the training schedule. The weight of the medicine ball was used for giving exercise were I kg, 2 kg and 3 kg. The data collected from two groups prior to and after experimentation on selected variable were statistically examined by applying the analysis of covariance (ANCOVA). The hypothesis was tested at. 05 level of significance. The medicine Ball is a good tool for complete bodywork out. It can be used to strengthen, shoulders, back, arms and legs as well as improving core trunk strength and joint integrity. Strength training can be very effective through a carefully planned program; which is a fundamental requirement to improve the performance, strength training progresses through basic strength, combined strength and specific strength. The above three qualities of strength can be improved systematically by using Medicine ball as a device for training. Due to these reasons, medicine ball exercises were improved the selected physical fitness components significantly. The result of the study indicates due to medicine ball exercise training speed, explosive power, and muscular endurance has been improved significantly.

Keywords: Training Method, Physical Fitness.

1. INTRODUCTION

By nature human beings are competitive and ambitious for excellence in "all athletic performances. Not only every man but also every nation wants to show his / its supremacy by challenging the other man/nation. This can be made possible through scientific, systematic and planned sports to identify and nurture human potentialities. The success or failure of an individual athlete depends upon the blending of physical ability, conditioning, training, mental preparation and the ability to perform well under pressure 1 .Over the years physical fitness has become the well-built foundation of a structure that supports many concrete blocks on it which represents all the activities that make life worth living: intellectual life, spiritual life, family life and social life. Sports are all forms of physical activity which, through casual or organized participation, aim to use, maintain or improve physical fitness and provide entertainment to participants. Sport may be competitive, where a winner or winners can be identified by objective means, and may require a degree of skill, especially at higher levels. Hundreds of sports exist, including those for a single participant, through to those with hundreds of simultaneous participants, either in teams or competing as individuals. Some non-physical activities, such as board games and card are sometimes referred to as sports, but a sport is generally recognized as being based in physical athleticism. Physical education is an essential and integral part of the total education program and makes significant contributions toward the achievement of desirable education and health outcomes through the medium of physical activity. Quality physical education programs promote the physical growth and development of children and youth while contributing to their general health and well-being. They are based on a planned sequence of experiences in a wide variety of activities beginning with basic movement skills and progressing toward more complex sport, dance, and other forms of movement. Ultimately, they should help young people keep physically fit and enjoy many forms of physical activity during the school years and continuing

throughout life. Fitness is the deciding factor in our daily tasks and it decides the effectiveness of the activities we prefer, So, the athletes seeking a place in competitive sports must admit the physical fitness first and motor fitness next. The principle in strength training is to overcome a given resistance, be it in the form of an apparatus, sports implement or one's own body weight. But for success, one must train with the use of a specific type of progressive resistance exercise to suit the individual needs and kind of sports concerned. Strength training can be very effective through a carefully planned program; which is a fundamental requirement to improve the performance, strength training progresses through basic strength, combined strength and specific strength. The above three qualities of strength can be improved systematically by using Medicine ball as a device for training. The medicine Ball is a good tool for complete bodywork out it can be used to strengthen shoulders, back, arms and legs as well as improving core trunk strength and joint integrity.

2. OBJECTIVE OF THE STUDY

The purpose of the study was to find out the effects of training by using medicine ball as a training device on selected physical fitness components.

3. METHODOLOGY

For achieve this purpose 30 male Physical Education students were selected from Department of Physical Education , JSM college Meerut, the subjects age ranged between 21 to25years. The necessary data on physical fitness was measured by using through measuring the selected physical fitness components like speed, explosive strength & muscular endurance and these physical fitness components were tested by 50 meter run, vertical jump & times sit ups, These subjects were divided into two groups, Group-I experimental group (15 players) and group II control group (15 players). In this study, various exercises with the medicine ball were performed on Monday, Wednesday and Friday are unchanged throughout the training period. Here, only the weight of the medicine ball was changed, as mentioned in the training schedule. The weight of the medicine ball was used for giving exercise were 1 kg, 2 kg and 3 kg. The data collected from two groups prior to and after experimentation on selected variable were statistically examined by applying the analysis of covariance (ANCOVA). The hypothesis was tested at .05 level of significance.

Table 1: Training Period as Mentioned Below

Weeks	Exercise		Weight of the Medicine ball	No. of Exercise	No. of Sets	No. of Sets Individual Performance with Med Ball	Total Hrs. of Training Per Day
	Work	Rest					
1	2 min	30 sec	1kg	10	2	10 Min	1 hour
2	2 min	30 sec	1kg	10	2	10 Min	1 hour
3	2 min	30 sec	1kg	10	2	10 Min	1 hour
4	2 min	30 sec	2kg	10	2	10 Min	1 hour
5	2 min	30 sec	2kg	10	2	10 Min	1 hour
6	2 min	30 sec	2kg	10	2	10 Min	1 hour
7	2 min	30 sec	3kg	10	2	10 Min	1 hour
8	2 min	30 sec	3kg	10	2	10 Min	1 hour
9	2 min	30 sec	3kg	10	2	10 Min	1 hour

Table 2: Selected Medicine Ball Exercises

S. No.	Medicine ball exercise for Monday	Medicine ball exercise for Wednesday	Medicine ball exercise for Friday
1	Overhead Throw	Backward throw	Underhand Throw
2	Under hand Throw	Standing Overhead Side	Full Twist Pass
3	Half Twist Pass	Standing Side one arm	Standing Overhead Side
4	Standing Chest Pass	Standing squat throws out	Standing Chest Pass
5	Standing Side Twists	Kneeling overhead (one leg kneeling)	Standing Side One arm
6	Medicine Ball Lunge	Kneeling Overhead out	Medicine ball Lunge
7	Kneeling Overhead Side	Zig-Zag pass in between legs	Kneeling Over Head
8	Over and under Pass	Medicine Ball Crunches	Kneeling Over-Head Side
9	Running with medicine ball	Shovel Toss	Scoop Throw
10	Sit-ups Leg-Arms extended	Scoop Toss	Sit-ups Leg-Arms extended

4. RESULTS

Table 3: Analysis of Covariance of Data on Speed between Pre and Post-Tests of Medicine Ball Training Group and Control Group

Test	Medicine Ball Training Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test							
Mean	6.8	6.8	Between	0.005 1 1		ⁿ0.005	0.04
S.D	0.35	0.34	Within	0.4 28		0.14	
Post Test							
Mean	6.5	6.9	Between	^.820	1	0.8	5.48*
S.D '• 0.36		0.4	Within	0.41	28	0.14	
Adjusted Post Test							
Mean	6.5	6.9	Between	0.960	1	0.96	96*
			Within	0.273	27	0.01	

The table values required for significance at 0.05 level of confidence for 1 and 28 & 1 and 27 are 4.20 and 4.21 respectively.

Table 4: Analysis of Covariance of Data on Explosive Power between Pre and Post-Tests of Medicine Ball Training Group and Control Group

Test	Medicine Ball Training Group	Control Group	Source of Variance	Sura of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test							
Mean 1 1.04		1.08	Between	0.007	1	0.007	0.7
S.D 0.13		0.09	Within	0.36	28	0.01	
Post Test							
Mean	1.15	1.04	Between	0.09	1	0.09	9.0*
S.D	0.12	0.08	Within	0.29	28	0.01	
Adjusted Post Test							
Mean	1.16	1.04	Between	0.15	1	0.15	75*
			Within	0.007	27	0.002	

The table values required for significance at 0.05 level of confidence for 1 and 28 & 1 and 27 are 4.20 and 4.21 respectively.

Table 5: Analysis of Covariance of Data on Muscular Endurance between Pre and Post-tests of Medicine Ball Training Group and Control Group

Test	Medicine BaU Training Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test							
Mean	20.7	20.9	Between	0.300	1	0.300	0.04
S.D	3.08	2.05	Within	191.86	28	6.852	
Post Test							
Mean	29.9	19.4	Between	821.63	1	821.6	178.61*
S.D	2.08	2.19	Within	128.66	28	4.6	
Adjusted Post Test							
Mean	29.9	19.47	Between	841.92	1	841.9	584.02*
			Within	38.95	27	1.44	

The table values required for significance at 0.05 level of confidence for 1 and 28 & 1 and 27 are 4.20 and 4.21 respectively.

5. FINDINGS

The medicine Ball is a good tool for complete bodywork out. It can be used to strengthen shoulders, back, arms and legs as well as improving core trunk.strength and joint

integrity. Strength training can be very effective through a carefully planned program; which is a fundamental requirement to improve the performance, strength training progresses through basic strength, combined strength and specific strength. The above three qualities of strength can be improved systematically by using Medicine ball as a device for training. Due to these reasons, medicine ball exercises were improved the selected physical fitness components significantly.

6. CONCLUSION

- Based on the results of the study the following findings were drawn:
- Training with medicine ball exercises has significantly increased speed.
- The findings of the study demonstrated that medicine ball training has significant improvement in explosive power.
- Muscular endurance has improved significantly as a result of medicine ball exercise.

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SPORTS AND NUTRITION

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ABSTRACT

A number of factors contribute to success in sport, and diet is a key component. An athlete's dietary requirements depend on several aspects, including the sport, the athlete's goals, the environment, and practical issues. The importance of individualized dietary advice has been increasingly recognized, including day-to-day dietary advice and specific advice before, during, and after training and/or competition. Athletes use a range of dietary strategies to improve performance, with maximizing glycogen stores a key strategy for many. Carbohydrate intake during exercise maintains high levels of carbohydrate oxidation, prevents hypoglycemia, and has a positive effect on the central nervous system. Recent research has focused on athletes training with low carbohydrate availability to enhance metabolic adaptations, but whether this leads to an improvement in performance is unclear. The benefits of protein intake throughout the day following exercise are now well recognized. Athletes should aim to maintain adequate levels of hydration, and they should minimize fluid losses during exercise to no more than 2% of their body weight.

Keywords: Nutrition, Diet, Sports, Athletes, Performance, Training.

1. INTRODUCTION

Nutrition is increasingly recognized as a key component of optimal sporting performance, with both the science and practice of sports nutrition developing rapidly. Evidence supports a range of dietary strategies in enhancing sports performance. It is likely that combining several strategies will be of greater benefit than one strategy in isolation. Dietary strategies to enhance performance include optimizing intakes of macronutrients, micronutrients, and fluids, including their composition and spacing throughout the day.

In almost all sports activities the diet during training period should be rich of complex carbohydrates along with low fat diet. This diet helps to provide sufficient energy during training period. The diet one week before the competition should be rich of complex carbohydrates (like rice, wheat, bread, potatoes, cereals, milk, cakes, etc.). This raises the glycogen store of energy in the body. Vitamin and minerals should also be maintained during this period.In contact sports (Wrestling, Judo, Kabaddi, Karate) there are lot of injuries during training period. Thus, their diet has more amount of proteins to repair and replace the worn out tissues. These players are also advised to take lot of complex carbohydrates along with vitamins and minerals.In explosive activities like throws, jumps, weightlifting, etc., the player should take lot of vitamins, minerals, whereas raised amount of proteins are also advised.

To know the role of particular diet, it would be better to know the role of essential nutrients on performance of sportspersons. These essential nutrients are described below:

Carbohydrates

Carbohydrates are the main source of energy in all activities. They provide quick energy to the body and are not stored in the body for long. The ratio of carbohydrates is increased in endurance events/activities. Carbohydrates i.e. CHO2 are compounds of carbon, hydrogen and oxygen. Carbohydrates are of two type (i) simple carbohydrates (ii) complex carbohydrates

(i) Simple carbohydrates contain vitamins and minerals: Sugars are simple carbohydrates, which are used to provide energy immediately. These are called quick energy foods.

Sources of simple carbohydrates: They naturally occur in fruits, milk and milk products and vegetables. (Potatoes, Carrots). They are also found in processed and refined sugars such as honey, jam, cakes, pastries, ice cream, table sugar, candy, syrups and regular carbonated beverages (drinks), jiggery (gurh).

Refined sugars provide calories, but lack in vitamins, minerals and fibers.

(ii) Complex carbohydrates of are good source minerals, vitamins and fibers: Starches are complex carbohydrates that contain several sugar molecules combined together

chemically. Their energy content is higher than sugar but is released more slowly.

Sources of complex carbohydrates: They are found in breads, cereals (wheat,bajra, rice), starchy vegetables and whole pulses (Chane,moong,rajma)

Proteins
Proteins are the basic structure of all living cells. These are complex organic compounds. The basic structure of proteins is a chain of amino acids that contain carbon, oxygen, hydrogen and nitrogen. The presence of nitrogen differentiates protein from carbohydrate and fat.

There are two types of proteins
- Non essential proteins
- essential proteins

(a) Non-essential protein: The human body needs approximately 20 amino acids for the synthesis of its proteins. The body can make only 13 of the amino acids that are known as the non-essential proteins or amino acids. In fact, they are essential but we do not have to get them from food we eat.

(b) Essential proteins: There are 9 essential amino acids, which are taken only from food and not made in the body. Thus, they are called essential proteins or amino acids.

If the proteins of a food supplied contain enough of the essential amino acids it is called complete protein food. If the proteins of a food do not supply the essential amino acids it, is called an incomplete protein food.

2. SOURCES OF COMPLETE PROTEINS

All meat and other animal products are sources of proteins. The best sources of complete proteins are eggs, milk, meat, poultry, beef and milk products.

Sources of Incomplete 'Proteins
Grains, fruits and vegetables are the same of incomplete proteins as they lack one of the essential amino acids. The plant protein can be combined to all of the essential amino acids and from a complete protein. For example, complete plant proteins are rice and and beans, milk and wheat cereal, and corn and beans.

Fats
Like carbohydrates, fats also contain carbon, **hydrogen and oxygen**. They are the most concentrated source of energy in foods. One gram of fat provides double the energy provided by one gram of carbohydrates. Since our body can store fats, they work as energy banks and are called stored energy foods. The energy is provided when there is a need. If we eat more carbohydrates than required by our body the body converts the extra amount into fats and stores it. Our body mainly stores fats under skin and also in the regions of the kidneys and the liver.

Sources of Fats
Saturated fats are in foods from both animal and vegetable sources. Animal sources include meat, poultry and dairy products like milk, cream, cheese, butter and ice cream. Vegetable sources include palm, coconut oils. Mono unsaturated fat is found in large amounts in foods from plants including peanut and olive oil. Polyunsaturated fats are found in foods from plants including sunflower, corn and soyabean and also fish oil.

Vitamins
Vitamins are essential in the normal diet for good performance in work and sports but there is no clear-cut evidence that extra amount of vitamins improves the performance. In fact, the body cannot store the large amount of vitamins; most of the excess amount of vitamins is excreted through the urine. This gives only extra work to the excretory organs. There are only three vitamins which have received the attention of researchers. These are stated below:
- **Vitamin 'C'**. Low level of vitamin 'C' intake does not reduce the work performance significantly. Approximately, 60 mg of vitamin 'C' intake by non-athletes and 300 mg to 500 mg intake by successful athletes do not have any harmful effect on kidneys.
- **Vitamin 'E'**. Several studies conducted on the use of Vitamin "B have shown little or no effect on the performance. lt has been established that excess amount of Vitamin 'E' intake does not improve the performance in sports.
- **Vitamin 'B-complex'**. Deficiency of vitamin 'B-complex' has shown the decrease in the sport s performance. Several studies related to excess amount of vitamin 'B-complex' intake show both the improvement in performance and no influence on performance. So, there is further need for research to know the effect of this vitamin on the performance.

Minerals
Minerals contain elements needed by our body in small quantities. But these are essential for proper growth and functioning of the body. Their deficiency in our diet causes deficiency diseases.It is well known about minerals that their deficiency can decrease the performance especially during the exercises in hot climate. Sweating reduces the amount of sodium and chloride in the body. Excess amount of salt intake can lead to potassium loss and increased

They are supplied in the form of salts by different foods. Some of the important minerals are mentioned belo:-
- **Iron** is important for the formation of hemoglobin (which is the oxygen-carrying pigment found in red blood cells (RBC). Iron is found in meat, fish, liver, eggs, green vegetables, turnip, germinating wheat grains and yeast. **Recommended daily allowance of iron is about 10 mg.**
- **Calcium** is needed for the formation of strong bones and teeth and also for clotting of blood and muscle contraction. Calcium is found in milk and milk

products, green leafy vegetables. **Daily-recommended allowances of calcium are about 800 mg.**

- **Phosphorus** is required for the development of strong bones and teeth and also for making energy rich compounds in the cells from body. Phosphorus is available in meat, eggs, fish and whole grains. **750 mg. of phosphorus is recommended daily allowance**.
- **Potassium** is important for growth and keeping cells and blood healthy. It is available in green and yellow vegetables. **The recommended daily allowance of potassium is about 2000 mg.**
- **Sodium** is needed for the proper functioning of the nervous system. It is found in common salt and also in meat and milk products. **Daily - recommended an allowance of sodium is about 500 mg.**
- **Iodine** is essential for proper thyroid function. It deficiency causes a disease called goiter in which a gland in the throat swells up**. Iodine is found in iodized salt, seafood and water.**
- **Fluoride** is important to make the enamel (polish) of the teeth hard and prevent dental caries. It is available in coffee, spinach, onion and tea. **Daily - recommended allowances of fluoride is 4 mg.**
- **Copper** is helpful in red blood cells, connective tissue and nerve fibers formation and functioning. It is found in grains, nuts and chocolate**. Recommended a daily allowance of copper is 3 mg.**
- **Zinc** is required for insulin production and also for functioning of male prostate, digestion and metabolism. **It is available in meat, eggs and fish.**
- **Chloride** is needed for muscle and nerve function and also for digestion. It is found in meat, milk products and fish**. Daily - recommended allowances of chloride is 750 mg.**

Water

Water is a nutrient that makes up almost 70 per cent of our body weight. Most of this water is in our cells. Some is between the cells and some in the blood. Life processes cannot occur without water.

Water plays an important role in the body's molecules:

- In the digestive system water helps to break down complex food molecules.
- Water transports food, wastes, chemicals and gases throughout the body.
- It carries waste products from the body through urine and sweat.
- The body is cooled by the evaporation water in the form of sweat from the skin.
- We lose a lot of water every day as we sweat, breathe, cry or get rid of our wastes. The water in the food we eat replaces approximately half of this water. Vegetables and fruits contain large amount of water. The other half is replaced when we drink liquid. Normally we need 2.5 liter or 8 glass of water every day to stay healthy. Athletes and sportspersons who are active in sports should drink enough water to replace the water they loss through sweating.

3. CONCLUSION

Athletes are always looking for an edge to improve their performance, and there are a range of dietary strategies available. Nonetheless, dietary recommendations should be individualized for each athlete and their sport and provided by an appropriately qualified professional to ensure optimal performance. Dietary supplements should be used with caution and as part of an overall nutrition and performance plan.

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ENHANCEMENT OF PHYSICAL FITNESS COMPONENTS AND MENTAL HEALTH THROUGH YOGA

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ABSTRACT

Every athlete irrespective of sport or discipline has the potential to enhance their ability by adopting a consistent yoga practice. Today's top athletes have a unique ability to consistently perform at their highest potential in comparison to their competition. For high school, college and professional sports, most athletes are very similar in physical abilities, so how are some athletes able to consistently dominate their competitions.

The most important benefit of yoga is physical and mental health therapy. The ageing process which is largely an artificial condition, caused mainly by autointoxication i. e. self poisoning, can be slowed down by practicing yoga, by keeping the body clean ,flexible and well lubricated.

According to medical scientist, Yoga therapy is successful because of the balance created in the nervous and endocrine systems, which directly influences all other systems and organs of the body. Yoga acts both as a curative and preventive therapy. The very essence of yoga lies in attaining mental peace improved concentration powers. Through the practice of yoga we become aware of inter connectedness between our emotional mental and physical levels.

Keywords: Physical Fitness, Mental Health and Yoga

1. INTRODUCTION

Yoga improving strength

Routine and consistent practice of the various yoga Asana helped to build strength and improve lean muscle mass. Most notably with respect to several muscle groups under-utilized in the athletic disciplines of swimming, cycling and running. These gains have enhanced core body stability and significantly impeded overuse injury by strengthening the supportive but otherwise under-developed muscles surrounding the more utilized muscles, creating a more balanced and optimally functional overall strength. Looking for a new way to get in your resistance work? You might be surprised to find that yoga makes a perfect companion for athletes of all sports as well as the "Jack-of-all-trade" fitness enthusiasts. Yoga can help you develop better a breathing technique while it improvises your balance, flexibility, core strength, and endurance.

Prolonged Peak Physical Performance

A dominate athlete will perform at their highest physical ability, pushing their body to its limit, until the very end of their performance, and will do this consistently over each and every performance

Great Balance

Swimmer must have always been rather flexible. But the balance is historically horrible, through a consistent yoga practice, athletes coordination and balance have improved immensely. It is important that Better balance and coordination means enhanced control over how athletes move their body, which in turns leads to better technique and form the brass ring every athlete spends a career refining, whether your focus is a swim stroke, mallakamba twist, drafts and catches, shuttle and volley ball jump shots, wrestling moves, foot ball heading and Pele shot.

Ability to Prevent Serious Injury

A dominant athlete is able to avoid serious injury during each and every performance

Flexibility

Yoga invariably improves joint and muscular flexibility, which is crucial to the body's overall structural soundness. Enhanced joint and muscle pliancy translates to greater range of motion, or an increase in the performance latitude for a particular movement or series of movements.

For example, a swimmer with supple shoulder and hip joints is able to capture and pull more water than a swimmer with a more limited range of motion. The result is more forward movement per stroke as well as enhanced muscular economy. In turn, this increased range of motion provides a greater ability to strength condition a particular muscle group due to the amelioration in overall force that can be exerted with each movement.

Great recovery
A dominant athlete is able to recover more quickly, both mentally and physically, over their competition. They are able to continually compete again, and even at higher mental and physical level than previously, as their competition get tougher and they move towards successful way.

Physical Benefits of Yoga
- Yoga Improves Breathing
- Yoga Improves Balance
- Yoga Increases Range of Motion
- Yoga Improves Recovery Time
- Yoga Strengthen Ankles & Knees
- Yoga Strengthen Tendons & Ligaments
- Yoga Decreases Injuries
- Yoga Increases Body Awareness

Yoga exercises helps in mental (emotional) health
When yoga is used as part of a regular exercise regime, there can be many benefits beyond flexibility or strength training. A lot of athletes use yoga exercises as a form of meditation to clear the mind before a game, but the benefits of yoga extend beyond cleansing the mind. If you are thinking about starting an exercise routine, you might consider using yoga, because there are many emotional benefits of using yoga regularly.

Strong Mental Focus
A dominant athlete is able to maintain a higher level of mental focus, awareness and concentration over his competition, some term this as performing "In the Zone".

Yoga Reduces Stress
One of the best emotional health benefits of yoga is the fact that yoga exercises can reduce stress, which is very important for an athlete. Often times, an athlete will become overwhelmed with an upcoming game or meet, and this can really cause a lot of stress for them, which will hinder athletic performance. Yoga exercises require a lot of concentration, and this means an athlete will be concentrating on the aim at hand, instead of thinking about a sport or game. When an athlete has the ability to concentrate only on the yoga exercises, it can help him reduce overall stress levels, which might increase athletic ability during the competition.

Yoga Increases Concentration
Another important emotional health benefit of yoga is that, it can increase overall concentration, which is very important for an athlete. The ability to concentrate is especially vital during conditioning, a game or an athletic meet, and it can really help them to succeed in sports. Yoga helps to increase concentration levels in an athlete because due to the concentration is needed during the yoga poses. When an athlete performs a yoga pose, he has to focus only on the pose and breathing techniques needed for that exercise, which requires a lot of concentration.

Yoga Relieves Depression
Yoga can also help relieve depression symptoms in an athlete, which can hinder athletic ability or cause them to feel like a failure. When an athlete performs yoga exercises, it can help get rid of the negative energy within the body, which is released through the various poses. If an athlete performs yoga exercises regularly, he will come to know that the depression starts going away, and he will feel overall more positive about life. Since yoga helps the mind and body connection, while also balancing hormones in the body, it is logical that it can relieve depression symptoms. Yoga exercises probably will not relieve an athlete of all their depression symptoms, so a doctor still might be needed for therapy, but it can help reduce the negative energy significantly. If an athlete continues with the yoga exercises through an extended period of time, they will notice better performance in sports, and their esteem will increase as well.

Yoga Increase Overall Mood and Happiness
Yoga is known to increase your overall mood and happiness, which can significantly help an athlete. If an athlete is in a bad mood or is not happy, this can hinder his or her athletic ability during a game. Yoga exercises help balance the hormones within the body, which are responsible for many things, such as mood and quality of life. When an athlete practices yoga, his nervous system will become balanced over time, leading to an increased outlook on life in general. Yoga also help to increase the awareness of the body, create a healthier feeling body, and can increase the mind and body connection, which will also help increase the overall mood of an athlete.

Various Mental Benefits of Yoga
Presence of mind Controlled Breathing & Heart Rate Body and Mind Awareness Control the Stress and Anxiety Internal Discipline and Mind Concentration Relaxation for Healing & Recovery

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THE COMPARISON OF PSYCHOLOGICAL VARIABLE BETWEEN BODY CONTACT AND NON-BODY CONTACT GAMES OF FEMALE PLAYERS

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ABSTRACT

Modern competitive sports are an extremely complex behavioral phenomenon, in tough competition of performance in sports is not related to physical fitness only, rather psychological variables also deeply related to it. The purpose of this study was to compare aggression between body contact and non body contact games of female players, who participated at Inter College, Inter University level players in Utter Pradesh. The sample of 80 players taken each game under age 18-25yrs. The data was collect by used of aggression scale which was constructed by Km.Roma Pal and Dr.Tasneem Nagvi. The collected data was statistically analyzed by employing't'-test' at 0.05 level of significance finding reveled that body contact game players were having significantly more aggressive as compare to non-body contact game players.

Keywords: Aggression, Body Contact, Non-Body Contact, Inter-University.

1. INTRODUCTION

Sports perhaps may be viewed as that aspect of human activity, which essentially strengthens the integration of body and mind. Success in sports is generally attributed to the level of physical fitness, psychological variables, techniques and tactics.

According to Silva and Weinberg during the past two decades, sports psychology has emerged as a legitimate field of scientific enquiry. As with all scientific endeavors sports psychology shows basic goals of science. Researchers are awarded with ample opportunities to observe, describe and explain the various psychological factors that influence diverse aspects of sports and physical activity.

Aggressive behavior is quite visible in sports. Not all aggressive behavior in sports is violent and destructive. Often aggression is "part of the game", and Use of the term aggression refers to a wide range of sports a behavior that causes injury. In fact, many form of aggressive behavior are accepted and even prompted. Aggression is any form of behavior directed toward the objective of harming or injuring another living being [1]Carol and peter anger: **"The Struggle for Emotional control in America's History"** An introduction of physical education (1989), p.196.

Who is motivated to avoid such treatment? Aggression in sports is instrumental as participants use aggressive behavior to get the ball, score point, or stop opponents. Hostile aggression also occurs in sports and often the dividing line between Hostile and Instrumental aggression is quite fuzzy.

"Aggression" describes the behavior but does not give any information about underlying motives or causes. Aggression can have multiple motivations. Aggressive behavior is quite visible in sport. Not all aggressive behavior in sport is violent and destructive often aggressive is "Part of game" use of the term aggression refers to a wide range of sports behaviors that causes contusion.

2. METHODS AND PROCEDURE

For the present study subjects or sample selected and tools used to access and evaluate the aggression between body contact and non body contact games of female players, who participate at the level of all India inter university level is given as follows.

Sample

For the purpose of this study a total eighty five(85) female players were selected from each games (Hockey, Basket ball, Handball, Table-tennis, Badminton and Volley ball)

who participated at all India inter- university level from their respective colleges. Their age range 18-25.

3. TOOLS

The data was collected by questionnaires method using questionnaire table i.e. aggression scale by Km. Roma Pal and Dr. Tasneen Naqvi. To administer the test as per the specified instructions by researchers to the players. First of all permission was obtained from the coaches. The administration of the test was conducted in groups. The data collected after scoring the response of the subjects was statistically analyzed with help of the computer. There were two groups, one is body contact and another is non body contact games. T-test is computed to significance of differences between these groups. The level of significance for this study was set at 0.05.

Table 1

Subject	Mean	SD	T-TEST
Body contact games	6.2	0.81	0.67
Non-Body contact games	6.1	0.75	

The above table showed that there was significant difference found between both the groups. However body contact game players showed more aggressive than non-body contact games players.

4. RESULTS AND DISCUSSION

The result of the study showed that the significance difference in body contact and non-body contact games of the female players. Body contact game players are more aggressive than non-body contact game players of Uttar Pradesh. It was hypothesized at the beginning at the study that there is significance difference between body contact and non-body contact games of female players.

5. CONCLUSION

In this study the comparison of psychological variables (aggression) between body contact and non-body contact games of female players. The conclusion is drawn the body contact games and non-body contact players were significant difference. Body contact game players are more aggressive then non-body contact game players of Uttar Pradesh.

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EFFECT OF EIGHT WEEK VARIED EXERCISE TRAINING ON SELECTED PHYSICAL FITNESS COMPONENTS OF COLLEGE STUDENT

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ABSTRACT

The purpose of the present study was to determine the effect of eight week varied exercise training programme on selected physical fitness components of college male student. To achieve the purpose, twenty one (N=21) male college student were randomly selected from boys hostel of Seva Bharati Mahavidyalaya, at Jhargram district, West Bengal. Age ranges of the subjects were 19 to 23 years. The varied exercises training programme was carried out for this study was 4 day per weeks for 8 weeks. The duration of training session was 45 minutes. Prior and after the eight weeks training programme pre test and post test data of cardiovascular endurance, muscular endurance and Body mass index (BMI) were collected by Harvard Step Test, Bend Knee Sit-up and BMI formula. The collected data were analysed by paired t-test and level of confident was set at 0.05 levels. The result of the study was eight week varied exercises training significantly improved cardiovascular endurance, muscular endurance and body mass index of college student.

Keywords: Varied Training, Cardiovascular Endurance, Muscles Endurance, Body Mass Index

1. INTRODUCTION

Physical exercise is any bodily activity where calorie burns during exercise and that maintains physical fitness and overall health and wellness. Generally, physical exercises are grouped into three types; Aerobic and Anaerobic or Continuous and Interval and Flexibility. Flexibility exercises are activities such as stretching help to improve joint flexibility and keep muscles limber. The goal is to improve the range of motion which can reduce the chance of injury. Individuals engaged in physical exercise for various reasons, such as to increasing growth and development, strengthening muscles and to develop cardiovascular endurance, athletic skills, weight loss or management and also enjoyment. Among the major health problems due to sedentary life style in modern era are hearth diseases due to cardiovascular inefficiency and overweight.

Cardiovascular Endurance is the ability of the cardiovascular heart, lungs and blood vessels to supply a sufficient amount of oxygen and nutrients to the cells to meet demands of activities, characterized by moderate contraction of large muscle group over prolonged or longer period of time. The beneficial effect of exercise on the cardiovascular system is well documented. There is a direct correlation between physical inactivity and cardiovascular efficiency. Regular physical exercise showed beneficial effect on vo2 max and physiological parameters of growing children [(7)]. Circuit training programme significantly increased cardiovascular endurance and muscles endurance of the different age grouped persons [(3, 5, 6)]. Previous research indicated that twelve weeks combined circuit and interval training significantly increased cardio-respiratory endurance of the secondary school hockey players [(2)].

Body Mass Index (BMI) is a measure of body fat based on your weight in relation to your height. BMI does not measure body fat directly but it is used as a screening tool to indicate whether a person is underweight, overweight, obeys or a healthy weight for their height. The beneficial effect of physical exercise on body mass index is also well documented. The research of varied physical training and aerobic exercise showed favourable effects on the occurrence of obesity and physical fitness in obese persons [(8, 9)]. BMI of college students was reduced by four weeks yoga and continuous running training [(1)]. Another research indicates that the eight weeks of conditioning exercise significantly reduced body mass index of college student [(4)].

2. OBJECTIVE OF THE STUDY

The purpose of the present study was to investigate the effect of eight week varied exercise training on selected physical fitness components of college male student.

Methodology:

Subjects: Twenty one (N = 21) male student having age range between 19 to 23 years were randomly selected from Seva Bharati Mahavidyalaya at Jhargram district, West Bengal for achieving the purpose of the study. All the selected subjects were Hostellers.

Experimental Design: Pre and post test group design was applied in the present study. Pre test data was collected initial day of experiment and after given the experimental training of eight weeks post test data was collected.

Selection of Variables:

- Cardiovascular Endurance
- Muscular Endurance (abdominal)
- Body Mass Index (BMI)

Critical Measurement:

Cardiovascular Endurance - was measured by used of Harvard Step Test. A bench of 20 inches high and a stopwatch were used in this test. The subjects performed step up and down exercise into the bench for 5 minutes duration with cadence 30 step per minutes. If subjects feels very exhaustion before 5 minute duration, immediate stopped the exercise and seated in a chair. The pulse was counted up to 1 to1.3, 2 to 2.3 and 3 to 3.3 minutes after exercise. The efficiency index was calculated by following formula:

$$PEI = \frac{\text{Duration of Exercise in Second} \times 100}{2 \times \text{Sum of Pulse Counts in Recovery}}$$

Muscular Endurance (Abdominal) was measured by bend knee sit-up for 60 second.

Body Mass Index (BMI) was measured by measurement of height and weight. **Height** of the subjects was measured by anthropometric rod campus and weight was measured by the standard weight machine with using the appropriate procedure. The Body Mass Index (BMI) was calculated by the following formula:

$$\text{Body Mass Index(BMI)} = \frac{\text{Body weight in kg}}{(\text{Height in meter})^2}$$

Training protocol:

The every session of training was started with 7-10 minutes warm-up and training was given four days in a week for 8 weeks. The duration of each training session was 45 minutes. The selected varied exercises training programme was done as per following manner: **Tuesday:** Continue running jogging. **Wednesday:** Circuit training consist of seven stations such as jogging, burpee exercise, side to side sprint, skipping, sit-up, squats jumping jack. 30 second works on each exercise with 40 second recovery. The subjects performed 3 sets with 3 minutes rest between each sets. **Thursday:** Yoga asana were underwent likes Suryanamaskar, Paschimottanasan, Halasana, Vajrasan, Gaumukhasan, Padmasan, Dhanurasan, Bhujangasan, Uttanasana and Utkatasana. **Friday:** Speed, Agility and Quickness training. The present study underwent SAQ drill with 20 meter acceleration, 180 degree turn and acceleration, figure 8 drills, 2 cone shuttle agility and acceleration, slalom weave drill. Selected exercises were conducted according to capability of the subjects.

Statistical Analysis:

For calculating the collected data Mean and SD were measured and paired t-test was applied to find out the significant. The level of significant was set at 0.05 levels.

Result and Discussion:

On the basis of collected data of cardiovascular endurance and body mass index, before and after eight weeks training presented in tables-1:

Table 1: Descriptive statistic of cardiovascular endurance

Variables	Pre Test		Post Test		Df	t-value
	Mean	SD	Mean	SD		
Cardiovascular Endurance	77.62	2.79	87.38	5.00	20	8.92

The level of significant 0.05

Table-1 showed per test and post test mean, SD and calculated t values of cardiovascular endurance of selected subjects. The pre test mean and SD of cardiovascular endurance were 77.62 and 2.79 and post test mean and SD were 87.38 and 5.00 respectively. The calculated t-value of cardiovascular endurance was 8.92. The calculated t-value 8.92 is greater than the required table value of 2.84 for 0.05 level of confidence.

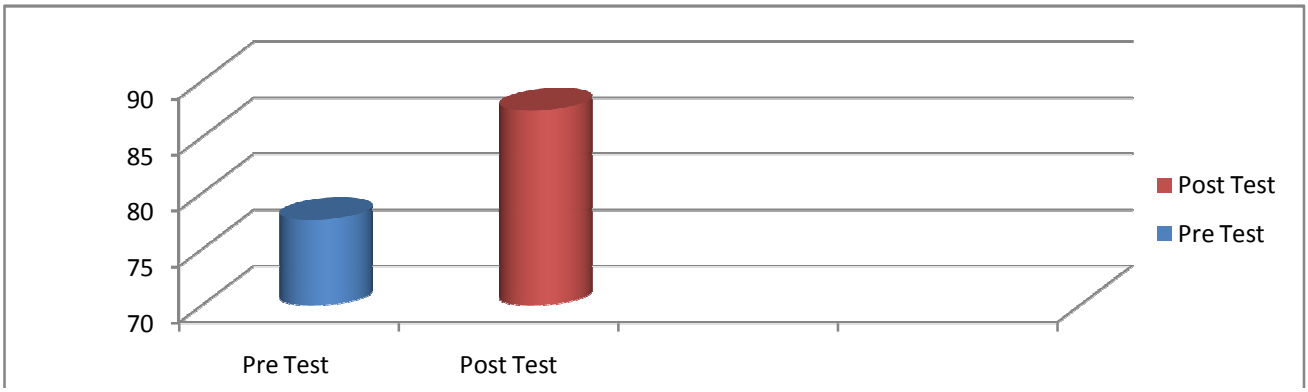

Figure 1: Graphical presentation pre test and post test mean value of cardiovascular endurance.

Table 2: Descriptive statistic of muscular endurance

Variables	Pre Test		Post Test		df	t-value
	Mean	SD	Mean	SD		
Sit-up	20.76	1.54	24.42	2.66	20	12.29

The level of significant 0.05

Table-2 showed per test and post test mean, SD and calculated t values of sit-up scores of selected subjects. The pre test mean and SD of sit-up were 20.76 and 1.54 and post test mean and SD were 24.42 and 2.66 respectively. The calculated t-value of sit-up was 12.29. The calculated t-value 12.29 is greater than the required table value of 2.84 for 0.05 level of confidence.

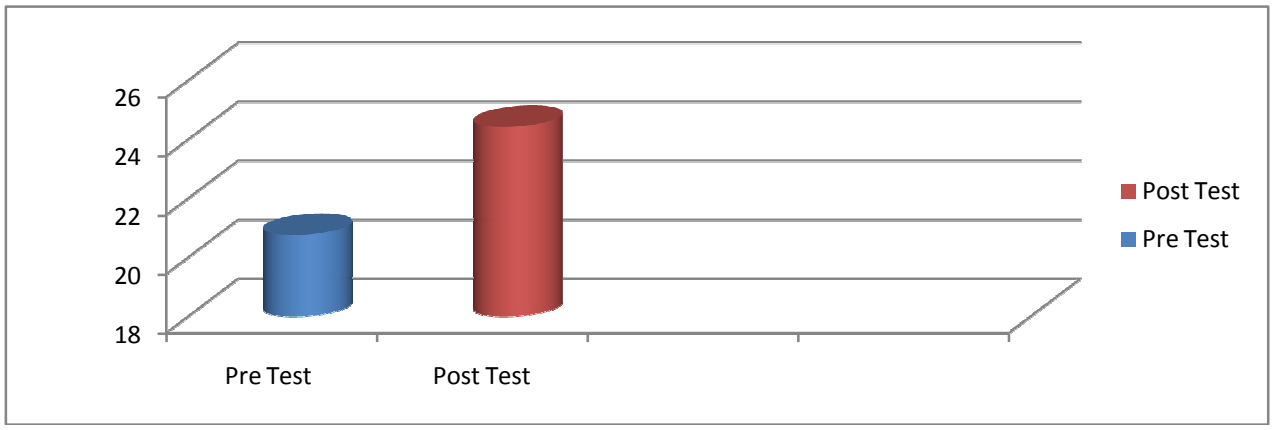

Figure 2: Graphical presentation pre test and post test mean value of sit-up.

Table 3: Descriptive statistic of body Mass index (BMI)

Variables	Pre Test		Post Test		df	t-value
	Mean	SD	Mean	SD		
BMI	22.50	2.53	20.92	2.35	20	7.41

The level of significant 0.05

Table-3 showed per test and post test mean, SD and calculated t values of BMI of selected subjects. The pre test mean and SD of BMI were 22.50 and 2.53 and post test were 20.92 and 2.35 respectively. The calculated t-value of BMI was 7.41. The calculated t-value 8.92 is greater than the required table value of 2.84 for 0.05 level of confidence.

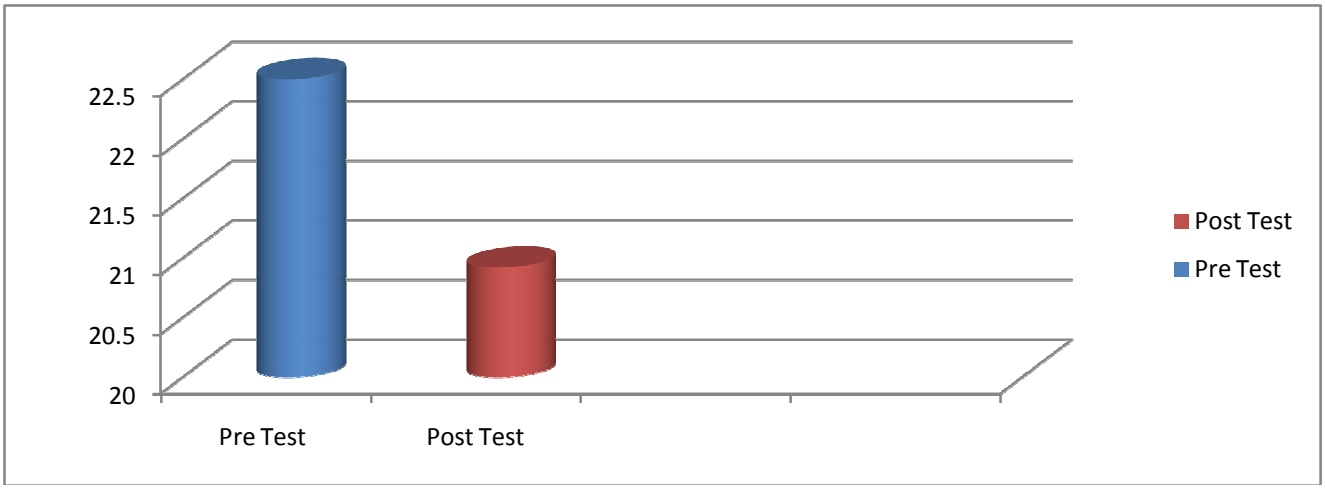

Figure 3: Graphical presentation pre test and post test mean value of BMI

The aim of the present study was to find out the effect of eight week varied exercise training on cardiovascular endurance, muscular endurance and body mass index of college student. The results of the present study represent the calculated t-value of cardiovascular endurance, muscular endurance and BMI were 8.92, 12.29 and 7.41 respectively, and those are the higher then tabulated t-value of 2.84 for 0.05 level of confident. Hence, there was significant different between pre test and post test result of cardiovascular endurance, muscular endurance and body mass index of college student.

3. CONCLUSION

On the base of result of present study, it was concluded that eight week varied exercise training significantly improved cardiovascular endurance and muscular endurance and also significantly reduced body mass index of college student.

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A COMPARATIVE STUDY ON BODY MASS INDEX BETWEEN TRAINED AND NON-TRAINED COLLEGE WOMEN

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ABSTRACT

The purpose of the present study was to compare the Body Mass Index between trained and non-trained college women student. Twenty (N_1=20) B.P.Ed training course women student and twenty (N_2 =20) final years general degree courses sedentary women student were randomly selected from Seva Bharati Mahavidyalaya at Jhargram in West Bengal as subjects of the study. The age ranges of the subjects were 20 to 25 years. The BMI was measured by BMI formula weight in kg / height in meter2. The result of the present study was BMI of trained women were significantly low than non trained women.

Keywords: Trained, Non-Trained, BMI.

1. INTRODUCTION

Dale S. Beach defines training as 'the organized procedure by which people learn knowledge and or skill for a definite purpose'. Training refers to the teaching and learning activities carried on for the primary purpose of helping members of an organization acquire and apply the knowledge, skills, abilities, and attitudes needed by a particular job and organization[1]. The **Bachelor of Physical Education (B.P.Ed)** is a teachers training course especially in physical education subjects, it regulated by NCTE in India. The degree has included topics such as sports science, sports coaching, and outdoor education activity. Its aim to makes students a matured teacher in physical education field and also develop students total personality.

The BMI is defined as the body mass divided by the square of the body height, and is universally expressed in units of kg/m^2, resulting from mass in kilograms and height in metres. The BMI is an attempt to quantify the amount of tissue mass (muscle, fat, and bone) in an individual, but it directly define person as underweight, normal weight, overweight, or obese based on index value, that has prescribed by World Health Organization. Commonly accepted BMI ranges are underweight: under 18.5 kg/m^2, normal weight: 18.5 to 25, overweight: 25 to 30, obese: over 30. People of Asian descent have different associations between BMI, percentage of body fat, and health risks than those of European descent, with a higher risk of type 2 diabetes and cardiovascular disease at BMIs lower than the WHO cut-off point for overweight, 25 kg/m^2, although the cut-off for observed risk varies among different Asian populations[2].

2. OBJECTIVE OF THE STUDY

The aim of the present study was to compare the Body Mass Index between trained and non-trained college women student.

3. METHODOLOGY

Selection of subject:

For achieved the purpose of the study, twenty (N_1=20) B.P.Ed training course women student and twenty (N_2=20) final year general degree courses sedentary women student were randomly selected from the Seva Bharati Mahavidyalaya at Jhargram in West Bengal. The age ranges of the subjects were 20to 25 years.

Variable and measurement:

The present study selected variable Body Mass Index (BMI) was measured by the BMI formula. BMI = Body weight in kg / height in meter2.

The **weight** of the subjects was measured by the standard weight machine and score was recorded in kg. The **height**

of subjects was measured by the stadiometer and score was recorded in meter with the use of appropriate procedures in both cases.

Statistical analysis:
For the statistical analysis Mean and SD of selected variable was calculated. The Independent 't' test was used to find out the significant. The level of significant was set at 0.05 levels.

4. RESULT AND DISCUSSION

The result of BMI was represented in tabular form.

Table 1: Represent Mean and SD value of height and weight

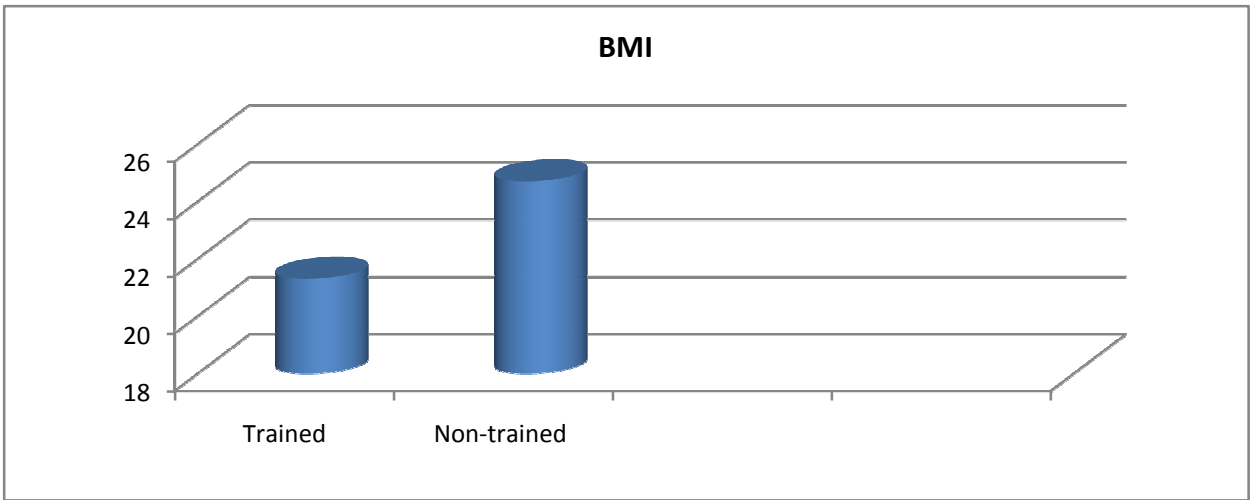
Variable	Trained		Non-trained	
	Mean	SD	Mean	SD
Height (meter)	1.60	5.47	1.54	3.58
Weight (kg)	54.54	6.68	58.6	5.87

Table 2: Represent the Descriptive Statistic of BMI

Variable	Trained		Non-trained		Calculated t-value
	Mean	SD	Mean	SD	
BMI	21.30	2.48	24.70	2.25	3.28

Table -2 represent the mean, SD and calculated t-value of BMI of trained and non-trained subjects. The trained subjects mean and SD were 21.30 and 2.48 and non-trained were 24.70 and 2.25 respectively. The calculated t-value 3.28. The calculated t-value 3.28 is higher than the required tabulated t value for 0.05 levels of confident.

Figure 1



Graphical presentations mean value of BMI between trained and non-trained college women

The several researches those supported this study, **Sarma AS. (2017)** compared on physiological variables between active and sedentary college student, were indicated that the of body mass index of sedentary students were higher than the active student [3]. **Kant Shashi (2017)** compared on flexibility, agility and body mass index of basketball and football players, there body mass index was no significant deferent between basketball and football players [4]. **Sangwan Dheeraj (2016)** compared of body mass index between private and government school children. The result of the study was privet school student BMI was significantly higher than the government school student [5]. **Joshi AA et al. (2015)** declared the Indian female medical students body mass index significantly higher, when compared to the Malaysia medical female student [6].

5. CONCLUSION

On the bases of finding of present study it should conclude that, BMI of trained women student were significantly low than the non-trained student.

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EFFECT OF TRAINING PROGRAM ON TIME TRAIL AND INDIVIDUAL PURSUIT EVENT PERFORMANCE OF TRACK CYCLING STATE LEVEL CYCLIST

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ABSTRACT

The purpose of this study was to determine the effect of 12 weeks specific training program on state level cyclist for improving performance of time trail and individual pursuit events. For this purpose, a total of sixty boys from Kreeda prabodhini, Balewadi, Pune, were considered. The age of the selected subjects were ranged between 15 to 17 years. The training programme was assessed on four Phases (T1, T2, T3 and T4) for every three weeks. One-way ANOVA was computed to establish degree of significant difference between data collected during the period of 12 weeks. The findings of the study reveals that 12 weeks of specific training program had a considerable amplification on time trail and individual pursuit.

Keywords: Time Trail, Individual Pursuit, Revolution Per Minute Aerobic and Anaerobic Capacity, 12 Min Run/Walk, One-way ANOVA.

1. INTRODUCTION

Importance of pedalling cadence in cycling performance

Cyclists know more than anyone the importance of efficiency. Not only do everyday cyclists take pride in how biking can be more energy-efficient than driving a car, but avid cyclists improve personal efficiency in order to obtain optimal performance. They strive to make their bike an extension of their own body to translate every bit of energy their body exerts into power and speed.

In race training, working to strengthen your muscles is important, of course, but if you can simply work to improve your efficiency, you can boost your performance with the strength you already have. To improve cycling efficiency, you'll want to pay close attention to the concept of cadence.

Cadence is simply the speed at which you pedal. Cyclists measure this in revolutions per minute, or rpm. So, if one foot pedals a full circle about once every second, you are cycling at 60 rpm. It's a simple concept, but knowing about how it affects your performance will prove excessively helpful.

Obviously, gears play a large role in cadence and how it translates into performance. It's easier to pedal on a low gear, but you'll have to sustain a very high cadence to move quickly. High gears, on the other hand, let you go faster on a lower cadence, but they require you to push harder to pedal.

Riding hard is a constant balance between oxygen and ventilation in the lungs and between energy production and waste management at the muscle. Changing your cadence, you control the rate at which these processes occur. Bicycle gear allows controlling cadence but skilled cyclist knowing which cadence gives best performance on given race. Always try to match your leg burn to your lung burn. This can be accomplished by changing cadence. If lungs hurt more than your legs, decrease your cadence and push a bigger gear. If legs burn more than lungs, shift in to an easier gear and increase the rpm.

Researcher says that the cadence at which you turn the pedals is critical to keeping your heart rate where you want it. For cardio respiratory benefit, for example,"You need to pedal close to 90 revolutions per minute,". "When a cyclist first starts, that seems like a lot because you're used to doing 50 to 70 revolutions per minute. So, count your rpm's every now and then." One revolution is one complete turn of the pedal with one leg. To count your rpm's, simply count how many times one leg turns in a 15-second time period. Your goal is to reach 22 or 23 revolutions in 15 seconds, which is about 90 rpm's.

Maintaining this cadence means you will have to shift your gears. As the terrain or wind changes, you'll move to a larger or smaller gear so you can maintain pedaling at or

near 90 rpm's. Always Experiment to find what cadence keeps you in your target zones. It will take several weeks or months of regular cycling to learn this skill, says researcher, but it's worth the effort.

2. RELATED FACTORS AFFECT ON CYCLING PERFORMANCE

Understanding factors that affect cycling performance is of interest to scientists, coaches and cyclists alike. Accordingly, various environmental, physiological and biomechanical factors influence cycling performance. From this work, cycling performance would appear to be dictated largely by the ability of the cyclist to produce high power outputs at minimal metabolic costs. As pedal rate (i.e.cadence) can influence both the ability to produce power, as well as rate of energy consumption, cadence selection could have a significant impact on cycling performance. For instance, the adoption of a high cadence has been shown to reduce myelectrical activity, muscle force and neuromuscular fatigue .In contrast, high cadences (80-120rpm) have also less economical than lower cadences (90rpm). Indeed, observed a difference between energetically optimal cadence and neuromuscular optimal cadence in well trained cyclists. In addition, optimal and self-selected cadences have been found to be influenced by cycling intensity, muscle fibre composition and cycling experience.). Best cycling performance was however seen at freely chosen cadence of 90 rpm.

Researcher studies have examined the effects of specific training for beginner cyclist on time trail and individual pursuit event. 12 weeks of specific training for cyclist, which is directly effecting on cadence during cycling. In this study, it was suggested that the decline in self-selected pedal rate may be related to a reduction in perceptions of force associated with increased strength. Indeed, it has been shown that when cycling at constant power outputs (90-180W), perceived exertion is negatively related to pedal rates in the range of 40-80rpm. Despite this, no research has examined the influence of cadence training on self-selected and optimal pedal rates in trained cyclists. As a result it is unknown whether cyclists habitually adopt their own optimal pedalling cadence, mimic the pedal rate of successful cyclists, or both. Further research is needed in order to examine the influence of training at various cadences on optimal and preferred cadence selection. The pedaling rate each min (cadence) is also related to cycling performance, and studies have shown that muscular strength reduces freely chosen cadence (Hansen et al., 2007).

For many years, scientists, coaches and athletes have attempted to determine the optimal pedal rate to apply during a variety of cycling tasks. While numerous investigations have been conducted, the best possible cycling cadence remains unclear. This uncertainty may be due to methodological differences and variations in the precise definition of the term 'optimal' used within cadence research. Indeed, previous research in this area has focused on the effects of various cadences on cycling mechanics, cycling efficiency, neuromuscular fatigue and more recently cycling performance. Therefore the ideal cycling cadence may differ, dependent on whether the term refers to the most economical, powerful, fatigue-resistant or comfortable cadence. For the purpose of this review on cadence, the term 'optimal' refers to the pedal rate resulting in the best possible performance outcome. Competitive cyclists prefer and regularly try to much higher cadences. Competitive cyclists utilize cadences that are higher than the recreational cyclist the average cyclist pedals at about 60 rpm, but advanced cyclists pedal at much higher cadences, from at least 80 rpm to more than 100 rpm. Recreational cyclists ride at low power levels or slow velocities where they can maximize comfort. Competitive cyclists on the other hand must produce high power levels in order to produce the high velocities necessary to be competitive.

3. PEDALLING MOTION

Usually beginner cyclists stomp on the pedals, applying pressure only one the down stroke .They should focus on keeping pedalling with both legs working for the entire revolution. A mostly coach guide to their players use words like "pedalling in circle". Some are refer "Pedalling in triangles" This may strange but studies have shown that some elite riders apply pressure that is consistent with the shape of triangle: pushing down and forward pulling back at the bottom of pedalling arc, and pulling upward to the pedal stroke..The point is that only apply pressure consistently. Don't waste your strength with half pedalling pedal stroke.

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CORRELATION BETWEEN PERIPHERAL VISION, REACTION TIME AND PLAYING PERFORMANCE OF KABADDI PLAYER'S

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ABSTRACT

The purpose of this descriptive corelational study was to investigate the relation between Peripheral Vision (PV), Reaction Time (RT) - Visual reaction time (VRT); Sound reaction time (VRT); Vibration reaction time (ViRT); Nelsan hand reaction time (HRT); Nelsan foot reaction time (FRT) and Playing Performance (PP) of Kabaddi player's. A total of 132 players (70 Male and 62 Female) were selected using the non-probability based purposive sampling technique. The PV of these players was measured using the Ectrecinalti, Hul. (version: 1.4.3) software. RT was measured by the Jerry (Version: 0.6.4) software and the PP was measured using observation method (live match observation-OSST, video recorded observation-OSSV). For statistical analysis in descriptive statistic mean, stander deviation was used and for correlation Pearson correlation was used. Results showed for male Kabaddi players a significant negative correlation between PV and SRT, VRT, ViRT, HRT, FRT (-0.770**, -0.615**, -0.458**, -0.679**, -0.371**) and a positive correlation was found between SRT and VRT, ViRT, HRT, FRT (0.701**, 0.509**, 0.607**, 0.414**); VRT and ViRT, HRT, FRT (0.872**, 0.448**, 0.257*); ViRT and HRT (0.348**); HRT and FRT (0.434**). No correlation was found between PV and OSST, OSSV (-0.010, 0.030); SRT and OSST, OSSV (0.077, -0.043); VRT and OSST, OSSV (0.196, -0.091); ViRT and FRT, OSST, OSSV (0.126, 0.133, -0.036); HRT and OSST, OSSV (0.099, -0.020); FRT and OSST, OSSV (-0.017, 0.149); OSST and OSSV (0.183). For female Kabaddi players a significant negative correlation was found between PV and SRT, VRT, ViRT, HRT, FRT (-0.472**, -0.426**, -0.298*, -0.315*, -0.536**); FRT and OSST (-0.302*) and positive correlation between PV and OSST (0.315*); SRT and VRT, ViRT, HRT, FRT (0.851**, 0.620**, 0.618**, 0.350**); VRT and ViRT, HRT, FRT (0.822**, 0.552**, 0.352**); ViRT and HRT (0.464**); HRT and FRT (0.383**); OSST and OSSV (0.329**). In the female Kabaddi players did not show correlation between PV and OSSV (0.178); SRT and OSST, OSSV (-0.192, 0.072); VRT and OSST, OSSV (-0.191, -0.005); ViRT and FRT, OSST, OSSV (0.218, -0.098, 0.015); HRT and OSST, OSSV (-0.148, -0.100); FRT and OSSV (0.009). Considering the two groups significant negative correlation was found in PV and RT and significant positive correlation was found between in all RT (VRT, SRT, ViRT, HRT, FRT), and correlation was not found in PV and OSST,OSSV; RT and OSST,OSSV. Negative correlation was found in FRT and OSST in only the group of female players.

Keywords: Peripheral Vision, Reaction Time, VRT, SRT, ViRT, Playing Performance.

1. INTRODUCTION

Sport or game is referred to the ability of demonstrating athletic playing performance in a constant way. Experts in sports have significantly higher skill, more ability or performance than novices (Coffee, B., & Reichow, A. W., 1995). They are usually more skilled at extracting and utilizing environmental information and adopting it to existing knowledge so that they can select and execute appropriate responses and reaction. The ability of expert playing performers to exploit perceptual cues can lessen the temporal constraints required in a reaction time task (Collardeau, M., J. Brisswalter, and M. Audiffren., 2001).

The basic elements of sports vision include visual reaction time and peripheral vision (Planer, P.M., 1994). These factors significantly influence the perceptual abilities of an athlete, although they have fundamentally different backgrounds. The peripheral vision is influenced by general functions of the human visual system. Anatomically reaction time is connected with information and cognitive processes of movement control and regulation, influenced by the functions of the central nervous system and muscle effectors. But in motor reaction time is the period of time between the signal and completion of an action (Raczek, J., 1991), thus it has both sensory and motor characteristics of reaction. Abernethy described the visual system as mutual interactions between variables of the system, namely hardware and software

(Abernethy, B., 1987).

In sports or game the system is understood as the mechanical and optometric properties of the visual system, unrelated to specific activities (i.e., visual acuity, ocular health, binocular abilities like accommodation (focus and fusion), depth perception, color discrimination, and peripheral vision). These all visual functions can be measured using standard optometric techniques. The software system is connected more with cognitive aspects: visualization, visual concentration, visual perception, reaction time to visual stimuli and visual search. The issue of visual perception in athletes or players is still not thoroughly researched. On one hand, some show that visual functions in athletes are better than in non athletes. And professional athletes have better parameters of the visual system than lower level athletes.

In sport or game which allows a very minimal amount of time to react, so player has to give proper and quick response during the game. A study done by Hascelik found decrease in the VRT and PV of male volleyball players (Hascelik, B.J., et. al, 1989). Another study done by Nougier (Nougier,V., et.al, 1989) suggests that an athlete has better reaction time as compared to control subjects. In game skilled decision making is critical to expertise across a broad range of human endeavours. Proficiency in decision making requires skilled performers to select from and integrate the most useful visual information available to them whilst ignoring other less salient sources of information. For instance, skilled decision making ability in chess is underpinned by the ability to search for and recognize structured patterns of play in an effort to encode and recall meaningful associations between chess pieces (Deveau, J., Thurman, S., & Seitz, A. R., 2016). Similarly, the development of skill in airport-security screening is the result of an ability to perceptually organize and recognize objects in security images so that targeted objects stand out from other distracting objects (McMorris, T., J. Sproule, S. Draper, and R. Child., 2000). In dynamic externally paced activities like those encountered when driving, crossing a road, and playing sport, the more acute temporal demands imposed by these tasks mean that key objects must be recognized quickly, and accurately, to support optimal performance. For instance, expert drivers have a superior capacity to recognize and anticipate future hazards when driving, allowing them to decrease their incidences of vehicle accidents (Hoffman, L. G., Polan, G., & Powell, J., 1984; Uchida, Y., Kudoh, D., Higuchi, T., et al., 2013). Similarly, skilled athletes in fast ball-sports like soccer, field hockey, and basketball are able to make better, and earlier decisions, in large part because of their ability to search for and recognize meaningful patterns of play (Crist, R. E., Li, W., & Gilbert, C. D., 2001; Starks, J. L., & Ericsson, K. A., 2003) and by learning the sources of information that provide the earliest possible in dictation of the outcome of a movement (Beckerman, S., & Hitzeman, S. A., 2003; Jayesh Solanki et al., 2012).

The present study to see the effect which involves decision making speed of cognitive processes (reaction time) and peripheral vision and playing performance correlation in male and female kabaddi player group.

2. MATERIAL AND METHOD

The present study was conducted in Pune City a total of 132 players (70 Male and 62 Female) who participated in kabaddi open selection trail which was held in 2016 and they were selected using the non-probability based purposive sampling technique. The research informed consent obtained from each subject to inclusion in the study. Personal history was collected in pre-designed program. After taking consent, Peripheral vision was measured with Ectrecinalti, Hul. (Version: 0.6.4) software (Jose, S., Gideon, P.K., 2010). Peripheral vision was measured where subject has to respond to different shape that has the most number four shapes (circle, triangle, square, star). Test the number of correct answers by pressing correct key on screen. Given stimulus appearing on screen only for 5 sec. If made mistake the test should end on that level. Reaction time was measured with Jerry (Version: 0.6.4) software (Jose, S., Gideon, P.K., 2010). It was carried out with adequate light and in silent atmosphere. VRT was measured where subject has to respond to different color stimulus appearing on screen by pressing key on screen. SRT was measured where subject has to respond to sound/bip whenever stimulus appearing pressing key on screen. ViRT was measured where subject has to respond to vibration stimulus appearing pressing key on screen. During the reaction time testing visual, sound and vibration stimuli were given for five times and average reaction time was taken as the final reaction time. And also nelson hand, foot reaction test was used. And the PP scored was measured using observation method (live match observation-OSST, video recorded observation-OSSV). Subject were given practice session before measuring the actual peripheral vision and reaction time. Data was collected and was statistically analyzed. Peripheral vision and reaction time was reported as mean, standard deviation. The correlation between PV and RT of male kabaddi players was tested by Pearson correlation test, by SPSS software.

3. RESULT

As per table no 1. Male kabaddi player group mean and slandered deviation of PV 24.936, (±6.700); SRT 325.746, (±89.295); VRT 317.031, (±84.185); ViRT 303.920, (±70.887); HRT 1.440, (±0.077); FRT 1.817, (±0.095); OSST 0.600, (±1.674); OSSV - 0.635, (±1.594).

Table.1. Male kabaddi player descriptive analysis. (N=70)

Test	*Mean*	*Std. Deviation*
PV	24.936	6.700
SRT	325.746	89.295
VRT	317.031	84.185
ViRT	303.920	70.887
HRT	1.440	0.077
FRT	1.817	0.095
OSST	0.600	1.674
OSSV	- 0.635	1.594

Table.2. Male kabaddi player correlation analysis. (N=70)

Test	*SRT*	*VRT*	*ViRT*	*HRT*	*FRT*	*OSST*	*OSSV*
PV	-0.770**	-0.615**	-0.458**	-0.679**	-0.371**	-0.010	0.030
SRT		0.701**	0.509**	0.607**	0.414**	0.077	-0.043
VRT			0.872**	0.448**	0.257*	0.196	-0.091
ViRT				0.348**	0.126	0.133	-0.036
HRT					0.434**	0.099	-0.020
FRT						-0.017	0.149
OSST							0.183

** 0.01 and *0.05 Significant level.

As per table no 2. In male kabaddi player group which was statistically significant at 0.05 significant leave. This indicate that there is negative correlation between PV and SRT, VRT, ViRT, HRT, FRT (-0.770**,p<0.001; -0.615**, p<0.001; -0.458**, p<0.001; -0.679**, p<0.001; -0.371**, p<0.002) and a positive correlation was found between SRT and VRT, ViRT, HRT, FRT (0.701**, p<0.001; 0.509**, p<0.001; 0.607**, p<0.001; 0.414** p<0.001;); VRT and ViRT, HRT, FRT (0.872**, p<0.001; 0.448**, p<0.001; 0.257*, p<0.032); ViRT and HRT (0.348**, p<0.003); HRT and FRT (0.434**, p<0.001). This is also statistically significant at 0.05 significant leave. No correlation was found between PV and OSST, OSSV (-0.010, p<0.937; 0.030, p<0.806); SRT and OSST, OSSV (0.077, p<0.525; -0.043, p<0.723); VRT and OSST, OSSV (0.196, p<0.104; -0.091, p<0.452); ViRT and FRT, OSST, OSSV (0.126, p<0.300; 0.133, p<0.273; -0.036, p<0.765); HRT and OSST, OSSV (0.099, p<0.416; -0.020, p<0.871); FRT and OSST, OSSV (-0.017, p<0.890; 0.149, p<0.218); OSST and OSSV (0.183, p<0.130). All this they are not statistically significant at 0.05 significant leave.

As per table no 3. Female kabaddi player group mean and slandered deviation of PV 23.427, (±7.355); SRT 358.484, (±113.332); VRT 353.897, (±118.423); ViRT 319.790, (±78.373); HRT 1.505, (±0.156); FRT 1.856, (±0.132); OSST 0.993, (±1.596); OSSV - 0.522, (±1.661).

Table.3. Female kabaddi player descriptive analysis. (N=62)

Test	*Mean*	*Std. Deviation*
PV	23.427	7.355
SRT	358.484	113.332
VRT	353.897	118.423
ViRT	319.790	78.373
HRT	1.505	0.156
FRT	1.856	0.132

OSST	0.993	1.596
OSSV	- 0.522	1.661

Table.4. Female kabaddi player correlation analysis. (N=62)

Test	*SRT*	*VRT*	*ViRT*	*HRT*	*FRT*	*OSST*	*OSSV*
PV	-0.472**	-0.426**	-0.298*	-0.315*	-0.536**	0.315*	0.178
SRT		0.851**	0.620**	0.618**	0.350**	-0.192	0.072
VRT			0.822**	0.552**	0.352**	-0.191	-0.005
ViRT				0.464**	0.218	-0.098	0.015
HRT					0.383**	-0.148	-0.100
FRT						-0.302*	0.009
OSST							0.329**

** 0.01 and *0.05 Significant level.

As per table no 4. In female kabaddi player group which was statistically significant at 0.05 significant leave. This indicate that there is negative correlation between PV and SRT, VRT, ViRT, HRT, FRT (-0.472**, p<0.001; -0.426**, p<0.001; -0.298*, p<0.019; -0.315*, p<0.013; -0.536**, p<0.001); FRT and OSST (-0.302*) and positive correlation between PV and OSST (0.315*, p<0.013); SRT and VRT, ViRT, HRT, FRT (0.851**, p<0.001; 0.620**, p<0.001; 0.618**, p<0.001; 0.350** p<0.005); VRT and ViRT, HRT, FRT (0.822**, p<0.001; 0.552**, p<0.001; 0.352** p<0.005); ViRT and HRT (0.464**, p<0.001); HRT and FRT (0.383**, p<0.002); OSST and OSSV (0.329**, p<0.009). This is also statistically significant at 0.05 significant leave. In the female Kabaddi players did not show correlation between PV and OSSV (0.178, p<0.167); SRT and OSST, OSSV (-0.192, p<0.135; 0.072, p<0.580); VRT and OSST, OSSV (-0.191, p<0.137; -0.005, p<0.969); ViRT and FRT, OSST, OSSV (0.218, p<0.088; -0.098, p<0.449; 0.015, p<0.905); HRT and OSST, OSSV (-0.148, p<0.251; -0.100, p<0.441); FRT and OSSV (0.009, p<0.947). All this they are not statistically significant at 0.05 significant leave.

4. DISCUSSION

The aim of this study was to determine the correlation in PV, RT, PP of kabaddi players. Reaction time is an important component of motor movement and physical fitness. It is one of the important methods to study a person's central information processing speed (Ando, S., et.al. 2002). Reaction time is an accurate indicator of speed and effectiveness of decision making. VRT can be of crucial value in activities like driving and is an important quality of a sports persons (Glenister, D., 1996; Scully, D. et,al. 1998). The authors expected that age, along with accompanying motor development, could also influence visual perception skills. Their research showed statistically significant (p<0.05) superiority of the older group in eye-hand coordination, eye-body coordination, and reaction time to visual stimuli (software skills). The younger group, however, had better results in tests investigating static visual acuity, contrast sensitivity, and stereoscopic examination (hardware skills) (Dane, S. and Erzurumluoglu, A., 2003). And also proved that the central and peripheral visual reaction time of soccer players is significantly shorter than that of non athletes. Their results suggest that soccer players are better able to respond quickly to a stimulus presented to both their peripheral and central visual fields (Ando, S., et al. 2001). One of the fundamental functions of peripheral vision is to focus attention on objects perceived outside the central field of vision. The photoreceptors in the human retina are not evenly distributed. The further from the central fovea of the retina, the lower the density of the receptors, and consequently the lower the visual resolution (Erickson, G. B., 2007). Many previous researches, indicate a superior response on behalf of the elite athletes (Naresh, K. e.,al, 2012). Generally expert performers benefit from more experience gained from practice and professional competition which is correlated to higher knowledge and skill (Voss, M. W., Kramer, A. F., et. Al., 2010). In previous findings that reaction time performance improves as a result of the time spent on practice (Buchsbaum, M. and Callaway, E., 1965). Also find visual skill and reaction time in rugby players from different age group. The authors expected that age, along with accompanying motor development in this research showed statistically significant (p<0.05) superiority of the older group in reaction time (Venter S.C., Ferreira J.T.,2004).

Based on the finding of present study that both group correlation result shows that, there was strong negative correlation found in PV and SRT, VRT, ViRT, HRT, FRT. And positive correlation found in between all RT. But both group there was no correlation found in PV and PP, RT and PP.

5. CONCLUSION

In Male kabaddi player group.

- Negative correlation is found in the.
- *PV and SRT, VRT, ViRT, HRT, FRT. But in this high negative correlation is found in the PV and SRT. And low negative correlation is found in the PV and FRT.*
- Positive correlation is found in the.
- *SRT and VRT, ViRT, HRT, FRT; VRT and ViRT, HRT, FRT; ViRT and HRT. But in this high correlation is found in the VRT and ViRT. And low negative correlation is found in the VRT and FRT.*
- No correlation is found in the.
- ViRT and FRT; PV and OSST, OSSV; all RT and OSST, OSSV.

In Female kabaddi player group.

- Negative correlation is found in the.
- *PV and SRT, VRT, ViRT, HRT, FRT. But in this high negative correlation is found in the PV and FRT. And low negative correlation is found in the PV and ViRT.*
- Positive correlation is found in the.
- *SRT and VRT, ViRT, HRT, FRT; VRT and ViRT, HRT, FRT; ViRT and HRT. But in this high correlation is found in the SRT and VRT. And low negative correlation is found in the SRT and FRT.*
- No correlation is found in the.
- *ViRT and FRT; PV and OSST, OSSV; all RT and OSST, OSSV.*

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A SURVEY OF POSTURAL CHARACTERISTICS ON SCHOOL CHILDREN

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ABSTRACT

The purpose of this study was to survey the selected postural characteristics on school children.One hundred school children with age group 10 to 12 years, from Presidicum School, Gurugram were purposively selected. Iowa posture test was used to examine the postural characteristics and all the subjects directed to assemble in swimming costume and examined on selected items of Iowa test such as foot mechanics (weight distribution & direction of feet), Body Mechanics of standing and walking. Scoring for Iowa test was as follows: Weight Distribution; No pronation – 3, Some pronation – 2, Marked pronation – 1, Direction of Feet; Feet normal – 3, Moderate toeing out – 2, Marked toeing out- 1, Standing Body Mechanics; Correct alignment- 3, Slight general deviation or moderate deviation of one part- 2, Marked general deviation – 1, Body Mechanics in Walking; Rate as for standing, checking particularly for any change from the standing position, record stiffness, if present- 3, 2, or 1 point further on the basis of scoring all the children were categorized in to Good, Fair and Poor.

Frequencies statistics revealed that overall school children had 7.5% poor, 44.75% fair and 47.75% good, posture characteristics on all the selected postural items. Further chi-square obtained for weight distribution is 26.00, for direction of feet 20.720, for standing mechanics 43.220 and for walking mechanics 38.660, with a significance level of .000, which falls well below the .05 alpha level in all postural items. Thus it can conclude that school children significantly differ on selected postural characteristics.

Keywords: Postural Characteristics and IOWA Test Items.

1. INTRODUCTION

The visual appeal of good posture and poise cannot be denied of course a good posture always improves social and economic efficiency. A child with good posture characteristics is more confident and has efficient movements. Good appearance and good posture of an individual conveys good impression of his well-being. It reflects the alertness activeness, agility and wholesomeness of an individual`s personality. Lack of awareness regarding the concept of proper posture and continues to follow wrong or faulty posture is one of the major causes of deformities. It has also been suggested that discrepancies between childhood anthropometric characteristics and school furniture dimension could be responsible for the development of musculoskeletal conditions (Marschall 1995). In fact, prolonged sitting postures and school bag carriage are equally associated with poor posture(Watson 2002). Every individual has his own characteristics of sitting, standing and walking habits, which are result of combination of health and lot of body type with educational, occupational, psychological or mechanical fluencies and no two of us can be expected to look alike in posture any more of them in face certain family similarity show in bodies as in faces but environmental factors influences health of mind and body so markedly that family characteristics are less marked in posture than in such purely inherited traits as color of eyes and hair and shape of the nose(Rathbonea 1965).In a clinical setting, contemporary postural analysis systems enable the clinician to rapidly perform a quantitative postural evaluation and could eventually be used in patient counselling and treatment monitoring. Several such systems have been found to have high degrees of reliability and validity and are easy to use in a clinical setting (Dunk 2004, Normand 2002). Therefore the purpose of this study was to investigate the postural characteristics of school children.

2. METHOD & MATERIALS

This study was undertaken to investigate the postural

characteristics of school children. One hundred school children with age group 10 to 12 years, from Presidicum School, Gurugram were purposively selected. Iowa posture test was used to examine the postural characteristics and all the subjects directed to assemble in swimming costume and examined on selected items of Iowa test such as foot mechanics (weight distribution & direction of feet), Body Mechanics of standingand walking.

For investigation of foot mechanics examiner assembled the subjects in a line and asked them to walk ten to fifteen steps bare foot and then return to their starting position to check on toeing straight ahead and the presence or absence of pronation. Scoring for Iowa test was as follows: Weight Distribution;No pronation – 3, Some pronation – 2, Marked pronation – 1, Direction of Feet; Feet normal – 3, Moderate toeing out – 2, Marked toeing out- 1, Standing Body Mechanics; Correct alignment- 3, Slight general deviationor moderate deviation of one part- 2, Marked general deviation – 1, Body Mechanics in Walking; Rate as for standing, checking particularly for any change from the standing position, record stiffness, if present- 3, 2, or 1 point.Scoring for posture assessment was as follows: 3 – Good, 2 – Fair, 1 – Poor.

3. RESULTS

In order to investigate posture characteristics of school children Frequencies statisticswere employed. The data was also analyzed by using Chi-square for testing the null hypothesis: No difference will be in Posture Characteristics among children.

Frequencies statistics was used with regard to posture characteristics of school children are presented in table-1

Table 1: Performance of Students on IOWA Posture Characteristics Test

Variable	Performance		
	Poor	Fair	Good
Weight Distribution	10	40	50
Direction of Feet	12	42	46
Standing Mechanics	3	43	54
Walking Mechanics	5	54	41

Table 1 clearly revealedthat a total of 100 school children were assessed for selected posture characteristics.Out of 100 school children in case weight distribution 10% had poor, 40% had fair and 50% had good pattern where as in case of direction of feet 12% has poor, 42% had Fair and 46% had good posture characteristics. In standing mechanics 3% had poor, 43% had fair and 54% had good standing posture although in case of walking mechanics 5% had poor, 54 had fair and 41% had good walking style.

The graphical representation of means of different postural characteristics of school children is presented in Figure-1.

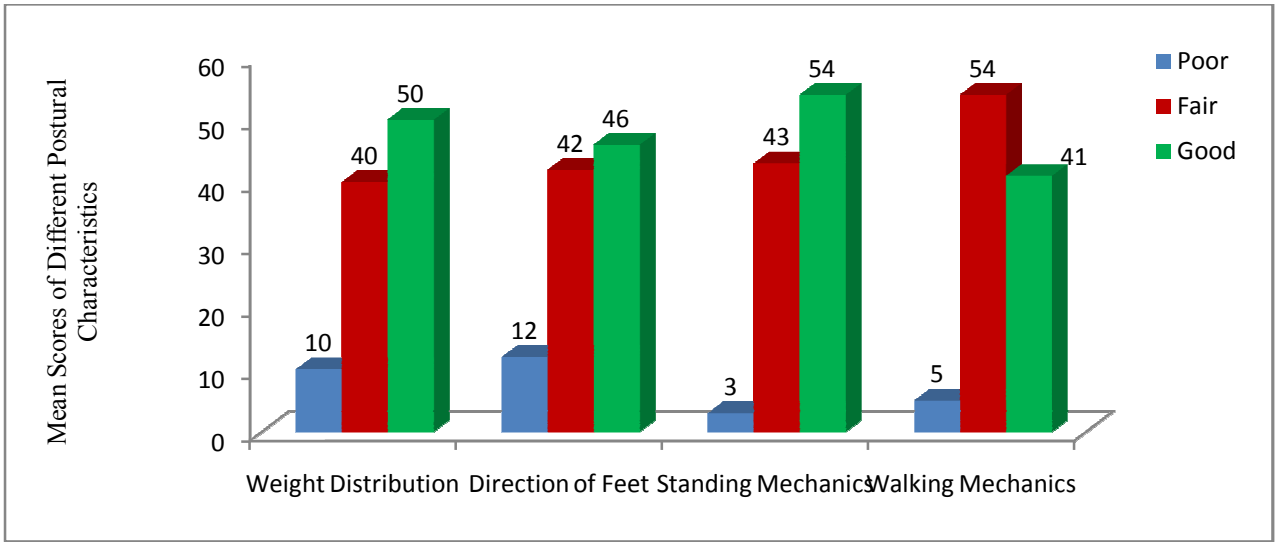

Figure 1: Graphical Comparison of the mean sores of different postural characteristics of school children

Table 2- Chi- Square Analysis of Posture Characteristics of School Children

Weight	Direction Mechanics	Standing Mechanics	Walking Distribution	of Feet
Chi-Square	26.000a	20.720a	43.220a	38.660a
df	2	2	2	2
Asymp.Sig.	.000	.000	.000	.000

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 33.3.

It is evident from Table-2 that the chi-square obtained for weight distribution is 26.00, for direction of feet 20.720, for standing mechanics 43.220 and for walking mechanics 38.660, with a significance level of .000, which falls well below the .05 alpha levels in all postural items. Thus it can conclude that school children significantly differ on selected postural characteristics. The null hypothesis is that no difference will be in posture characteristics among children is failed to accept by this analysis at 0.05 level of significance.

4. DISCUSSION

From the findings it is clearly seen that direction of feet and weight distribution were two postural characteristics which found common among all the children. It may be due to the fact that majority of students have wrong habits especially for foot mechanics.

Further it was also found that overall school children had 7.5% poor, 44.75% fair and 47.75% good, posture characteristics on all the selected postural items. The unsatisfactory posture characteristics may be due to many of the factors such as – lack of guidance & awareness, bad quality of foot wears, malnutrition, lack of participation in physical activities, lack of muscle strength, diseases, lack of stretching, poor fitness etc. In some cases heredity can be affect the posture because heredity disease occur from parents to off spring and children's get the bad posture. On the other hand, several authors have suggested that postural habits and other environmental factors could influence postural development (Black 1996, Murphy 2004). These observations are not surprising since children, attending traditional school, spend over 95% of their school time in a static sitting position (Cardon 2004). Moreover, children and adolescents spend an average of 1.5 hours a day playing video games and using computers (Marshall 2006). Thus, with the increasing number of hours spent in the sitting position at home and at school during childhood, sagittal plane postural translations may increase with age.

This suggests the need forpreventive measures and appropriate guidelines with regard to different poor posture characteristics in schoolchildren to protect this age group.

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COMPARISON OF HILL RUNNING AND BACKWARD RUNNING ON ATHLETES

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ABSTRACT

Backward running is a common technique employed in the treatment of a variety of orthopedic and neurological diseases. Backward running training may offer some benefits especially in balance and motor control ability beyond those experienced through running and in hill running, the athlete is using their body weight as a resistance to push against, so the driving muscles from which their leg power is derived have to work harder. The purpose of this study to comparison of hill running and backward running on Athletes and to develop profile of Athletes on the basis of physical variables.

Keywords: Backward Running, Hill Running.

1. INTRODUCTION

Many factors such as decline of balance, lean body mass, decrease of muscular strength of lower limbs, weakening of visual, coetaneous, proprioceptive and vestibular senses may lead to falls [1]. Backward walking/running technique prevalent in football, basketball, and tennis has recently gained popularity as a method for treating patella femoral pain syndrome[6] Various studies on forward and BW have determined the effect of these trainings on biomechanical and kinesiological aspects[5,6,7] however the basic sports performance components have not been looked upon. Interaction of the sensory system, the motor system and the musculoskeletal system play a great role among all the factors. Wei-Ya and Yan [2] proved that the use of simple physical exercise, such as a backward running can improve balance, so it has beneficial effect for healthy individuals. Some motor patterns are easy to describe in terms of e.g. translation and rotation, amplitude, and time. The main hypothesis tested by Winter et al. [3] was whether backward running could be considered as a simple reversal of forward running they suggested that backward running was a near image of forward running. Grasso et al. [4] found that the kinematic results show simple temporal reversal of joint angles. Vilensky et al. [5] Noted that at identical walking speeds, backward running was characterized by shorter time of swing and support phase. However, EMG patterns seem to be significantly different between the two movement directions [4], [5]. All simple or difficult movements, that are not habit, require different, not familiar motor control ability. Hence the purpose of this study was to compare muscle force distribution during forward running and backward running for person who does not walk backwards as training.

Hill running has a strengthening effect as well as boosting your athlete's power and is ideal for those athletes who depend on high running speeds - football, rugby, basketball, cricket players and even runners. To reduce the possibility of injury hill training should be conducted once the athlete has a good solid base of strength and endurance. It builds muscles in your calves, quads hamstrings, glutes and hip flexour.

Play is an essential facet in the Physical, Physiological and Psychological development of child. Play includes sports and games. Sports are generally individualistic where the pattern of movements does not change as in athletics a runner goes on running in a same style with least change in a body movements. In games, movements change from one action to another action. They require more elaborate organization and strategies based on intense competition.

There will be two training variables Hill running and Backward running used to check the components of physical fitness on an athlete and comparison between them will determine the performance.

Objective: The objective of the study was to compare hill running and backward running in athletes

2. MATERIALS AND METHODS

Experimental analysis: To quantify contributions of individual muscles during hill running and backward running 38 male healthy subject under 19 years of Lucknow region is participated in the study. For development of physical components eight weeks training in spring session are delivered related to backward running and hill running. Pre-test and post-test data is collected for comparision.

Data processing: Totally, 38 young healthy male subjects participated in this study. Subjects were free from any musculoskeletal problems and had no recent or remote history of significant lower extremity injuries that might have affected their training. In addition, subjects were excluded from the study in case of any type of the visual or vestibular deficiency. Prior to study obtained informed consent from each participant, and also obtained the study protocol approval from the institution's ethical committee. Data of 38 Subjects are collected before training of eight weeks with the help of AAHPHARD test. After that Backward running and hill running (with the help of up-stairs and down-stairs) were demonstrated, and subjects were given sufficient practice to become confident. We allowed the subject to habituate to running on the unnatural movement respective to their group either hill running with one practice session or Backward running with two or more sessions. Once the subjects were comfortable running, participants walked both hill and backward on planed schedule for one hour per day till eight weeks. For collection of data (pre-test and post-test) and comparison of data of physical components is described below

3. TESTING

Collection of data-: Data will collected by administration of standard tests for Physical variables after pretest before training and post test after training of hill running and backward running.

(50 METER DASH)

Objective: To Measure the speed.
Equipments: Stop watch, track etc**.**

Procedure: An area was marked on a sandy track. Two parallel lines 10 meters in length were drawn 50 meters apart, considering one as starting line. After little warm up the subject took a position behind the starting line. Two subjects ran at the one time. The starter used the command 'Ready' and on clapper sound took off and finish at end line only. One trial was permitted.

Scoring: The score will elapsed time to the nearest tenth of a second between the starting signal and the instant the subjects cross the finish line.

STRENGTH (PULL UPS)

Objective: To measure the arm and shoulder strength.
Equipments: A horizontal bar positioned at a height that allowed the subjects to hang without touching the ground.

Procedure: The bar will adjust to a height that permitted the subjects to hang free from the floor. From the hanging position with an overhand grip(Palms Forward), the body will pulled upward until the chin rest over the bar, and then lowered until the arms were straight . This movement will repeat to exhaustion. The subject will not allow to kick, jerk or use a 'hip' movement.

Scoring: The score will the number of correctly executed chin ups.

POWER (STANDING BROAD JUMP)

Objective: To Measure the explosive power of leg.
Equipments: A measuring steel tape.

Procedure: One meter take off line was on the edge of sandy pit. The subject stood behind the marked line with his feet slightly apart and parallel. He took a crouch position by bending his knees and swings his arms backward then took jump forward as far as he could at the stretch, with one maximum effort along with forward arm swing and landed in front.

Scoring: The distance between the nearer heel mark and the starting line will record. Three trials will give and the best of the trails will record in centimeters.

ENDURANCE (600 METER RUN/WALK)

Objective: To Measure the endurance.
Equipments: Stop watch, wooden clapper etc.

Procedure: on 400 meter sandy track a curved starting line will mark. In the morning session 10 subjects took a position behind the starting line. The starter used the command ready and on clapper sound the subject took off for one complete lap and 200 meters and finish at end line only one trail will permit. Timekeeper took time for two subjects.

Scoring: The elapsed time will record in seconds.

AGILITY (4×10 METER SHUTTLE RUN)

Objective: To Measure the Agility
Equipments: Stopwatch, wooden clapper, two blocks of wood (2'×2'×4) etc .

Procedure: Marking of two parallel lines 3 meters in length were drawn 10 meters the two wooden blocks place on the edge of the other line. On the starting signal with clapper, the subject ran to the wooden block and lifted one block and returns to the starting line and placed the block behind the line. He then return to the second block, lifted it and then sprinted across the starting line on the way back.

Scoring: The elapsed time will record in seconds.

FLEXIBILITY (BENT KNEE SIT-UPS)

Objective: To Measure the muscular flexibility.
Equipments: Stopwatch and Mat.

Procedure: The subject was asked to lie down on his back with the legs bent and the feet flat on the floor close to the

body. The distance between the blocks and the heels was twelve inches. The hands were clasped behind the head. On the signal 'go' the subject came up and touched the elbows to the knee and went back down to the floor to the starting position . He did as many sit-ups as possible in 60 seconds.

Scoring: The score was the completed sit-ups in 60 seconds.

STATISTICAL TECHNIQUE

The data will be collect from 37 male and female from Navodaya Vidyalaya of Lucknow. T-test will use for comparisons between physical fitness components on Athletes. The level of significance will be set at 0.05.

4. TESTER'S COMPETENCY & RELIABILITY OF TEST

The tester competency was evaluated together with the reliability of the tests. To determine the reliability of tests the performance of subject selected at random on the selected variables were recorded twine under identical condition by the scholar.

FINDINGS OF RESULTS

Result and analysis of data

Table 1: Descriptive Statistics jump of Boy Athletes

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre-test jump	2.1227	38	.07152	.01176
	Post-test jump	2.2649	38	.11866	.01951

Interpretation: From above table we see that mean, standard deviation and standard error of pre test jump is 2.122, .071 and .011 respectively. Similarly mean, standard deviation and standard error of post test jump is 2.26, .118 and .019 respectively.

Table 2: Paired t-test to compare jump of boy athletes

	Paired Differences of jump					T	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pre-test post-test	-.14216	.09741	.01601	-.17464	-.10968	-8.877	37	.000

From paired samples test table we see that t value is .8.87 with 37 degrees of freedom and p value is .000, which shows that null hypothesis is rejected and data in significant.

Table 3: Descriptive Statistics 600 meter run of boy athletes

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre-test 600 meter run	1.817	38	.278	.045
	Post-test 600 meter run	1.548	38	.306	.050

Interpretation: From above table we see that mean, standard deviation and standard error of pre test 600 meter run is 1.817, .278 and .045 respectively. Similarly mean, standard deviation and standard error of post test 600 meter run is 1.548, .306 and .050 respectively.

Table 4: Paired t-test to compare 600 meter run of boy athletes

	Paired Differences of 600 meter run					T	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pre-test post-test	.269	.231	.038	.192	.346	7.074	37	.000

From paired samples test table we see that t value is 7.074 with 37 degrees of freedom and p value is .000, which shows that null hypothesis is rejected and data is significant.

Hence, we conclude that there is significant between pre test 600 meter run and post test 600 meter run.

Table 5: Descriptive Statistics knee sit up of boy athletes

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre-test knee sit-ups	32.675	38	10.255	1.685
	Post-test knee sit-ups	39.378	38	14.638	2.406

Interpretation: From above table we see that mean, standard deviation and standard error of pre test knee sit up is 32.675, 10.255 and 1.685 respectively. Similarly mean, standard deviation and standard error of post test knee sit up is 39.378, 14.638 and 2.406 respectively.

Table 6: Paired t-test to compare knee sit up of boy athletes

	Paired Differences of knee sit up					T	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pre-test post-test	-6.702	7.291	1.198	-9.133	-4.271	-5.592	37	.000

From paired samples test table we see that t value is 5.592 with 37 degrees of freedom and p value is 000, which shows that null hypothesis is rejected and data in significant.

Hence, we conclude that there is significant between pre test knee sit up and post test knee sit up.

Comparative Result -: When comparing these measured differences among modes of backward running and hill running on physical components, results are-:

- Non significant result occurred during standing broad jump.
- Significant result occurred during 600meter run which resembles explosive strength.
- Improve flexibility because of occurring significant result during analysis of bent knee sit-up.

5. DISCUSSION

Walking style represents a complex whose significance encompasses both the mechanical requirements of gait, such as: equilibrium, speed, and energy as well as the emotional aspects of life [9]. During hill and backward running muscles produce forces which act directly on the skeleton. These forces influence whole body movement, as ground reactions cause the effects of muscle force to be transmitted to segments remotely from the muscular contraction. This effect is referred to as "dynamic coupling". Understanding the complex mechanisms behind normal gait is challenging [10]. The main aim of this study was to quantify the difference in the leg muscle force patterns during Forward running and Backward running, and validation of muscle force distribution by EMG signal. However, the relationship between EMG and muscle force is not trivial [11]. To do this, RMS and correlation coefficients were used. Błażkiewicz and Wit [12] proved that correlation coefficients and RMS are good methods in comparison with the closeness of the two curves in the shape. They performed comparative analysis of sensitivity of four methods: waveform parameterization, correlation coefficients, RMS and IAE (Integral Absolute Error) in order to compare joint angles with reference curve. The sample scores obtained in this work provide important information about closeness in the shape of two curves. Moreover, authors encourage using multiple techniques of data analysis. Regarding the gait analysis, most publications concern the analysis of muscle forces, muscle activity, kinematic and kinetic parameters during simple running [6]. For hill running and Backward running mixed results were reported. Grasso et al. [4] suggested that the preservation of kinematic templates for the motion of the joints between Backward running and hill running was reflective.

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COMPARATIVE EFFECT OF THREE RECOVERY PROGRAMMES ON SELECTED HEMATOLOGICAL PARAMETERS

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ABSTRACT

The purpose of the study was tocompare the effect of different recovery programmes on selected hematological parameters.Simple random group design method was used for the study. Eight district level basketball players aged between 16-25 years were randomly selected from Birbhum, WB, India as the subject for the study. They were also randomly divided into four groups of equal strength namely Experimental Group-I for Massage (MG), Experimental Group-II for Cold Bath (CBG), Experimental group-III for slow stretching Group (STG) and Control group (CG) will not participate in any recovery programmes. The three experimental groups played a full length basketball match for 40 min. Then immediately after that Pre-test data was collected. Then after a day the subjects again played a full length basketball match and thereafter the experimental groups were given selected different recovery programmes for 10 min. Then immediately after the recovery programmes the post test data was collected. To analyze the data descriptive statistics and the analysis of co-variance (ANCOVA) at 0.05 level of significance was applied.

It is clearly revealed that there was a statistically insignificant difference in Hemoglobin, Glucose and Lactic Acid among experimental groups (massage group, cold bath group& slow stretch group) and control group as the calculated 'F' value for Hemoglobin, Glucose and Lactic acid was insignificant because p-value associated with these are 0.53,0.66 and 0.06 respectively which were found greater than 0.05. This proved that there was a no significant difference among the means due to different recovery training programs on Hemoglobin, Glucose and Lactic acid. As the calculated 'F' value was found insignificant at 5% level a no post hoc comparison test was applied.

Keywords: Hematological, Basketball Players, Recovery, Recovery Programmes

1. INTRODUCTION

Fatigue is an event that always got toexperience. When a person does exercise;this occurs more and quickly and thethreshold increases in case of doing regularexercise .Some people define fatigue as decrease of muscle function. Fatigue hasan undesirable effect on continuing of exercise and reduces the quality of athletes'workout. There are lots of effective factorson a fatigue occurrence that the lactateincrement is the most important ones.Increasing the blood lactate level is one ofthe most important factors that cause the fatigue. After strenuous exercises, fatigue iscreated due to the changes in the muscle andthen in the chemical factors of blood serumof the athletes these changes are due to thewaste products such as lactic acid. Thissubstance is the product of anaerobic metabolism. Lactate accumulationavoids the muscle contraction and causesfatigue. Reduction of fatigue due to thephysical activity is a key success factor forprofessional athletes in competition or nextexercise and hence the recovery time is animportant factor in professional sport.Recovery from exercise training is anintegral component of the overall trainingprogram and is essential for optimalperformance and improvement. If the rate ofrecovery is improved, higher trainingvolumes and intensities are possible withoutthe detrimental effects of overtraining.Understanding the physiological concept ofrecovery is essential for designing optimaltraining programs. Recovery has differentmethods that are done in various waysamong the athletes and coaches. Recoveryincludes the factors such as: normalizationof physiological functions (e.g., bloodpressure, cardiac cycle), return tohomeostasis (resting cell environment), restoration of energy stores (blood glucoseand muscle glycogen), and replenishment ofcellular energy enzymes (i.e., phosphofructokinase a key enzyme in carbohydrate metabolism). Otherimportant physiological factors are return ofrespiratory system, circulation and bodytemperature to a state of pre-exercise. Different recovery strategies are used byathletes during competition and training to enhance the recovery. Throughouthistory immersion in cold water has beenused as a therapeutic treatment for restoringphysical and mental health, but nowadays itis used as a recovery strategy.Static stretching after exercise is commended as a preventative measure for delayed-onset muscle soreness and improved range on motion through dispersion of oedema or tension reduction

of the muscle-tendon unit (Montgomery et al., 2008). In contrast, Dawson and colleagues (2005) reported that stretching following an Australian football match significantly improved power output during a 6 s cycle sprint 15 h after the match, compared to a control. Additionally, Miladi and colleagues (2011) reported that dynamic stretching was significantly superior to active or passive recovery for maintaining a second bout of cycling to exhaustion. Finally, following a muscle damaging protocol, stretching was found to improve range of motion and reduce muscle soreness compared to a control (Kokkinidis et al., 1998).As can be concluded from the above findings, there have been mixed reports regarding the benefit of stretching as a recovery strategy. However, two separate reviews of recovery methods concluded that there was no benefit for stretching as a recovery modality (Barnett, 2006; Vaile et al., 2010). It is important to note that to date, there have not been any detrimental effects on performance associated with post-exercise stretching.

2. METHODOLOGY

Simple random group design method was used for the study. The three experimental groups were given recovery programmes for 10 min immediately after training or competition. eight district level basketball players aged between 16-25 years were randomly selected from Birbhum, WB, India. They were also randomly divided into four groups of equal strength namely Experimental Group-I for Massage (MG), Experimental Group-II for Cold Bath (CBG), Experimental group-III for slow stretching Group (STG) and Control group (CG) will not participate in any recovery programmes. The subjects would play a full length basketball match for 40 min thereafter the Pre-test data was collected. Then after a day the subject was play a full length basketball match and immediately after the recovery programmes were applied and then the post test data was collected.To analyze data descriptive statistics and the analysis of co-variance (ANCOVA) at 0.05 level of significance was applied.

3. RESULTS

The data collected was analyzed by using descriptive statistics and scores of post mean of Hematological variables are presented in table-1

Table 1: Descriptive Statistics of Post Mean for Hematological Variables of Experimental Groups

Variable	Group	Mean	Std. Deviation	N
Haemoglobin	Massage Group	13.95	.77	2
	Cold Water Group	12.70	.98	2
Slow Stretch Group	13.30	1.41	2	
Control Group	14.35	1.48	2	
Glucose	Massage Group	91.70	13.15	2
Cold Water Group	85.75	3.18	2	
Slow Stretch Group	86.00	2.82	2	
Control Group	87.40	.28	2	
Lactic Acid	Massage Group	1.91	.134	2
Cold Water Group	2.99	.233	2	
Slow Stretch Group	2.42	.494	2	
Control Group	2.95	.091	2	

Table 1 depicts that the original post mean for Hemoglobin of massage group was 13.95 with a standard deviation of 0.77, cold water group was 12.70 with a standard deviation 0.98, slow stretch group was 13.30 with a standard deviation 1.41 and control group was 14.35 with a standard deviation 1.48. The original post mean for Glucose of massage group was 91.70 with a standard deviation of 13.15, cold water group was 85.75 with a standard deviation 3.18, slow stretch group was 86.0 with a standard deviation 2.82 and control group was 87.40 with a standard deviation 0.28.The original post mean for Lactic acid of massage group was 1.91 with a standard deviation of 0.134, cold water group was 2.99 with a standard deviation 0.233, slow stretch group was 2.42 with a standard deviation .494 and control group was 2.95 with a standard deviation 0.091.

Thus it was indicating that control group Hemoglobin was greater among all groups and Glucose level was found higher in massage group although Lactic acid was found lowest in massage group.

Descriptive statistics and scores of adjusted post mean of Hematological variables are presented in table-2.

Table 2: Descriptive Statistics of Adjusted Post Mean for Hematological Variables of Experimental Groups

Variable	Group	Mean	Std. Error	95% Confidence Interval Lower Bound	Upper Bound
Hemoglobin	MassageGroup	13.68	.24	12.89	14.46
	Cold WaterGroup	13.85	.29	12.91	14.80
Slow Stretch Group		13.27	.24	12.49	14.04
Control Group		13.49	.27	12.61	14.36
Glucose Massage Group		85.96	1.92	79.82	92.09
	Cold Water Group	87.17	1.66	81.88	92.46
Slow Stretch Group		89.37	1.74	83.81	94.93
Control Group		88.33	1.651	83.08	93.59
Lactic Acid	Massage Group	1.78	.210	1.12	2.45
	Cold Water Group	3.13	.216	2.44	3.82
Slow Stretch Group		2.66	.267	1.81	3.51
Control Group		2.68	.275	1.80	3.55

Table 2 revealed that the adjusted post mean for Hemoglobin of massage group was 13.68, cold water group was 13.85, slow stretch group was 13.27 and control group was 13.49. The adjusted post mean for Glucose of massage group was 85.96, cold water group was 87.17, slow stretch group was 89.37 and control group was 88.33. The adjusted post mean for Lactic acid of massage group was 1.78, cold water group was 3.13, slow stretch group was 2.66 and control group was 2.68.

It was very clear that adjusted post mean Hemoglobin was found highest in cold water group and Glucose was found highest in slow stretch group although Lactic acid was found lowest in massage group.

The analysis of covariance (ANCOVA) was used to find out the significant difference between experimental groups & control group after eliminating the effects of covariate is presented in table-3.

Table 3: Analysis of Covariance for Between Subject Effects Among Experimental Groups

Variable	Source	Sum of Squares	df	Mean Square	F	Sig.	
Pre Hemoglobin		5.434	1	5.434	45.833	.007	
Hemoglobin	Treatment Group		.323	3	.108	.909	.530
Error		.356	3	.119			
Corrected Total		8.955	7				
Pre Glucose		174.988	1	74.988	32.411	.011	
Glucose	Treatment Group	9.464	3	3.155	.584	.665	
Error		16.197	3	5.399			
Corrected Total	236.749	7					
Lactic Acid	Pre Lactic Acid	.117	1	.117	1.675	.286	
	Treatment Group	1.639	3	.546	7.836	.062	
Error		.209	3	.070			
Corrected Total	1.871	7					

Significant at 5% level.

$F_{.05}(3, 3) = 9.28$

Table-3 clearly revealed that there was a statistically insignificant difference in Hemoglobin, Glucose and Lactic Acidamong experimental groups (massage group, cold stretch group& slow stretch group) and control group as the calculated 'F' value for Hemoglobin, Glucose and Lactic acid was insignificant because p-value associated with theseare 0.53,0.66 and0.06 respectively which were found greater than 0.05.

This proved that there was a no significant difference among the means due to different recovery training programs on Hemoglobin, Glucose and Lactic acid.

As the calculated 'F' value was found insignificant at 5% level a no post hoc comparison test was applied.

The graphical representation of adjusted post-group means of experimental groups and control group for hematological variables are presented in Figure-1.

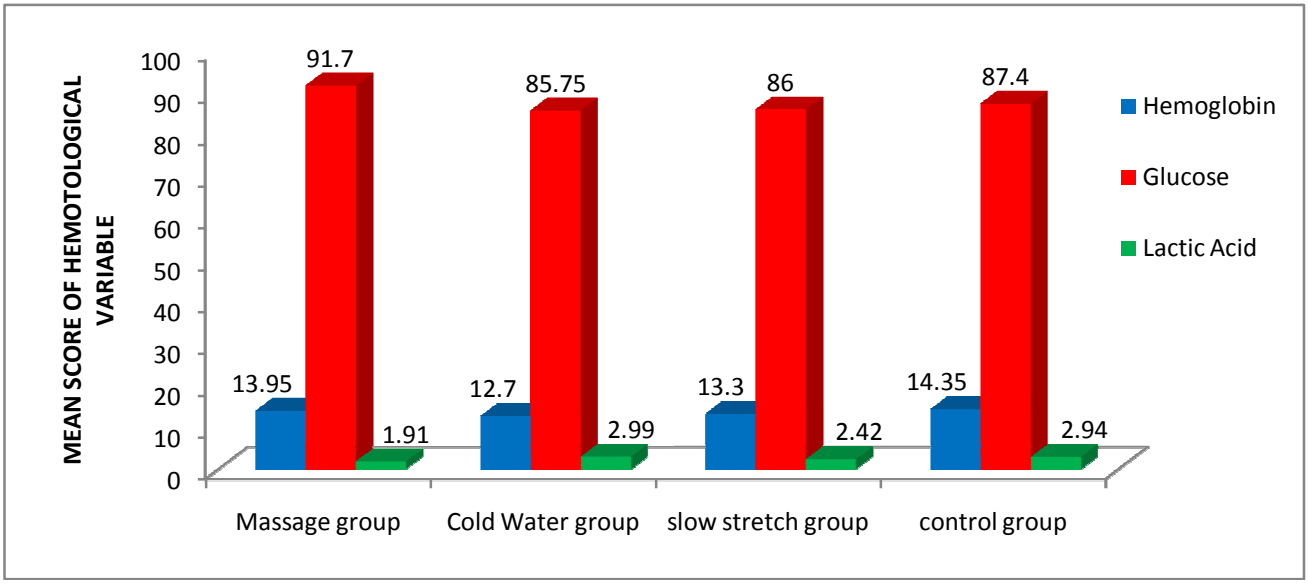

Figure 1: Graphical Comparison of the Adjusted Mean in Hematological variables of Experimental Groups & Control Group

4. DISCUSSION

This study investigated comparative effect of different recovery programmes on selected hematological parameters of basketball players. No significant change was found in hemoglobin, glucose and lactic acid among basketball players after administration of different recovery programs (Massage, cold water & slow stretch recovery programs).

It may be attributed due to the fact that the time duration which was ten minutes not appropriate to produce significant change in hematological parameters among different recovery programs. It was very clear from the adjusted post mean hemoglobin was found highest in cold water group and glucose was found highest in slow stretch group although lactic acid was found lowest in massage group. For the fast and better recover of basketball players it was found massage recovery programme was better than other recovery programme because adjusted mean of lactic acid in massage group was found lowest. Finding of this study was found contradictory to the study conducted by Franchini et al.(2003), Spierer et al.(2004), Tessitore et al.(2007),Kinugusa&Kilding (2009), the effect of different recovery on hemotological variables under different recovery programmes have been previously reported observed positive effects on perceived recovery(higher quality of recovery and lighter legs) after the combination modality (cold water immersion and active recovery). Signorile et al.(1993) indicated that active recovery provides superior performance to passive rest in repeated short-term, high intensity power activities. Weltman et al.(1979) studied performance after a 1-minute all-out cycle ergometry effort, followed by 20 minutes of active recovery or rest period. Active recovery produced higher pedal revolutions in repeated bouts, accompanied by increased lactate removal rates.

5. CONCLUSION

No significant change was found in hemoglobin, glucose and lactic acid among basketball players after administration of different recovery programs (massage, cold water &slow stretch recovery programs). On the basis of adjusted mean of lactic acid it was found that massage recovery programme was better to remove lactic acid in comparison to cold water & slow stretch recovery programs. Thus, it is recommended that duration of recovery programs should be extend up to 20 minutes to produce significant effect of different recovery programs and check which programme will be more effective for better and fast recovery.

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BURNOUT AMONG PHYSICAL EDUCATION TEACHERS

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ABSTRACT

The presentpaper emphasized to study the burnout among physical education teachers. 135 physical education teachers were selected from the three districts Amritsar, Jalandhar and Patiala of Punjab State. The sample was further divided into three groups on the basis of primary, secondary and senior secondary levels. Each group had equal size of 45 Samples.The burnout among Physical Education teachers was measured by questionnaire of Maslach Burnout Inventory by Maslach and Jackson (1986). To know the statistical burnout among physical education teachers ANOVA and Post Hoc Test were employed. The results of the present study were found, significant difference on the scores of emotional exhaustion, depersonalization and overall burnout but no significant difference was found on the scores of personal accomplishment among of primary secondary and senior secondary physical education teachers.

Keywords: Burnout, Emotional Exhaustion, Depersonalization, Accomplishment, Physical Education Teachers.

1. INTRODUCTION

In any society, the higher, the educational and cultural level in terms of quality, the more will be the development and growth of that society. Education - from elementary levels to higher education – shapes the individual, the family and from a broader perspective, the society. When teachers and officials themselves are creative and are not physically and emotionally exhausted and providing that they are committed to the school and their critical responsibility (Sabaqian, Rad. 2005).

Burnout: The importance of burnout syndrome in the educational setting is even more emphasized, because apart from affecting the mental, psychosomatic and social health of educators it also decrease the quality of teaching and work performance, which in turn may negatively influences students academicals achievement.Maslach, Schaufeli and Leiter, (2001) suggested for the comprehension of the burnout phenomenon, and they conceptualized burnout as "… a tri-dimensional syndrome characterized by emotional exhaustion, cynicism (depersonalization), and reduced efficacy (reduced personal accomplishment)". In present study teachers burnout defined as Physical, emotional, and attitudinal exhaustion that begins with a feeling of uneasiness and mounts as the joy of teaching begins to gradually slip away.

2. REVIEW OF RELATED LITERATURE

Zhao and Bi (2003) studied job burnout and the factors related to it among 190 secondary school teachers on the Chinese mainland and revealed no significant difference among the three dimensions of burnout in relation to the variable of gender. Dupatepe and Akkus-Cikla (2004), revealed low levels of teachers' emotional exhaustion, depersonalization, and reduced personal accomplishment found significant differenceamong 100 primary school teachers.Yeltekin and Demirel et al., (2005) examined burnout among high school teachers in turkey with the purpose to studythe (a) burnout in a sample of Turkish high school teachers and, (b) to test the hypothesis that Turkish teachers suffer from burnout more than the teachers in the developed countries. Six hundred and ten questionnaires were distributed to the teachers, and 520 questionnaires were returned. The 48 questionnaires were excluded in the final analysis, because of including inconclusive and/or incomplete data. There was no statistically significant difference between the scores of sub samples according (emotional exhaustion and depersonalization) to the gender ($p>0$, 05). There was an insignificant negative correlation ($p=0.08$) between the depersonalization and personal accomplishment in the group of female teachers. Drinking, smoking and marital status had no effect on burnout in this study sample ($p>0.05$). Less experienced Turkish teachers reported higher scores on depersonalization ($p=0.001$). Turkish teachers suffer from burnout less that of the teachers in many developed countries.

Lopes et.al (2009) compared the burnout syndrome between teachers of state and private school systems and revealed that statistically both groups have different perceptions of burnout. However, such perceptions are associated with the variables in a distinct way in thesegroups.Mukundan and Khanderoo (2009) found that

emotional exhaustion of female teachers and depersonalization among male teachers was significantly high, while both had significantly a high level of reduced personal accomplishment among 120 English language teachers in Malaysia. English teachers with less than 26 years of teaching experience revealed a significantly high level of emotional exhaustion. Teachers with more than five years of teaching experience had significantly high depersonalization, while teachers with less than five and more than 25 years of teaching experience showed significantly high reduced personal accomplishment.Gavrilovici (2009) studied the burnout level of 178 teachers in primary, secondary, high schools, and special schools in Iasi County of Romania during the period 2007-2009. The results showed that emotional exhaustion of teachers with work experience of more than 17 years was significantly higher than teachers with less work experience. In contrast, no significant differences were found between the teachers‟ work experience and their levels of depersonalization and reduced personal accomplishment. Likewise, gender and marital status did not show any effect on any dimension of the burnout. In the case of gender, mixed results have been reported. For instance,Luk, et al., (2010) studied the relation between demographic variables and burnout among 138 teachers of primary and secondary schools in Macau. The results revealed that Macau school teachers had moderate levels of emotional exhaustion and low levels of depersonalization. They also found that age, marital status, and teaching experience significantly affected the burnout levels of teachers in their categories. Younger and single teachers had significantly higher emotional exhaustion and depersonalization than older and married teachers. Similarly, teachers with less years of experience had significantly higher emotional exhaustion than teachers with more than 20 years of experience. JayakaranMukundan,(2011) This study is an attempt to survey the burnout level of female teachers in Malaysia and determine the likely factors that are associated with this phenomenon. The subjects of the study were 437 female teachers from primary, secondary, and tertiary levels. A demographic questionnaire was used to collect the data regarding the individual characteristics (e.g., marital status, number of children, age, and teaching experience) and organizational factors (e.g., teaching level and workload). The Maslach Burnout Inventory-Educator Survey (MBI-ES) (Maslach, Jackson, & Schwab, 1986) was also employed to collect the data concerning the burnout levels of the teachers in the three dimensions of emotional exhaustion, depersonalization, and reduced personal accomplishment. Descriptive and univariate statistics were used in the data analysis. It was found that the number of children, level of teaching, age, and years of teaching experience were significant indicators of burnout among the female teachers, while marital status and workload were not significantly related to their burnout syndrome. The implications and recommendations are also presented.

3. SIGNIFICANCE OF THE STUDY

Teachers undoubtedly are the architects of our profession. They play multiple roles for the promotion of education at every level, from hunting of the talent to-excellence in achievement. Knowing the problems which cause poor standard of teaching will surely help in removing them and improving the educational standard to a great extent. The present study will bring light to the burnout status of physical education teachers of different levels. The findings of the present study will make a positive contribution in this direction. Further, the present study will be of immense importance to physical educationists, Sports scientists, sports administrators and society at large.

4. OBJECTIVES

- To compare the emotional exhaustion among physical education teachers.
- To compare the depersonalization among physical education teachers.
- To compare the accomplishment among physical education teachers.
- To compare the burnout status among physical education teachers.

5. HYPOTHESES

- There would exist significant difference in emotional exhaustion amongphysical education teachers.
- There would exist significant difference in depersonalizationamong physical education teachers.
- There would exist significant difference in accomplishmentamong physical education teachers.
- There would exist significant difference in burn out among physical education teachers.

6. METHODOLOGY

Sampling Design

The subject of this study was the teachers selected from government and private schools, who are engaged in teaching in primary and secondary and senior secondary level. The total sample of the present study comprise of 135 physical education teachers including Primary level (N=45), Secondary level (N=45), and senior secondary (N=45) of three district (Amritsar, Patiala and Jalandhar) of Punjab, shown in the TABLE 1.

Table 1: Distribution of Sample at different levels of Physical Education Teachers

Sr. No.	Districts	Primary Physical Education Teachers	Secondary Physical Education Teachers	Senior Secondary Physical Education Teachers
1	Amritsar	15	15	15
2	Jalandhar	15	15	15

Sr. No.	Districts	Primary Physical Education Teachers	Secondary Physical Education Teachers	Senior Secondary Physical Education Teachers
3	Patiala	15	15	15
	Total	45	45	45
Grand Total	135			

Tool Used
Maslach Burnout Inventory by Maslach and Jackson (1986) was used to burnout among physical education teachers.

Statistical technique
To compare Burnout among the physical education teachers of different level of teaching ANOVA and post-hoc test were used.

7. RESULT AND DISCUSSION

Table 2: Show the Comparison of Emotional Exhaustion among Physical Education Teachers

Levels	N	Mean	SD	ANOVA			Post Hoc Test		
				SS BG	SS WG	F Ratio	Primary VS Secondary	Primary VS Senior Secondary	Secondary VS Senior Secondary
Primary	45	28	5.60	2451.40	6815.92	23.74**	4.40**	6.79**	2.39**
Secondary	45	21.67	8.19						
Senior Secondary	45	18.05	7.53						

Hypothesis 1: There would exist significant difference in emotional exhaustion among physical education teachers.

The result depicted that the mean value of Emotional Exhaustion among the Physical Education teachers of primary, secondary and senior secondary level. It was observed that primary level teacher possess high level of Emotional Exhaustion (28.34) and, secondary and senior secondary level teacher (21.67) and (18.05), respectively. The statistical differences, when observed among the physical education teachers of primary level, secondary level and senior secondary level, revealed that the f ratio (f=23.74) is significant. Hence, the hypothesis no-1 that, there would be significant difference in emotional exhaustion among physical education teachers was accepted. Post-hoc test value indicates that Primary level teachers were found to be significantly more emotionally exhausted than secondary level and senior secondary level teachers as the t value comes out to be 4.40 and 6.70, respectively. Similarly, secondary level teachers were found to be significantly more emotionally exhausted than senior secondary level teachers as the t-value comes out to be 2.40 shown in the TABLE 2**.**

Table 3: Show the Comparison of Depersonalization among Physical Education teachers

Levels	N	Mean	SD	ANOVA			Post Hoc Test		
				SS BG	SS WG	F Ratio	Primary VS Secondary	Primary VS Senior Secondary	Secondary VS Senior Secondary
Primary	45	16.87	4.54	1200.99	2762.45	28.70**	3.09**	7.53**	4.45**
Secondary	45	13.89	5.07						
Senior Secondary	45	9.6	4.08						

Hypothesis 2: There would exist significant difference in depersonalizationamong physical education teachers.

The result revealed that the mean value of Depersonalization among the Physical Education teachers of primary, secondary and senior secondary levels. It was observed that primary level teacher possess higher value of Depersonalization (16.87) followed by Secondary level teacher (13.89) and senior secondary level teacher (9.6). The statistical differences, when observed among the Physical Education teachers of primary, secondary and senior secondary level, revealed that the f ratio (f=28.70) is significant which means that physical education teacher differ significantly. Hence, the hypothesis no-2 that, there would be significant difference in Depersonalization among Physical Education teachers is accepted. Post-hoc test value indicates that Primary level teachers were found to be significantly more depersonalization than secondary and senior secondary levels teachers as the t value comes out to be 7.53 and 4.45, respectively. Similarly, secondary level teachers were found to be significantly more Depersonalization than senior secondary level teachers as

the t value comes out to be 3.09shown in the TABLE 3**.**

Table 4: Show the comparison of Personal Accomplishment among Physical Education teachers

Levels	N	Mean	SD	ANOVA		
				SS BG	SS WG	F Ratio
Primary	45	27.69	5.52	387.54	8554	2.99
Secondary	45	23.56	7.74			
Senior Secondary	45	25.29	10.21			

Hypothesis 3: There would exist significant difference in accomplishment among physical education teachers.
The result showed that the mean value of Personal Accomplishment among the Physical Education teachers of primary, secondary and senior secondary levels. It was observed that primary level teacher possess higher value of Personal Accomplishment (27.69) followed by Secondary level teacher (23.56) and senior secondary level teacher (25.29). The statistical differences, when observed among the physical education teachers of primary level, secondary level and senior secondary level, revealed that the f ratio (f=2.99) is significant which means that physical education teacher differ significantly, shown in the TABLE 4. Hence, the hypothesis No-3 that, there would be significant difference in Personal Accomplishment among Physical Education teachers was accepted.

Table 5: Show the comparison of Burnout among Physical Education Teachers

Levels	N	Mean	SD	ANOVA			Post Hoc Test		
				SS BG	SS WG	F Ratio	Primary VS Secondary	Primary VS Senior Secondary	Secondary VS Senior Secondary
Primary	45	72.89	11.48	9393.24	22845.69	27.13**	4.97**	7.19**	2.23**
Secondary	45	59.11	14.63						
Senior Secondary	45	52.11	13.18						

NOTE: (df -132)Table Value F. ratio- 3.06 **Significant at .0 1Level (df-88) t-value-.36

Hypothesis 4: There would exist significant difference in burn out among physical education teachers.

The result depicted that the mean value of burnout among the Physical Education teachers of primary, secondary and senior secondary level. It was observed that primary level teacher possess higher value of burnout (72.89) followed by Secondary level teacher (59.11) and senior secondary level teacher (52.11). The statistical differences, when observed burnout among the physical education teachers of primary level, secondary level and senior secondary level, revealed that the f ratio (f=27.13) is significant which means that Physical Education teacher differ significantly. Hence, the hypothesis n-4 that, there would be significant difference in burnout among Physical Education teachers was accepted. Post-hoc test value indicates that Primary teachers were found to be significantly more burnout than secondary and senior secondary levels teachers as the t value comes out to be 4.97 and 7.19, respectively. Similarly, secondary level teachers were found to be significantly more burnout than senior secondary level teachers as the t value comes out to be 2.23shown in the TABLE 5.

8. FINDINGS OF THE STUDY

- Significant differences has been found in emotional exhaustion among the physical education teacher of primary, Secondary and senior secondary level.
- Significant differences in Depersonalization among the physical education teacher of primary, Secondary and senior secondary level teacher.
- No significant differences in personal accomplishment among the physical education teacher of primary, Secondary and senior secondary level teacher.
- Significant differences in burnout the physical education teacher of primary, Secondary and senior secondary level teacher.

9. RECOMMENDATIONS

- The similar study can be conducted on large number of sample of male and female subjects to study compare burnout level among different subject teachers.
- The study can be conducted on national level or international level.
- The similar study can be conducted on different age groups.

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EFFECT OF AEROBIC EXERCISES ON SELECTED PHYSICAL AND PHYSIOLOGICAL VARIABLES OF SCHOOL CHILDREN

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ABSTRACT

The Purpose of the study was to find out the effect of aerobic training on selected physical and physiological variables. For the present study 30 male students from D.P.S, Mathura was selected randomly as the subjects for the study. The age of the subjects ranged between 13 - 17 years. The variables selected for the present study were muscular endurance, cardio-respiratory endurance, Resting Heart Rate and Vital Capacity. For the study pre test – post test randomized group design; the subjects were further classified at random into two equal groups. Group - I underwent aerobic exercises for four days per week for ten weeks experimental group (15 students) and group - II acted as control group (15 students) was used. The data were collected through the pre test, before training and post test, after eight weeks of aerobic exercises training. The Statistical Techniquefor comparing pre and post test means of experimental and control groups of selected physiological variables, descriptive analysis and Analysis of Co-Variance (ANCOVA) were used, the data analyzed with the help of SPSS (16.0 version) software and the level of significance was set at 0.05 level of confidence. The result of the study showed that there was significant difference between pre and post test (experimental group) of muscular endurance, cardio-respiratory endurance, Resting Heart Rate and Vital Capacity whereas in control group insignificant difference was found between pre and post test of muscular endurance, cardio-respiratory endurance, Resting Heart Rate and Vital Capacity. On the basis of the findings it was concluded that the aerobic training might be responsible for the improvement of selected physical and physiological variables.

Keywords: Aerobic Training and Physiological Variables.

1. INTRODUCTION

Fundamental movements of man, which they have achieved from their pre-human ancestors, are walking, running, jumping, climbing, throwing, pulling, pushing etc. By permutation and combination of these basic fundamental movements, man has developed various secondary movements essential for day-to-day living and for the use in games and sports. Physical fitness is important for all human beings, irrespective of their age. A given work may not be carried out if the required physical strength is not available. Fitness is the first and foremost thing to enjoy the life fully (Reddy, 2012).Regular physical activity, fitness, and exercise are critically important for the health and wellbeing of people of all, whether they participate in vigorous exercise or some type of moderate health-enhancing physical activity. Even among frail and very old adults, mobility and functioning can be improved through physical activity (Butler et al., 1998) .Regular aerobic exercise will produce beneficial effects for any age group providing the exercise is specific and appropriate to the level of fitness of the individual. Progressive exercise correctly performed will increase the level of fitness and improve health. It will also create a sense of well -being, produce greater energy and reduce the risk of developing many diseases.

There is increasing evidence that physical activity during childhood and adolescence has an important impact on short and long-term health and behavior outcomes. The literature dealing with the effects of increased physical activity on pulmonary morphology and function is equivocal. Cross-sectional or longitudinal studies comparing child athletes with non athletes (or with reference values) indicate slightly greater or equallung volumes, capacities, and flow rates. Possible reasons for the lack of association between physical activity and lung function could be inadequate stimulus, age, growth status, and type of activity .Moreover, the aerobic system in children is usually often used in their activities. Aerobic metabolism participating in total energy intake is higher in children than adults. The assessment and interpretation of peak aerobic fitness in children and adolescents is fraught

with problems. Numerous investigations have been conducted in children concerning the effect of training on the cardio respiratorysystem. The effect of added activity or training on VO_{2max} during growth is well documented and conflicting results exist in prepuertal boys. Several studies have shown that VO_{2max} does not increase with training before the peak of puberty. In contrast, others suggest that the VO_{2max} can be increased after a training program with aerobic dominance

The word aerobic, meaning with oxygen, to represent idea, even so the dynamics of the idea are more complicated than implied by the definition. Aerobic can be viewed as an intricate system of bodily supply and demand. That is the body needs energy for any kind of activity and the need is filled by burning off the foods that we eat. Aerobic programs strengthen heart muscle, increase the efficiency of lungs and offer other wonderful benefits. Aerobic refers to a variety of exercise that stimulates heart and lung activity for a time period sufficiently long to produce beneficial change in the body. Aerobics or endurance exercises are those in which large muscle groups are used in rhythmic repetitive fashion for prolonged periods of time. By doing aerobics, the whole body is used and major muscle groups including legs, trunk and arm get involved. In aerobic exercise the heart rate increases substantially, but never reaches its maximum level. The heart is always able to deliver sufficient oxygen rich blood to muscles so that they can derive energy from fat and glycogen aerobically. Aerobic exercise builds stamina for sports and it also is the most important form of exercise for health, since it increases the efficiency of heart, circulation and muscles. Aerobic exercise is the keystone of fitness, by doing aerobics; it increases the capillary network in the body. Aerobics is a progressive physical conditioning programmer that stimulates respiratory activity for a time period sufficiently long to produce beneficial changes in the body.

Many research studies says physical exercise are important for the development of all physical fitness but no research was done in men health related physical fitness problems. Now a days in our country because of sedentary life style most people are attacked by chronic disease such as; coronary heart disease, hypertension, diabetes, and Some other upcoming diseases. According to many research studies finding physical inactivity is one of the causes for development of chronic disease and poor fitness. Similarly, in people are living sedentary lifestyles due to poor culture of having regular physical exercise. Therefore, the research investigated the effect of aerobic training on selected physical and physiological variables.

2. METHOD & MATERIALS

The Purpose of the study was to find out the effect of aerobic training on selected physical and physiological variables. For the present study 30 male students from D.P.S, Mathura was selected randomly as the subjects for the study. The age of the subjects ranged between 13 - 17 years. The variables selected for the present study weremuscular endurance, cardio-respiratory endurance, Resting Heart Rate and Vital Capacity. For the study pre test – post test randomized group design; the subjects were further classified at random into two equal groups. Group - I underwent aerobic exercises for four days per week for ten weeks experimental group (15 students) and group - II acted as control group (15 students) was used. The data were collected through the pre test, before training and post test, after eight weeks of aerobic exercises training. TheStatistical Techniquefor comparing pre and post test means of experimental and control groups of selected physiological variables, descriptive analysis and Analysis of Co-Variance (ANCOVA) were used, the data analyzed with the help of SPSS (16.0 version) software and the level of significance was set at 0.05 level of confidence.Before and after the training period. The selected variables were measured by using standard testing procedures.

1. Muscular Endurance was measured by Sit ups Test and recorded in number. 2. Cardio respiratory Endurance was measured by Coopers 12 Minutes run and recorded in meter. 3. Resting Heart rate was measured by gently pressing over the radial artery and recorded in numbers for one minute by using stop watch. 4. Vital capacity was measured by Dry Spiro meter and recorded in milliliters.

3. RESULT AND FINDINGS OF THE STUDY

The Analysis of covariance on muscular endurance, cardio respiratory endurance, resting heart rate and Vital capacity of the pretest and post test scores of aerobic exercise and control group have been analyzed and presented in Table 1.

Table 1: Analysis of co variance on selected variables among aerobic exercise and control groups

Variable	Group name	Control group	Aerobic exercise group	'F' Ratio
Muscular endurance	Pre-test Mean ± S.D	33.84±3.93	33.29±4.30	0.177
	Post-test Mean ± S.D	34.44±3.82	40.24±4.24	20.52*
	Adj. Post-test Mean	33.17	40.51	864.83*
Cardio respiratory endurance	Pre-test Mean ± S.D	1888.51±115.94	1883.49±114.02	.018
	Post-test Mean ± S.D	886.49±117.61	2017.49±109.67	13.26*
	Adj. Post-test Mean	1884.08	2019.91	304.31*
Resting Heart rate	Pre-test Mean ± S.D	75.72±7.86	74.32±4.69	.351
	Post-test Mean ± S.D	74.79±6.36	69.32±4.14	7.749*

Variable	Group name	Control group	Aerobic exercise group	'F' Ratio
	Adj. Post-test Mean	74.30	69.82	17.654*
Vital capacity	Pre-test Mean ± S.D	3.468±.6112	3.7639±.38787	2.484
	Post-test Mean ± S.D	3.468±.61132	4.2919±.48632	15.874*
	Adj. Post-test Mean	3.626	4.146	31.411*

**significant at 0.05 level, F 0.05 (1, 38) = 4.098, F0.05 (1, 37) = 4.107.*

Table 1 clearly revealed that adjusted post-test means on muscular endurance of control group and aerobic exercise group are 33.17 and 40.51 respectively. The obtained 'F' ratio value of 864.83 of adjusted post-test data on muscular endurance is greater than the required table value of 4.107 for significance at 0.05 level of confidence with degree of freedom 1 and 37. The adjusted post-test means on cardio respiratory endurance of control group and aerobic exercise group are 1884.08 and 2019.91 respectively. The obtained 'F' ratio value of 304.31 of adjusted post-test data on cardio respiratory endurance is greater than the required table value of 4.107 for significance at 0.05 level of confidence with degree of freedom 1 and 37. The adjusted post-test means on resting heart rate of control group and aerobic exercise group are 74.30 and 69.82 respectively. The obtained 'F' ratio value of 17.654 of adjusted post-test data on resting heart rate is greater than the required table value of 4.107 for significance at 0.05 level of confidence with degree of freedom 1 and 37. The adjusted post-test means on vital capacity of control group and aerobic exercise group are 3.626 and 4.146 respectively. The obtained 'F' ratio value of 31.411 of adjusted post-test data on resting heart rate is greater than the required table value of 4.107 for significance at 0.05 level of confidence with degree of freedom 1 and 37. The results of the study showed that there was significant difference among the adjusted post-test means of control group and aerobic exercise group.

The graphical representation of adjusted post-test means of experimental and control groups on physical and physiological variables of school children is presented in Figure-1.

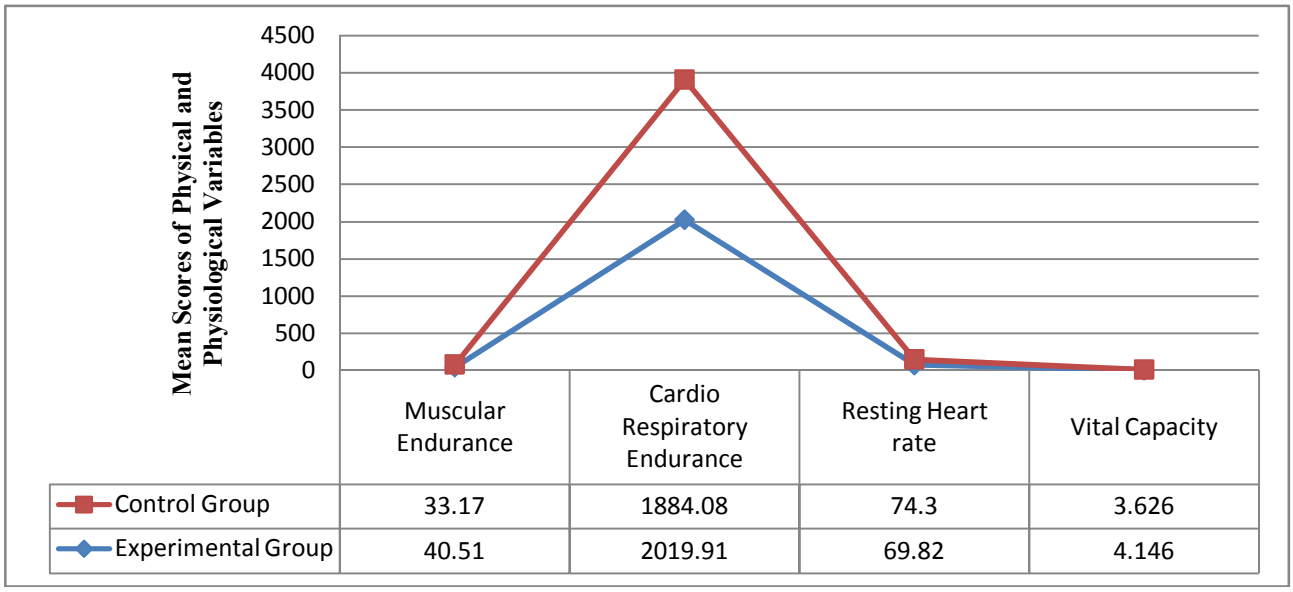

Figure 1: Graphical Comparison of the adjusted post testmean sores of experimental and control groups of school children

4. DISCUSSION

The findings of the study shows that significant difference exists between aerobic training and control group on muscular endurance, cardio respiratory endurance, resting heart rate and vital capacity. Recent work shows that the cardiovascular adaptations occur as a result of endurance training (Helgerudet al., 2007; Wisloff, Ellingsen, &Kemi, 2009) . Regular participation in aerobic exercise often results in a decrease in resting heart rate (Katona PC, et al, 1982 & Smith ML, et al, 1989) Similar study conducted by (M. Muralikrishna& P.V. Shelvam, 2014) on Effect of different intensities of aerobic training on vital capacity of middle aged obese men; The results showed that High intensity aerobic training positively influences the cardiopulmonary (vital capacity) (R. MuthuEleckuvan, 2014) . The result of the study shows that aerobic exercise has its influence in the selected physical and physiological variables among school succer player.

5. CONCLUSION

On the basis of findings of the study, the following conclusions may be drawn: 1. The results of the study indicate that the significant difference was found in pre and post test of (experimental group) Muscular endurance, ($p<0.05$). 2. The results of the study indicate that the insignificant difference was found in pre and post test of (control group) Muscular endurance, ($p>0.05$). 3. The results of the study indicate that the significant difference was found in pre and post test of (experimental group) Cardio respiratory endurance, ($p<0.05$). 4. The results of the study indicate that the insignificant difference was found in pre and post test of (control group) Cardio respiratory endurance, ($p>0.05$). 5. The results of the study indicate that the significant difference was found in pre and post test of (experimental group) resting heart rate, ($p<0.05$). 6. The results of the study indicate that the insignificant difference was found in pre and post test of (control group) resting heart rate, ($p>0.05$). 7. The results of the study indicate that the significant difference was found in pre and post test of (experimental group) vital capacity, ($p<0.05$). 8. The results of the study indicate that the insignificant difference was found in pre and post test of (control group) vital capacity, ($p>0.05$).

On the basis of the findings it was concluded that the eight weeks aerobic training is responsible for the improvement of selected physical and physiological variables like Muscular endurance, Cardio respiratory endurance Resting Heart Rate, Vital Capacity.

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DOPING : BOON OR CURSE

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1. INTRODUCTION

DOPING refers to the use of banned athletic performance-enhancing drugs by athletic competitors. Doping enhance the ability of a person multidimensional like physiology, mentally, health etc. It increase the muscles mass and enhance the work efficiency and capacity of the body, but we all have listened that doping is an destructive mode of growth and development, it's not a sustainable development, and we also heard about the world and most famous, successfulbodybuilder**ARNOLD SCHWAEZENEGGER,** he is also an actor, producer, businessman, investor, author, politician and very important he has a very happy family. In present era mostly complete youth want fitness, health and wellness and for this they use the mode of doping for all they want in the fitness world, mostly the boy declined their thoughts towards the more muscles mass.

Now here the question arise that, "Is doping sound for us or ruinous for us?

The doping brings many benefits like:

- Blood doping-blood doping is the practise of boosting the numbers of red blood cells in the bloodstream, which enable the blood to carry more amount of oxygen to muscles and it leads to the more efficiency.
- Testosterone –It is the primary male harmone and it also responsible in the promoting secondary sexual characteristics such as increased muscles and bone mass, it also enhance the athletic body characteristics, and doping can increase the testosterone level in the body.
- Creatine- It is an organic compound which recycles the A.T.P of the body, but through the doping we can increase the amount of creatine and it leads to the faster rate of the regeneration of the adenocine tri-phosphatemolecules and make body more energetic.

The research show that doping also has the deleterious affect on the body like-

- Blood doping leads to the increase amount of the blood in the body and in such case the blood's thickness increased and it can be cause of heart disease, stroke.
- The use of drugs means insertion of synthetic/artificial elements to the body and creates turmoil in the natural working of the body.
- The filtration unit of the kidney name nephron, filter the blood from toxic elements and in case of doping the toxic and undissolved elements increased and block the kidney which cause the kidney dysfunction.
- Infertility-In doping case the fertility of body can be decreased and it can also lead to the impotency.
- It diminish the sperm production due to the several reasons like temperature, harmones imbalance etc.
- In female doping promote the mensturation disturbances and deeper voice **(hoarseness).**
- The doping create the excrescence and internal bloody tumour which can be the cause of death.

2. CONCLUSION

The everything that exist in this world have the both effects positive and negative, and in the case of doping the positive effects are very appreciative but the negative effects are epidemic and hugely venomous that can eat the human life, the positive effects are very short but the negative effects are for rest of the life. The use of doping is not ethical in the sportsmanship but apart from this the doping ruin the life of the sportsperson it totally degrade the life quality. The last thing is that the doping have also both positive and negative effects and it should not be done but the decision will be always of ours.

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CURRICULUM DESIGN IN PHYSICAL EDUCATION

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ABSTRACT

A curriculum is considered the "heart" of any learning institution which means that schools or universities cannot exist without a curriculum. Curriculum is organization of all academic processes that happen in any institution. Curriculum is everything that happens in any institution. A curriculum prepares an individual with the knowledge to be successful, confident and responsible citizens. Good curriculum plays an important role in forging life-long learning competencies, as well as social attitudes and skills, such as tolerance and respect, constructive management of diversity, peaceful conflict management, promotion and respect of Human Rights, gender equality, justice and inclusiveness. To get a better understanding of examining curriculum design in physical education, the present article investigates the process of designing curriculum in physical education.

Keywords: Curriculum, Learning, Intended Learning Outcome, Institution.

1. INTRODUCTION

The term 'curriculum 'has been derived from a Latin word 'currere' which means race course .Thus ,the term 'curriculum' has the sense of competition and achievement of goal inherent in it. Curriculum is everything that happens in any institution or organization. It includes everything from academic activities to living in hostels. Curriculum is based upon experiences. All kinds of experiences that a student interacts with in his academic life. In the twentieth century the curriculum of schools and of colleges has been defined in several ways. Some people have called the curriculum the accumulated tradition of organized knowledge contained in a school and college subjects. Other persons have considered it to be the modes of thinking and inquiring about the phenomena of our world. A definition commonly used during early period was "curriculum of a school is all the experiences that pupils have under the guidance of that school". In another way we say " a child's curriculum in a given day of his life is all that he experiences from the moment of his waking to the moment of his falling asleep". The curriculum is the planned and guided learning experiences and intended learning outcomes formulated through the systematic reconstruction of knowledge and experiences under the auspices of the school for the learner's continuous and willful growth in personal social competence. In fact, the curriculum has been described as "the environment in motion." In modern times, the term is interpreted in this more liberal sense because there is no questioning the fact that the child's education is influenced, by not only books but the playground, library, laboratory, reading room, extra-curricular programs, the educational environment, and a host of other factors. In the school, both the educator and the student are part of the curriculum because they are part of the environment, while in the family the child is expected to progress and achieve the goals of education. The curriculum is all that goes on in the lives of the children, their parents and their teachers. The curriculum is made up of everything that surrounds the learner in all his working hours.

2. DESIGNING PHYSICAL EDUCATION CURRICULUM

Physical education classes can, at times, seem like kids running around willy-nilly, throwing balls and running in circles. But, if taught correctly, it is so much more. It provides a physical development component of a student's education to accompany their academic work. Physical education is widely recognized as an integral part of every student's education, not only so they can develop motor and physical skills, but to encourage them to live a healthy and active lifestyle. As the units and activities you choose to include in your curriculum will likely depend on grade and skill level. The designing of physical education curriculum involves following steps

3. NEED ANALYSIS

- Student Culture Economy
- Society Nation Institution

First we have to establish the need we have to identify it, for that purpose we have to interact with students and try to know them what kind of physical education they want

for example if they want fitness classes included in their course. Similarly we have to survey the society and identify what society wants, what they expect and what is their demand. With that we have to take care of culture also we have to value the culture and design program keeping the culture fact also in view, for example if our school is situated in southern part of India we should be aware of their culture and food habits we cannot offer them rice on regular basis as they are not fond of it. We have to check the policies of nation what nation wants for that there is a body national curriculum frame work NCF that guides us what they want for example India is a big nation with big problems facing now a days, our focus is to remove these problems among these is the problem of diabetes so right now nation wants its people to grow healthy. While establishing need we have to keep economic conditions of school as well as parents in mind, our project should not run out of money, it should not be that much of cost that a student could not afford it. We have to also interact with members of institution so that we get the idea from them what their view is about physical education. After surveying these areas we will conclude the need which means that we become able to know what the common need that will satisfy all is. Identifying need is one of the most important things in curriculum designing because all the process starts from here so we have to be careful when we are identifying need because it is concerned with the whole nation.

4. AIM AND OBJECTIVES

Once need is identified, all our efforts are now to satisfy the need. For that we set our aim and too reach to our aim we set a frame of objectives. We state reasons behind our aim, the aim is according to our need, it is in action of line so are our objectives. Objectives act as steps and we have to climb each step in order to reach to our aim .once aim is set the work on achieving this aim starts immediately without any further delay. Aim should be reachable and achievable it should not be weird and non sense. Objectives should be stated clearly and they should be in proper sequence so that every time we achieve them our progress goes gradually. We have to be very confident about achieving our aim so that is why aim should be achievable.

5. INTENDED LEARNING OUTCOM

An intended learning outcome should describe what students should know or be able to do at the end of the course that they couldn't do before. This is very important step while designing curriculum, we have to be clear what kind of learning is going to take place in an institute. As we know learning is of three types that is cognitive learning, affective learning, motor learning so we need to be clear about the effects of these three types of learning. We have to be very much sure which kind of learning we select because this learning will lead us to our aim that will fulfill our need.

6. SYLLABUS

The next step in designing curriculum is framing of syllabus. A syllabus is a document that outlines everything that will be covered in a class. We have to note some key points while we frame syllabus like

- It should be optimal and relevant
- It should not be outdated
- It should be of appropriate level
- It should be in relevance with our aim and need
- It should not be too advanced

By the help of these points we frame syllabus and act according to it in order to achieve our aim.

7. LEARNING AND TEACHING METHODS

The teaching method refers to the general principles, pedagogy and management strategies used for classroom instruction. Our choice of teaching method depends on what fits us — our educational philosophy, classroom demographic, subject area(s) and school mission statement and of course the need. We can organize teaching methods into four categories based on two major parameters: a teacher-centered approach versus a student-centered approach, and high-tech material use versus low-tech material use. We have to choose the best one so that our aim is achieved. More over there are different styles of teaching so teacher can use his own style to teach.

8. ASSESSMENT

Assessment is the process of gathering and discussing information from multiple and diverse sources in order to develop a deep understanding of what students know, understand, and can do with their knowledge as a result of their educational experiences; the process culminates when assessment results are used to improve subsequent learning. We use different methods to evaluate if learning has been done and was our intended learning outcome achieved. If we find out that something has went wrong we have to design our curriculum again and modify it time to time.

9. DISCUSSION AND SUGGESTIONS

There are various aspects that need to be discussed among them the important may be whenever a commission on education is formed there is no physical educator present in the commission who design curriculum. This should not happen, to design curriculum of physical education experts from the field of physical education must be appointed to do the job. More over we have been following the sports model of physical education since times but now it is time to adapt health model of physical education because it is the need of hour as India is facing tremendous threat of diabetes so prevention is better than cure.

10. CONCLUSION

In conclusion, the present paper has extended the

investigation of designing curriculum in physical education, the necessary procedure to be followed while designing curriculum in physical education. curriculum is a process of learning things by experiencing them so while designing curriculum we should not only focus on the academic activities focus should also be given life outside class room like living in hostels, participating in games and sports , taking leadership charge. These experiences will help a student to become a good product which will fulfill the need of society, Nation. The conservative thinking of people towards physical education may change when we design our curriculum in a best possible way that will bring us laurels. More over students of physical education can design curriculum by themselves.

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FLEXIBILITY- A SPECIFIC COMPONENT OF PHYSICAL FITNESS AND ITS SIGNIFICANCE AS DETERMINANT OF INJURY

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ABSTRACT

Physical fitness in modern era came up as the major necessity among every individual of human society for living a better life due to mechanization which brought up integrally among every individual's life through technological developments. Physical fitness because of its diverse nature and its need have different meaning and importance for individual's. Sports specific fitness, General fitness, Yogic fitness, Recreational fitness, etc are some of the branches which have different intensities and methods to keep an individual physically fit based on its need. WHO (World Health Organization) stated that "Physical inactivity (lack of physical activity) has been identified as the fourth leading risk factor for global mortality (6% of deaths globally). Moreover, physical inactivity is estimated to be the main cause for approximately 21–25% of breast and colon cancers, 27% of diabetes and approximately 30% of ischemic heart disease burden"i. The definition of Health given by WHO clearly stated "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Preamble to the Constitution of this World Organization as adopted by the International Health Conference, New York, 19-22 June, 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of this World Organization, no. 2, p. 100) and entered into force on 7 April 1948. One of the major challenges of today's advance human society is to maintain its physical efficiency with so fast growing technological advancements. Physical fitness, which is one of the major determinants of individual overall physical capabilities. According to Physical Education and Sports medicine, General physical fitness has 6 major components as Speed, Agility, Strength, Flexibility, Endurance, Co-ordination. In fact, flexibility does not exist as a general characteristic but it is specific to a particular joint and joint action (Bryant 1984; Corbin and Noble 1980; Harris 1969a).

Keywords: Physical fitness components, Flexibility.

1. INTRODUCTION

Flexibility, which is defined as the ability to perform movement with greater range of motion or large amplitude. It is controlled partly by the energy liberation processes of the body and partly by the coordinative processes of central nervous systemii. Though flexibility depend on various factors some of them as, Anatomical structure of joints, Extensibility of ligaments and muscles, State of organism, Exercise, Age, Sex, etc. A flexible person can easily bend, twist, turn or lunge to any direction by means of flexion and extension of muscles without causing any damage to the bones, muscles or ligaments surrounding the joints. If we look back the history of flexibility from different civilizations and cultures. We can found various evidences from round the world, Ancient Greeks used stretching in gymnastic training that included health maintenance, athletics and military physical training. Improving flexibility through stretching in the context of manual therapy can be traced back to Hippocrates and Galen, chief physician to the gladiators in Pergamum from A.D.157 and therefore probably the original sports therapist. Daily practices of people of Vedic periods in India needs lots of flexibility that was mainly maintain and increase by doing "Yoga" which is still one of the oldest structured physical practices of the world. In Japan and China also various martial practices needs lots of flexibility and strength that was a major focus in the various periods. Stretching is one the major method since the early period, which improves flexibility. Massaging, Gymnastics and various other physical activities also play a major role in improving the flexibility.

The scientific studies on flexibility were first begin in the early 1900s partly because of the increased number of thopedic cases resulting from World War 1 and partly because of epidemic of polio at the start of the century (Charles B. Corbin and Larry Noble). The Kraus-Weber test was one of the early tests developed for measuring flexibility. There are ample of research studies which show the importance of flexibility and in the recent period for improving fitness, there is greater emphasis put on the cardiovascular endurance by majority of fitness trainers and two parts of fitness that are often overlooked are

flexibility and balance. This may be because of conflicting information regarding their importance or relevance. However, both can play a vital role in overall fitness and function. Tight muscles can contribute to back pain or difficulty performing simple tasks, such as putting objects into overhead cupboards. While poor balance is known to increase the risk of falls in older persons, it may also affect sports performance in younger individuals. Luckily, it is very easy to work on both flexibility and balance on your own. Flexibility is a very important aspect of sports performance and also in maintaining the consistency of that performance, the biggest challenge of today's sports era is to enhance the sports performance beyond the imagination but also increase the longietivity of player's career by minimizing the causes of injuries. Diversity in ideas on the importance of flexibility in injury and athletic performance are always in debates but still there is an absence of awareness among athletes, sports physicians, therapists, trainers on ground level about the determinants of flexibility which can be the cause of lack in performance and injury. This review of literature will help us in enriching the knowledge about the importance of flexibility in general and sports specific and through a small study on student of bachelors of yogic sciences in which there flexibility of lower extremity and hamstring was test by Sit and reach test, which is one the reason for lower back pain and hamstring injuries.

2. IMPORTANCE OF FLEXIBILITY IN GENERAL AND SPORTS

If we talk in a general term, flexibility have a key role in day to day activities of human being as, individual having better flexibility have more advantages as compare to individual having less flexibility, some of the advantages as follows:-

- Less Back pain and other issues.
- Increased Range of Motion throughout the body.
- Injury Prevention.
- Improved Circulation.
- Less Stress and get better posture.
- Better energy utilization and efficiency of body in movements.
- Decrease muscle tension.
- Reduce muscle soreness.
- Improve your ability to relax.
- Allow time for mental training, such as visualization
- Significance of Flexibility in Sports injuries

Since the development of physical education and sports, there has been a long consideration among physical educationists and researchers about flexibility as one the major component of physical fitness, though specific flexibility patters are associated with specific sports and even positions within sports. The relationship of flexibility to athletic performance is likely to be sport-dependent (Gleimand Mchugh 1997). Flexibility can be measure in static, dynamic-passive (stiffness/compliance) or dynamic-active (muscle contracted, stiffness/compliance). In sports or before any physical activity, warm-up is considered as an important part of session. The aim of nearly all the pre-participation exercise is to increase muscle and joint pliability before going into strenuous exercise. In the passive stretching, when human muscle in vivo is held in a stretched position (static stretch) the passive tension in the muscle is decline over timeiii. Repeated static stretching results in decreased passive stiffness and attenuation of the stress relaxation responseiv. Safron(1997) in its study has shown in an ex vivo animal model that repeated sub maximal contractions can decrease passive stiffness and provide protection against external mechanical strain injuryv. The cooling down exercises also is the major part of training sessions or in general exercises, these exercises mainly brings the active muscles in to the normal state by decreasing the blood flow and also lower the intensity of work in smooth manner. The epidemiological studies of sports injury is topic of vast interest, but casual relationships are extremely difficult to discern from the available literature. Klinge et al.vi demonstrated that a 43% increase in isometric strength was associated with 25% increase in passive stiffness. These kinds of studies highlighted that, strength and flexibility has inversely proportional relationship. The demands of different sports vary considerably, and it is possible that flexibility patters which represent risk factors for one sport may vary for other sports. Nevertheless, many experts from sports medicine believe that flexibility plays a role in injuries, be they strains, sprains or overuse injuries. Smithvii in its study stated stretching prevents injuries while a prior review stated there is no clear relationship between flexibility and hamstring injury. A summary of cohort studies that have examined the relationship of flexibility and injury is provided in table no.1 viii. Two studies included in table I are in fact interventional, experimental studies examining injuries in Soccer players and runners, respectively, and arriving at opposite conclusions. The second report by Ekstrand and Gillquist which was done over the same time period as the interventional studyix x, found that tightness was associated with more groin Strains and tendinitis ($p < 0.05$) but was unrelated to hamstring strains. Most studies were not designed to measure exposure in the denominator. Increased flexibility has long been considered important injury prevention, despite little prospective evidencexi. Kovanen and suominenxii showed that muscles with a high proportion of fast twitch fibres have lower Stiffness and lower ultimate tensile strength, yet fail at a similar strain to predominantly slow twitch muscles. They have also highlighted a decrease in failure strain with aging suggests that older athletes may be at increased risk for muscle Strain injury.

Table I: Studies of flexibility, stretching and injury

Reference	Sample	n Problems	injury type	Relationship
Nicholaso	Pro US football	139 loose	Knee ligament	72% of players rated as
	players	Exposure	injured ligaments	
Liemohn	College track and	27M	Hamstring strain	More injury in athletes
	Field athletes	No statistics	4° less hip flexion	performed exposure?
Kirby	Young gymnasts	6OF	All types	Greater toe-touching
		Retrospective	.	
	ability had more low back	exposure?		.
		pain		
Ekstrand &	Senior soccer players	18OM	All types	No relationship
		Retrospective, Gillquist		
		exposure?		
Ekstrand	Senior soccer players	18OM	All types	but Intervention had
Multiple interventions		.		divided
	into types	fewer injuries ($p < 0.001$)	not just stretching	.
		for analysis		
Ekstrand &	Senior soccer players	18OM	All types, but	Tight had more groin strain
and	Temporally same as			Gillquist
	divided into types	tendinitis ($p < 0.05$), no relation	above study, Same	.
	for analysis	to hamstring strains	as intervention study?	
Clement	Runners	109 M&F	Achilles tendinitis	'insufficient strength and
		Examined only cases,	.	
		flexibility in triceps surae	retrospective	
Jacobs &	Runners	451 M&F	All types	'Stretchers' injured more
Retrospective, Berson				($p < 0,025$)
		exposure?		
Reid	Senior ballerinas	30	Lateral hip and	More symptoms had reduced
Retrospective,	.			knee pain
	and	hip adduction ROM ($p < 0.05$)	Other flexibility	.
	.		snapping	
		negative		
Giladi	Infantry recruits	295M	Stress fractures	More fractures in recruits
	with	Retroversion vs	.	
	>65 hip extension rotation or		flexibility	.
		laxity ($p < 0.01$)		
Weber	First division soccer	95M	Knee 'Complaints'	Higher percentage with
		Retrospective,		
Baumann	players			Complaints had Contracture
		exposure?		
Knapik	College athletes	138F	All types	Flexibility imbalance in hip,
right	Relation to all	.		vs
	left; more injury		types of injuries	

Reference	Sample	n	injury type	Relationship
		Problems		
Jones	Basic army trainees	303M	Lower extremity	Both high and low flexibility
		Relation to all	.	
		associated with injury	of injury	
Hennessy &	Rugby players, Gaelic	34M	Hamstring strain	No relationship to flexibility
	Retrospective, Watson		and hurling athletes	
		exposure?		
Van Mechelen	Runners	326M	Running injuries	No difference between
		Relation to all	.	
	stretching group and		.	
		stretching group		
Maffulli	Child athletes	453	All types	Flexibility unrelated to
	injury	All types of	.	
		injury, exposure?		
Krivickas &	College athletes	201 M&F	All types	Tighter injured more in males
All types,	Feiberg			only
		mixed sports exposure?		
Wiesler	Dancers	170 M&F	Lower extremity	Ankle ROM unrelated to
	injury	All types, mixed	.	
		sports, exposure?		

Abbreviations and symbol; F = females; M = males; n = number of study participants; ROM = range of motion; ? = uncertain or not measured.

3. SUMMARY AND RECOMMENDATIONS

In Summary, we see no inclusive evidence proving that flexibility and stretching is closely related with injury occurring in sportsperson or athlete. Sports injuries are having multiple factorial problem which results from yet undefined interactions between physiological, psychological, environmental and random factors. The clinical assumption is that a more compliant muscle (lower Stiffness) can be stretched further (higher ultimate strain) and is therefore less susceptible to strain injury. The sports which involve high endurance training have more chances for increasing in stiffness and the ultimate tensile strength but decreased the ultimate strain of slow twitch muscles which are major causes for injuries. Flexibility also plays a major role in rehabilitation of injured player. The active and passive therapeutic exercises directly focus on increasing range of motion in injuries. Epidemiology of sports injury is a topic of vast interest, but causal relationships are extremely difficult to discern from the available literature. The field is complicated by the unquestionable role that chance plays in acute injury. Nevertheless, many experts in sports medicine believe that flexibility plays a role in injuries, be they strains, sprains or overuse injuries. Finally, the relationship of dynamic flexibility to injury has never been investigated. The epidemiological research remains controversial, there continues to be an assumed relationship between muscle tightness and risk for strain injuryxiii. Prospective studies that have demonstrated Significant changes in flexibility concurrent with significant reductions in injury do not seem to exist. Such relationships can only be proven by large scale interventional studies enrolling thousands of participants, thus providing adequate Statistical power to observe low rates of injury and adjust for exposure. According to this study, we surely found a correlation of flexibility and injuries but there is no specific role of flexibility in injuries. Yet, this literature review helped us to broaden our knowledge base and importance about flexibility in the athlete and also it shows flexibility is one of the specific components which need to be focused in the same manner as other physical and motor components.

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YOGA – GUIDELINE OF MORAL EDUCATION (RELEVANCE OF YAMA, NIYAM IN TODAY'S WORLD)

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1. INTRODUCTION

Yoga, Union between the Creator and the Creation but here I would say that yoga enables us to think beyond our body and recognize that there is a seprate driving force within.The indweller also known as the self or the atma/jeev and then establish the union between this aatma/jeev and the creator of the universe.

The science of yoga helps to remove the illusions arising out of ignorance of identifying the atma with the ego and then with the subtle and physical bodies

Yoga Relates To An Eight Fold Path Of Self-Realization Called Astanga Yoga.The Limbs Are Practical Guide To A Persons Personal Development To Achieve The Harmony Of The Mind,The Body,The Spirit.

The Second Chapter Of Yogsutra Is Consider More Appropriate As it Specifically Deals With The First Five Steps Of Ashtanga Called Bahiranga.

First Two Steps Yama,Niyama Bring Openness In Our Behavior With Our Self And Society.Without Adhering To Yama,Niyama Fruits Of Other Parts Can Not Be Reaped.

Yama-Verbal Meaning Of Yama Is Restraints.

It Used To Mean Self Control, Forbearance Or Any Great Rule Or Duty.It Can Also Be Interpreted As Attitude,Patanjali Consider Society First.Yamas Are Ethical Duty.

Yogsutra Mentions Five Yamas That Is Behavior Patterns Or Relationship Between The Individual And Outside World.

1-Ahimsa-Harmlessness
It Means Not To Injure Or Show Cruelty To Any Creature Or Any Person In Any Form. It Is Kindness. It Also Has To Do With Our Duties. Ahimsa Implies That In Every Situation We Should Adopt A Considered Attitude.

2-Satya-Truthfullness
Speak The Truth,Which Is Pleasant, Do not Speak Unpleasent Truth,Donot Lie If Lies Are Pleasing To Ear

3-Asteya-Not To Steal
It Means Not To Take Anything That Does not Belong To Us. We Are Refrain From Taking That Which Is Not Ours By Right Of Consciousness And Karma.

4-Brahamcharya-Sense Control
Brahamcharya Is A Movement Towards The Essential Truth.Bahamcharya Suggestes That We Should Form Relationship That Foster Our Understanding Of The Highest Truth.It Enables A Person To Achieve Control Over Mind And Body.Mahavir gaveup all world pleasure.

5-Aprigraha-Non Greediness
The Purpose Of Aprigraha Too Is Ahimsa,Nothing Can Be Piled Without Bringing Pain To Others,This Teaches Us To Limit Our Demands.

Yama Control Our Behavior With Others.And Niyam Are Personal Disicipline And Regulate Our Behavior With Ourselves. the five niyam are constructive tools for cultivating happiness and self-confidence

1-Shouch-Cleanliness
Cleanliness Of Mind And Body Is Called Shouch. Cleanliness Of Our Mind Is Important Than Cleaniness Of Our Body.Asan,Pranyama,Dhyan are aimed at cleansing mind and Body.

2-Santosh-Contentment
Santosh Is To Enjoy Life Without Having Any Desire .Its A Thin Line Between Satisfaction And Contentment, Satisfaction Is Temporary Feeling.

3-Tapa-Endurance
Tapa Is Simply Practice Of Strong Self- Discipline And Maintain Strong Will Power.tapa helps us controlling premature impulse of the mind,when impurities are Removed than siddhis are obtained.practice of tapa

remove impurities.

4-Swadhayaya-Self Study
Daily Study Of Enlighting And Inspiring Scriptures Is Swadhayaya. Scriptures Geeta, Upnishads Ramayan,Mahabharta Motivates Us To Work For Self-Knowledge,They Also Reveal The Ways And Means Of Great Subjective Goal.

5-Ishwarpranidhana-Dedication
Beliving In Existence Of God And Having Faith In His Greatness .Completely Devoting Oneself To Him Without Any Expectations In Return.A Believer Of God Is Normally Free Of So Many Burdens ,Can See And Appreciate The Beauty Of All.

Ishwar is not only the creater and sustain of the universe but also respect our goal,so a profound belief and devotion unto him is of profound importance.

The Importance Of Yama,Niyama Is Timeless ,All Factors Are Instrumental In Purifying Ones Mind,They Help In Character Building And Moral Teaching Of Young Generation. Yoga Consider The Society First And Then Individual.

Yama, Niyama Are Booklets Of Guidance, Rules-How An Individual Should Behave. These Ten Rules Are Honored In Our Laws, Religion And Philosophy. Yam, Niyam Is A Way To Live Life And Form A Healthy Society And It's A Method Of Increasing The Efficiency In Work, Productivity. Children/Kids/Students Who Have Embraced Yoga Are Calm, More Alert, Better Listener, More Creative, More Physically Focused With Stronger And Healthier Bodies

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See: Hatha Yoga Pradipika; Note: This Free On-Line Source Author Lists Tapas Twice In The List Of Niyamas; Others List The Second Last Word Of Second Line In The Above As जपो, Orjapa

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ORIGIN OF TRADITIONAL GAMES IN INDIA AND THEIR STATUS IN MODERN TIMES

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ABSTRACT

India has been a birth place of several traditional games which are recognized by the whole world today. Some prominent games originating in India are Archery, Polo, Chess, Martial Art etc. These are skill and strength games which require very little equipment and expenses, which is one of the main reasons of their popularity. Yet much needs to be done at the govt. level so that they can be well promoted and Indians can retain their glorious heritage.

Keywords: Prominent Traditional Indian Games, Present Status.

1. INTRODUCTION

The word "GAME" is universal and does not have any cultural or linguistic boundaries. Games appear to be the common property of people who know them either professionally or as an amateur. Many games, which we think, are just pastimes are, in fact, relics of religious rituals, which often date back to the birth of mankind. Games echo the reflections of the traditions and ethos of a particular country or region. The pleasure of voluntary action is the soul of games. Traditional Games act as learning aids. They teach us many things while playing like to learn to win and lose, develop sensory skills, count, add, improve motor skills, identify color, improve hand-eye co-ordination and finally to have fun. The values that we achieve by playing these games are more when compared to the games that we play nowadays. Some of the values that we gain are that they are environment friendly, we get a chance to learn about our culture and history, and an important thing is, they are suitable for all ages, so they increase the interaction between generations. Many modern games played around the world have their origin in these traditional games. This is the matter of pride to our nation's culture.

Some prominent traditional games which originated in our country and became popular all over the world are as follows:

Shatranj/Chess

Chess originated in India and was originally called Ashtapada (sixty-four squares). Later this game came to be known as **chaturang** which is well recognized as the earliest form of Chess. Chess is perhaps India's oldest and most loved board indoor game. Chess has been played in India through centuries. It is revered as an indication of a man's intelligence and strategic capabilities. A chess set can be found in almost every Indian home. Many of India's folktales are littered with stories of kings and emperors and their chess games. Chess has also been mentioned in the great Indian epic, Mahabharat. In some form or the other, the game continued till it evolved intoChess. H. J. R. Murry, in his work titled A History of Chess, has concluded that chess is a descendant of an Indian game played in the 7th century AD. Chess is excellent for overall mental development. Many schools encourage children to pick up chess. Chess has a very positive effect on children as well as adults.

Archery

Dhanurvidya or archery is an indigenous sport of Meghalaya. As such, it is an inherent part of the culture of Meghalaya and the festivals of the state are incomplete without Archery. The bow and arrow constituted the classical Indian weapon of warfare, from the Vedic period, until the advent of Islam. Some Rig-Veda hymns lay emphasis on the use of the bow and arrow. Detailed accounts of training methodologies in early India concern archery, considered to be an essential martial skill in early India. Legendary figures like Doran, are depicted as masters in the art of archery. Arjuna, Eklavya, Karna, Rama, Lakshmana, Bharata and Shatrughan the great warrior are also associated with archery.

Archery games were immensely popular all over India. Specially among the students in the renowned universities of Nalanda and Taxila in ancient India. Now it is one of the most prominent game in all continents of the world.

Kabaddi
It is one of the most popular sports in India played by the people in villages as well as in small towns. Kabaddi is an Indian game which requires both power and skill for its play.

The origin of Kabaddi can be traced to pre-historic times when man learned how to defend in groups against animals or attack weaker animals individually or in groups for survival and food. It has also found mention in Mahabharat as Ek Shwans.' Basically Kabaddi is more popular in various Asian Countries, though some other countries are also taking keen interest.

Kho-Kho
Kho-Kho is one of the most popular traditional sports in India. Kho Kho is a 'run and touch' game that is very simple to play and can be enjoyed by people of all ages.

Kho-Kho in India goes back a long way, as it was first started in the state of Maharashtra.One of the main points of a successful animal life is "Active Chase" which is a fundamental principle of the Indian game called Kho Kho, synonymous with the phrase "Game of Chase". It will not be a mistake to say that Kho Kho was a recognized sport in the ancient times even earlier to the oldest mythological writings of classics- Mahabharata.

Mallakhamb
Mallakhamb is an ancient traditional Indian sport. 'Malla' means gymnast, and 'khamb' means pole. Thus, the name 'Mallakhamb' stands for 'a gymnast's pole'. Mallakhamb was used by wrestlers for practicing their skills in the game KUSTI. But now a days the trend has changed and it has got a special identity.

The origin of this sport can be traced to earlier part of the 12th century. A mention of wrestlers exercising on wooden poles is found in the Manasholas, written by Chalukya in 1153 A.D.

Ball badminton
Ball badminton is an indigenous sport of India. It is a racquet game played with a woolen ball upon a court of fixed dimensions. Ball badminton is a fast-paced game; it demands skill, quick reflexes, good judgment, agility, and the ability to control the ball with one's wrist.

Previously, ball badminton was an attractive game for rural boys since it required a minimum of equipment. The game drew a large number of students from South India, resulting in the formation of the Ball Badminton Federation of India in 1954. This game was played as early as 1856 by the royal family in Tanjore, capital of Thanjavur district in Tamil Nadu.

Vallamkali
The snake boat race, known as Vallamkali in Kerala is an interesting traditional game held on the occasion of Onam. It is a famous water sport and one of the main attraction held in Kerala. Boat Race is truly a feast to the eyes of the tourists, who come from far off places to see it.

The Vallamkali was first originated in Assyria, on a New Year day in BC.300. The history also reveals that, the Vallamkali (Boat Race) also took place in some other places like The Andaman and Nicobar Islands, Combodia, Bangkok, Burma, Britain etc. In the 14th century, there was a war occurred between Kayamkulam and Chembakasseri. During that time the king Chembakasseri Devanarayana had decided to build a suitable war boat and he gave the responsibility to the famous "Thachan" (Carpenter) in that period. Now the boat game has evolved in new version as sail boating, canoe racing etc.

Camel Race
Camel racing in Pushkar is one of the major attractions for tourist in Rajasthan. Camels are very important part of desert life, These camels are decorated beautifully at the time of race. This tradition has continued since old ages till present time.

Kalarippayattu (Martial Arts)
Martial art is a part of India's ancient culture. Kalarippayattu is the one of the oldest form of Indian martial art. This famous art is from Kerala. Indian martial art is a gift to the modern world and mother of all other Asian martial arts. Ancient India claims to have been the origin of Judo and Karate. karate, Kung-fu Judo etc are all modern variations of Kalaripayate.

Atya-patya
Atya patya is the thrilling and anciant game of india. Atya patya, one of the Major Games of Indian origin, is very popular particularly in rural areas. In the moonlights the game is played in the villages. The game has been played since time immemorial, it was played with different names and improvised with convenient rules accoding to situation. The game was known by different names such as Sur-pati, Lon-pati, Darya-banth, saragari, saramani, tilli, uppinat, uppupatti, choupal pati, panchwati, chikka etc. In Tamil nadu this game is mentioned in old Tamil Literature by the name of KLITHATU. etc. Atya patya is a traditional India sport played nine to a side, between two sides.

Chaughan (Polo)
No one is quite sure where Polo originated, but some records indicate that it was played by the ancient Indians long ago.Probably the game developed from the Central Asian nomads, who spent their lives on horseback. In India it was developed into a game to promote equestrian military skills and was considered the most important test of princes and warriors. It was known as "Chaughan" meaning mallet. The word polo comes from the Tibetan word 'Pulu' which means ball. Manipur as the birth of Polo was destined to become the favorite sport of the Englishmen in India.

2. CONCLUSION
The history of sports in India is very ancient and dates

back to the early Vedic era. It is more likely that many of today's Olympic disciplines are advanced versions of games of strength and speed that flourished in ancient India. Chess, wrestling, polo, archery and hockey (possibly a fall-out from polo) are some of the games believed to have originated in India. But unfortunately, in spite of being the birth place of several prominent games, the condition is far from satisfactory in India and below the desired level. This is mainly due the lack of encouragement and promotion on the part of the government.

3. SUGGESTIONS

- In order to revive and promote these games as part of Indian heritage, the govt. should adopt a constructive attitude for the same.
- The govt. should provide substantial funds and recourses for the promotion of these games at various levels.
- The govt. should develop ultra modern facilities and infrastructure all over the country for the promotion of these games.
- The Govt. should establish sports academy in large numbers all over the country to popularize these games.
- The govt. should make these traditional games a part of curriculum from the grass root level in order to produce world class sportsmen.

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SURVEY OF PROBLEMS CONFRONTING COACHES OF PHYSICALLY CHALLENGED SWIMMERS

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ABSTRACT

The purpose of this study was to survey of problems confronting coaches of physically challenged swimmers. For the purpose of investigation 32 swimming coaches who are teaching and training swimming to physically challenged swimmers and who accompanied their teams to X National Paralympic Swimming and Water Polo Championship which was held at Kishore Bharati Krirangan, Jadavpur, Kolkata from October 9-10, 2009 were taken as subjects for the study. Self-Constructed Questionnaire consisted of 21 items was framed and questionnaire was constructed by consulting with the experts with utmost care and seriousness of the purpose, taking into consideration the maximum coverage of the areas of the field concerned and at the same time not losing sight of the relevant aspects needed for the study. The data furnished in the questionnaire were categorized in terms of percentage and the method of logical analysis was used to obtain meaningful inferences. Such analysis was done to find out occurrence specific problem and extend of their severity.

Keywords: Physically challenged swimmers, Problems, Coaches, Swimming.

1. INTRODUCTION

Sports as an important aspect of life and playing vital role in bringing about physical, mental and social growth of nation. The past few decades have witnessed many innovations in this area. Sports are becoming increasingly sophisticated, technical and popularity as a separate profession. With the expansion of educational facilities in country, more and more going people are taking to sports as a daily feature of their life. Swimming which is as excellent all around individual and team sports has been widely accepted as a highly competitive as well as recreational game and rehabilitative activity through out the world. Swimming has developed into highly competitive sports which required a high level of physical, psychological and socio economic necessities.

Swimming has already occupied a place among the most popular sports in the world. It catersto the highest level competition for players of both male and female providing thrilling and good entertainment to spectators and above all it enjoys the status of a healthy recreation sport for people of all ages,

Among physical education activities, swimming is considerated as the best especially for the physically disabled because of the simple reason that the water supports them in maintaining balance. While swimming the physically disabled people can move freely without help of calipers, sticks or wheel chairs in the water. Swimming is also very valuable for the physically disabled people with its origins in the early use of hydrotherapy for the treatment of paralysis, particularly that resulting from poliomyelitis.

Physical Education is the greatest source for the handicapped to develop their capacities and potentialities and to become useful member in the society. Clarke pointed out that the physical education in one phase of education process; it utilizes activities that are inherent in each individual to develop a child organically, neuro muscularly, intellectually and emotionally. Physical Education is the greatest source for the handicapped to develop their capacities and potentialities and to become useful member in the society. There outcomes are revised whenever physical education activities are conducted in such places as the play grounds, gymnasium and swimming pool.

2. PROCEDURE & METHODOLOGY

Subjects

For the purpose of the study 32 swimming coaches who are teaching and training swimming to physically challenged swimmers and who accompanied their teams to

X National Paralympic Swimming and Water Polo Championship which was held at Kishore Bharati Krirangan, Jadavpur, Kolkata from October 9-10, 2009 were taken as subjects for the study.

Tool

Self constructed Questionnaire consisted of 21 items was framed and constructed by consulting with the experts with utmost care and seriousness of the purpose, taking into consideration the maximum coverage of the areas of the field concerned and at the same time not losing sight of the relevant aspects needed for the study, so as to get maximum worth while and meaningful response from the subjects.

Scoring

The data furnished in the questionnaire were categorized in terms of percentage and the method of logical analysis was used to obtain meaningful inferences. Such analysis was done to find out occurrence specific problem and extend of their severity.

Collection of Data

The data was collected on 32 swimming coaches who are teaching and training swimming to physically challenged swimmers. Before, administering the questionnaire, the purpose of the study was explained to the subjects and the researcher solicited their co-operation which all of them readily agreed to extend.

Administration of test

The questionnaire was administered on 32 swimming coaches who are teaching and training swimming to physically challenged Swimmers. All respondents were assembled at a common place, when they were not busy and had enough time to spare for filling up of questionnaire. Questionnaire was distributed, purpose and methods of responses were explained clearly to all subjects, it was also ensured that no item of the test is left unanswered by any subjects. Data hence collected was assorted for statistical interpretation and analysis of study.

Statistical Analysis of Data

The problems encountered by swimming coaches working all over India to teach and train Physically Challenged Swimmers were tabulated as under:

S. No.	Questions	Yes		No		Never	
		Freq.	%	Freq.	%	Freq.	%
1	Do you find it difficult to get sufficient number of physically challenged people for Swimming?	18	56.25	13	40.62	1	3.13
2	Do you get sufficient & required equipment & facilities for coaching?	15	46.88	17	53.12	-	-
3	Do you face difficulty in coaching due to the improper maintenance of pool?	11	34.37	20	62.5	1	3.13
4	Do you face difficulty in getting cooperation of physically challenged Swimmers?	12	37.5	18	56.25	2	6.25
5	Do you face difficulty in getting cooperation & support of your Colleagues and co-workers?	10	31.25	20	62.5	2	6.25
6	Do you have the necessary first-aid & emergency care ready at the pool for your swimmers?	25	78.12	6	18.75	1	3.13
7	Do you face difficulty while teaching (explaining) swimming theory & skill to physically challenged Swimmers?	4	12.5	27	84.31	1	3.13
8	Do you face difficulty when swimmers are unable to understand you or come up to your expectation?	10	31.25	19	59.37	3	9.38
9	Do your head of the institute/department show a positive attitude towards your effort in the promotion of swimming for physically challenged people?	27	84.37	5	15.63	-	-
10	Does your administration whole heartedly permit you to attend seminars, conferences, workshops, clinics, etc. related to disabled swimming?	20	62.5	12	37.5	-	-
11	Does the authority provide you information about different swimming competitions for Physically challenged in time?	24	75	7	21.86	1	3.13
12	Does your authority Co-operate with you in conducting the selection trails & coaching for the disabled swimmers?	24	75	8	25	-	-

S. No.	Questions	Yes		No		Never	
		Freq.	%	Freq.	%	Freq.	%
13	Does your government/department provide you incentives for outstanding performance of your physically challenged Swimmers?	15	46.88	15	46.88	2	6.25
14	Are you sanctioned special leave by your department when you need for attending competitions of the physically challenged Swimmers?	27	84.37	4	12.5	1	3.13
15	Do you face problems with the availability of the pool for competition?	16	50	16	50	-	-
16	Do you find it difficult to give the daily schedule due to insufficient pool space?	8	25	24	75	-	-
17	Do you get Sufficient time for completing the schedule?	24	75	8	25	-	-
18	Do you get sufficient officials needed for conducting the swimming competition for physically challenged swimmers?	28	87.5	4	12.5	-	-
19	Do you get necessary funds for the proper conduct of training & competitions?	14	43.75	16	50	2	6.25
20	Do you face problems in selecting the team due to some outside influences?	12	37.5	18	56.25	2	6.25
21	Do you find that the motivational level of physically challenged trainees is low?	22	68.75	10	31.25		

3. DISCUSSION & CONCLUSION

On the basis of the findings of the present study the following conclusions were made:

- As far as swimming for Physically Challenged swimmers are concerned almost 56.25% of coaches find it difficult in getting sufficient number of physically challenged people were as other do not face that much problem.
- Majority 53.12% of coaches agree that they do not get sufficient equipments for teaching and coaching physically challenged swimmers.
- Maintenance of pool is not a major problem for majority 62.50% of the coaches training physically challenged swimmers.
- Majority56.25% of coaches who are training physically challenged swimmers do not face any difficulty in getting co-operation of parents.
- Majority 62.50% of coaches training physically challenged swimmers do not face any difficulty in getting the cooperation and support of their colleagues and co-workers.
- Majority 78.12% of coaches training physically challenged swimmers agree that they have necessary first aid and emergency care
- Majority 84.37% of coaches training physically challenged swimmers do not face any difficulty while teaching
- Majority 59.37% of coaches training physically challenged swimmers do not face any difficulty when swimmers are not able to understand or come up to their expectations
- The majority 84.37% of coaches training physically challenged swimmers agreed that their institutions show positive attitude towards promoting swimming for physically disabled people.
- Majority of the 62.50% Paralympic swimming administration permits coaches to attend seminars, conferences, workshops, clinics etc. related to Paralympic swimming.
- Majority of the 75% authorities informs the coach training physically challenged swimmers about the various Paralympic swimming competitions.
- Majority of the 75% coaches training physically challenged swimmers do not face any problem in getting cooperation of the authority in conducting the selection trail of Physically Challenged swimmers.
- Another problem faced by the coaches training physically challenged swimmers is that almost 46.88% coaches do not get any incentives for outstanding performance of their physically challenged swimmers.
- Majority of the 84.37% coaches training physically challenged swimmers gets special leave by their department when they needed for attending competitions of the physically challenged swimmers,
- Almost 50% of coaches training physically challenged swimmers agreed that they faced the problem with the facilities while conducting competitions.
- Majority 75% of coaches training physically challenged swimmers do not find any difficulty in giving daily schedule due to in sufficient pool space.
- The time allotted to coaches training physically challenged swimmers for teaching swimming to physically challenge is sufficient to almost all the coaches.
- While conducting Paralympic swimming competitions there are sufficient officials.

- Almost 50% of the coaches do not get necessary funds for training physically challenged swimmers for properly conducting training and competition.
- Majority 56.25% of coaches training physically challenged swimmers do not face any problem in selecting the team due to outside influence.
- Majority 68.75% of coaches training physically challenged swimmers agree that the motivation level of physically challenged trainees is low.

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COMPARISON OF MENTAL TOUGHNESS AMONG DIFFERENT CLASSES OF PHYSICALLY CHALLANGED SWIMMERS

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ABSTRACT

The purpose of this study was to compare the level of Mental Toughness among different classes of Physically Challenged Swimmers belonging S-5 and S-8 categories who had participated in XV – National Paralympic Swimming Championship. For the purpose of this investigation 60 Physically Challenged Swimmers (30 swimmers of S-5 and 30 swimmers of S-8 category) were selected as subjects for the study. Their age were ranged from 18 to 37 years. The Mental Toughness Questionnaire developed by Alan Goldberg was used. Test consist 30 statements which measure the Mental Toughness and only yes/no option for answers. "t" test was employed to analyze the data. Result revealed that there was significance difference found between S-5 and S-8 category physically Challenged Swimmers in regard to Mental Toughness at 0.05 level of significance.

Keywords: Mental toughness, Physically Challenged Swimmers, Paralympics Swimming Championship.

1. INTRODUCTION

Throughout the World, the concept of Sports psychology is being changed. Today's athletes face acute and unique challenges. The standards are higher, the competition is tougher and the stakes are higher. Among the best, physical preparation is more complete and psychological component is more important than ever before.

According to Silva and Weinberg during the past two decades, Sport psychology has emerged as a legitimate field of scientific enquiry. As with all scientific endeavors sports psychology shows the same basic goals of science. Researchers are awarded with ample opportunities to observe, describe and explain the various psychological factors that influence, diverse aspects of sports and physical activity.

A key question for sports and exercise psychologists that whether champions have simply inherited the dominant psychological traits necessary for success or whether mental toughness can be acquired through training and experience. Recent research has attempted to explore the concept of mental toughness in sport more thoroughly, and it appears that, while some people are more naturally more tough minded than others, people can be 'toughened-up' with the correct approach to training.Swimming has already occupied a place among the most popular sports in the world. It caters to the highest level competition for players of both male and female providing thrilling and good entertainment to spectators and above all it enjoys the status of a healthy recreation sport for people of all ages.

Mental toughness is a collection of values, attitudes, behaviours and emotions, which enable an individual to persevere and overcome any obstacle, adversity or pressure experienced, but also to maintain concentration and motivation when things are going well, to consistently produce high levels of performance. In today's competitive scenario, the all other concerned with sports cannot depend only on physical fitness alone, they have toindentify and determine psychological attributes which affect of calipers, sticks or wheel chairs in the water. Swimming is also very valuable for the physically disabled people with its origins in the early use of hydrotherapy for the treatment of paralysis, particularly that resulting from poliomyelitis.

Physical Education is the greatest source for the handicapped to develop their capacities and potentialities and to become useful member in the society. Clarke pointed out that the physical education in one phase of education process; it utilizes activities that are inherent in each individual to develop a child organically, neuromuscularly, intellectually and emotionally. Physical Education is the greatest source for the handicapped to develop their capacities and potentialities and to become useful member in the society. There outcomes are revised whenever physical education activities are conducted in such places as the play grounds, gymnasium and swimming pool.

2. PROCEDURE & METHODOLOGY

Subjects

For the purpose of the study 60 subjects who were selected was participant of XV – National Paralympics Swimming Championship which was held at Suvarn JNMC Swimming Pool, Belgaum, Karnataka from November 27-30, 2015 under the auspices Paralympics Swimming Federation of India (PARASWIM) and Paralympics Committee of India.

Tool

Mental Toughness Questionnaire designed by Alan Goldberg to measure "Mental Toughness" factor was administered. Mental Toughness questionnaire consists of 30 items which measure the Mental Toughness and only yes/no option for answers. Around 80 questionnaires were distributed among the Physically Challenged Swimmers but we received only 60 completed questionnaires from them and while collecting, it checked that no response was left. There was no time limit for the completions of the questionnaires but the subjects were instructed not took too much time over any questions.

Scoring

Each item had two options yes/no for answers. The subjects were asked to encircle/tick any of the option from yes/no. The scoring was done according to the directions given in the key of this questionnaire. One mark is given for each correct answer and Zero for each wrong answer as per the answer key.

Collection of Data

The data was collected on 30 Physically Challenged Swimmers of S-5 and S-8 category who had participated in XV – National Paralympic Swimming Championship which was held at Suvarn JNMC Swimming Pool, Belgaum, Karnataka from November 27-30, 2015. Before, administering the questionnaire, the purpose of the study was explained to the subjects and the researcher solicited their co-operation which all of them readily agreed to extend.

Administration of test

The questionnaires was administered on 30 Physically Challenged Swimmers of S-5 and S-8 category who had participated in XV- National Paralympic Swimming Championship at the respective place of championship during free time. Questionnaires were distributed, purpose and methods of responses were explained clearly to all subjects, it was also ensured that no item of the test is left unanswered by any subjects. Data hence collected was assorted for statistical interpretation and analysis of study.

3. DATA ANALYSIS & STATISTICAL TECHNIQUE

To test the hypothesis and to find out the objective of this study 't' test was used at .05 level of significance.

4. RESULT

The comparison of physically challenged swimmers of S-5 and S-8 category on Mental Toughness is presented in table –I

Mean comparison of physically challenged swimmers of S-5 and S-8 category on Mental Toughness (n=60)

Table 1

Psychological variable	S-5 Mean	S-8 Mean	Df	't'
Mental Toughness	18.33	20.23	58	5.12

In using one tail test, the value of t=5.12 should be compared with tabulated t that is t=1.67.since the calculated ''t' is greater than the tabulated one. Null hypothesis may be rejected and it may be concluded that s-8 category shows greater mental toughness or higher than the s5 category.

Figure 1 : Graphical representation of S-5 and S-8 in mental toughness.

5. DISCUSSION

On the statistical findings on Mental Toughness it has been evident that significant difference was found between S-5 and S-8 category Physically Challenged Swimmers. Also, the S-8 category Physically Challenged Swimmers posses better Mental Toughness than S-5 category Physically challenged Swimmers .

6. CONCLUSION

On the basis of analysis of data and results of the study it is concluded that there is a significant difference in Mental Toughness among S-5 and S-8 category Physically challenged Swimmers and also, the S-8 category Physically challenged Swimmers posses better Mental Toughness than S-5 category Physically challenged Swimmers.

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REIKI : THE HOLISTIC THERAPY FOR ATHLETES

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1. INTRODUCTION

The special needs and pressures those serious college athletes, Masters, Professional and Olympic athletes all share. The way Reiki can support them specifically. For those who are not familiar with Reiki: it is an ancient alternative healing therapy that brings alignment balance, health and well being to the recipient's body. The way Reiki works is that it brings the athlete's natural healing ability to fruition. It boosts the overall positive wellness of body and mind restoring and rebalancing the person's energy. The amount of stress in our liver is highly dependent upon individual factors such as our physical health, the quality of our interpersonal relationships, the number commitments and responsibilities which everyone carries. But Reiki is one of the best techniques to cope up with the stress, and pressures. It helps train the mind to concentrate and focus and tune into the body and its surrounding energy and create a harmony and balance with in one's body for proper transference of energy. This energy transference are known to have direct physical and psychological impact on a human enhancing mental and physical relief.

2. OBJECTIVES

To study the holistic therapy for athletes.

How Reiki Works for Athletes:

It has been proved by researchers and studies that Reiki gives a positive effect on people troubled with severe stress, depression, anxiety and many other disorders Reiki offers a preventative and preparatory therapy in relation to physical stress of training and building one's endurance, skill, and strength – the obvious core aspects to any athlete's workout programme. Reiki can help athletes body heal and recover faster post performance. A drug free recovery booster.

To prevent Cure and Recovery from new and old sports injuries:

Reiki can prevent severe injuries and also improves post-workout recovery, speeding up the halting of old and new injuries. It is an excellent healing therapy for on the spot treatment of new sports injuries. It can be used anywhere, in an instant. Reiki is simple to administer, all a Reiki practitioner needs are his hands and his mind. This practical nature of Reiki makes it versatile indeed. Being attuned to Reiki is live having a 'first-aid-kit' in one's hand. It can be applied to help minimize swellings and small bleeding' to relief head-aches and other pain immediately; to help tissues burns, sprains and wounds. Can also be applied to brakes after the bones have been set. Reiki can reduce the healing time and makes the healing process more comfortable.

As a performance Booster for athletes:

Reiki improves concentration and focus creating a centered mind. It is a 'laying on hand' techniques that brings in the universal life force.

Better strengthens individual sports performance for the host of reasons as it helps to focus the mind freeing it from fear and worry' to strengthen and to relax the body' and to enhance memory confidence and intuition. Reiki also leads to better team performance for several reasons. Just as Reiki promotes balance within a person, it also builds harmony within a team. It can rejvenates the team as well as each player individually. Sports teams and individual athletes are sure to love Reiki once they start using it.

Reiki to Improve Confidence of Athletes:

Reiking supports athletes to be calm, secure and focused in the face of their unusually high stress load. Reiki can help athletes handle all stresses and realize a sense of physical and mental calm, and inner harmony. At unlucky times, extra stress comes from having to recover from sports injuring. Sports performance is based on right training and right thinking. Without a winners mentality of excitement to improve and confidence that one can do it, there will be no gold medal, not even bronze. Reiki also helps athletes on the emotional level. It usually brings out a stronger and more positive outlook of life. By helping a person to reduce negative emotions like w2orry, anger and fear Reiki allows confidence to surface. With Reiki, athletes become better prepared fro competition and athletic performance.

Right Time to give Reiki to Athletes:
Usually athletes lend to be busy people, who are keep on deep tissue massage, Reiki is best administrated in the following ways :-

- In a series of treatments when athletes are at rest, either by in person or distant treatment to boost the overall wellness and ability of the athlete;
- As on the sport treatment when needed such as in case of an injury.
- Alongside message treatments they are already getting.
- It makes sense for athletes to receive a series of treatments addressing specific health and performance issues and realizing overall wellness from dedicated Reiki Practitioner It is useful if either the coach, the assistant coach, the trainer or even the athlete himself is attuned to Reiki.

Case Studies:
New Zealand Cyclist Hyden Roulston turned his life around with Reiki: [1]

In 2006 Roulston was diagnosed with a potentially fatal heart disease.

After 2 month of reluctant retirement, Roulston came upon Reiki, which he explained as a Japanese healing method which gave him the peace of mind to get back in the Saddle.

Since coming back in late 2006, Roulston has made almost every domestic post a winner and in the Beijing Olympics he won silver in the men's individual pursuit and a bronze in the team event. It was the first time that a New Zealand track cyclist won two medals.

Another study suggested that hands – on interventions are beneficial in reducing stress for community mental health clinicians and that Reiki has a positive effect greater than relaxing touch along (Rosado, 2015)[2]

Erdogan & Cinar (2016)[3] aim of this study was to evaluate the effect of Reiki on depression in elderly persons living in nursing homes. The study was conducted randomized, controlled and experimental.

Diaz-Rodriguez et.al, (2011)[4] worked on study of student with burn syndrome biological indicators of a significant relaxation response were found as a result of Reiki treatment. When nurses administered Reiki to a group of athletes with acute coronary syndrome, physiologic indicators of a significant relaxation effect were recorded. (Friedman et. al., 2010)[5]

Shore (2004)[6] followed patients being treated for mild depression and stress. After six weeks of treatment and for up to a year after words, those who had received Reiki showed both immediate and long-term improvements in depression, stress and hopelessness. In a small study, complete elimination of typical postoperative depression was seen in heart surgery patients given Reiki during surgery (Motz, 1998)[7]

3. CONCLUSION

Reiki is becoming an increasingly accepted everywhere. It is seen as a powerful and cost-redacting technique to improve health outcomes and quality of care. It works on all levels: mental, emotional and the physical. This allows Reiki to help athletes in many ways and more likely to improve records and win.

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OVERCOMING OBESITY

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1. INTRODUCTION OF OBESITY

Obesity is a term used to describe excess body fat. There are many ways in which a person's health in relation to their weight can be classified, but the most widely used method is Body Mass Index (BMI).There are many consequences of excess weight on self esteem, individual and family health and on the economy. Excess weight takes years to develop and takes time to be lost.

Facts on obesity

- Globally, there are currently about 1.6 billion people in the world who are overweight and there are another 400 million who suffer from obesity.
- Obesity and overweight pose a major risk for chronic diseases, including heart disease, type 2 diabetes, high blood pressure, hypertension, certain forms of cancer and osteoarthritis.
- The key causes are increased consumption of energy-dense foods high in saturated fats and sugars and reduced physical activity.
- As a rule, women have more body fat than men. Most health care professionals agree that men with more than 25 percent body fat and women with more than 30 percent body fat are obese.

2. OBESITY

"Obesity" specifically refers to an excessive amount of body fat. "Overweight" refers to an excessive amount to body weight that includes muscle, bone, fat, and water.

3. MEASUREMENT OF OBESITY

Body Mass index (BMI):

This is the World Health Organization's (WHO) recommended body weight based on BMI values for adults. It is used for both men and women, age 18 or older.

Category	BMI range - kg/m^2
Severe Thinness	< 16
Moderate Thinness	16 - 17
Mild Thinness	17 - 18.5
Normal	18.5 – 25
Overweight	25 – 30
Obese Class I	30 – 35
Obese Class II	35 – 40
Obese Class III	> 40

Causes of Obesity:

The balance between calorie intake and energy expenditure determines a person's weight. At present, we know that there are many factors that contribute to obesity, some of which are:

- Genetics. A person is more likely to develop obesity if one or both parents are obese.
- Overeating. Overeating leads to weight gain, especially if the diet is high in fat.
- Slow metabolism. Women have less muscle that men. Muscle burns more calories that other tissue (which includes fat). As a result, women have a slower metabolism that men and hence, have a tendency to put on more weight that men, and weight loss is more difficult for women.
- Physical inactivity. The National Health and Examination Survey (NHES) showed that physical inactivity was strongly correlated with weight gain in both sexes.
- Medications. Medications associated with weight gain

include certain antidepressants, anti-convulsants. Weight gain may also be seen with some high blood pressure medications.
- Psychological facts. For some people, emotions influence eating habits. Many people eat excessively in response to emotion such as boredom, sadness, stress or anger.

- Diseases such as hypothyroidism, insulin resistance, polycystic ovary syndrome and Cushing's syndrome are also contributors to obesity.
- Lack of sleep may also contribute to obesity.

4. CONSEQUENCES OF OBESITY

Health Risk:
- Gallbladder disease and gallstones.
- Fatty liver disease.
- Gastro esophageal reflux.
- Osteoarthritis, a disease in which the joints deteriorate, this is possibly the result of excess weight on the joints.
- Gout disease affecting the joints.
- Pulmonary (breathing) problems, including sleep apnea, which causes a person to stop breathing for a short time during sleep.
- Reproductive problems in women, including menstrual irregulaties infertility.
- Doctor's providers generally agree that the more obese a person is the more likely he or she is developing health problems.

Psychological and Social:
Emotional suffering may be one of the most painful parts of obesity. Many people think that individuals with obesity are gluttonous, lazy or both. Feelings of rejection, shame or depression may occur.

Management of Obesity:
Doctors generally agree that people who have a BMI of 30 or greater can improve their health through weight loss. This is especially true for people with a BMI of 40 or greater, who are considered extremely obese. Preventing additional weight gain is recommended if you have a BMI between 25 to 25.9 unless you have othr risk factors for obesity related diseases.

Treatment of Obesity:
The method of treatment depends on your level of obesity, overall health condition and readiness to lose weight, treatment may include a combination of diet, exercise, behavior modification and weight-loss drugs.

Working Towards a Healthier Weight:
Listed below are step that may be taken to help you or your family member work towards a healthier weight.

1. Establish a Reasonable target weight.
- Discuss the BMI score with your doctor and have him or her assess the related risk factors for disease and health problem.
- Depending upon persons circumstances, a reasonable target goal may be weight loss of 10% of body weight over six months.
- For some, a minimum goal may be to prevent any further weight gain.
- It is best to lose weight gradually; to 2 pounds a week is reasonable.
- Keep in mind that small amounts of weight loss can have a positive health impact.

2. Best Health Diet Tips:
- Drink plenty of water or other calorie-free beverages.
- Think about what you can add to your diet, not what you should take away.
- Consider whether you're really hungry,
- Be choosy about nighttime snacks.
- Enjoy you favorite foods.
- Eat several mini-meals during the day.
- Eat protein at every meal.
- Stock your kitchen with health convenience foods.
- Order children's portions at restaurants.
- Eat foods in season.
- Use non-food alternatives to cope with stress.
- Have oily free food and also avoid junk foods like burgers, pizzas.
- Avoid to have food in front of TV.

3. Be as active as possible:
- Any kind of physical activity is beneficial. Not only can it assist with weight loss and maintenance, it also improves health in many ways.
- Physical activity doesn't have to be just exercise. Any activity involving movement of the body is beneficial. For example, walking is one easy and inexpensive way to increase physical activity.
- Before starting any program, discuss the physical activity plan with your doctor. Your doctor will assist you in developing a reasonable activity plan.
- Work toward a long-term goal of at least 30 minutes of a moderate physical activity on most days of the week. This physical activity doesn't have to occur all at one time: rather, it can be shorter intervals that add up to 30 minutes at the end of the day.
- If you or your family members has limited mobility, explore with your doctor or other clinical professional how you can safely increase physical activity.
- It is best to start any new physical activity gradually, taking special care to prevent injury.

4. Choose aerobic activities that are fun:
People are more likely to be active if they like what they are doing. It also helps to get support from a friend or a family member. Try one of these activities or others, you enjoy:
- Brisk walking or jogging
- Bicycling
- Swimming
- Aerobic exercise classes

- Dancing (square dancing, slasa, African dance, swing)
- Playing basketball or soccer etc.

5. Be good to yourself

Regular physical activity can give you more energy. Try some of these other ideas to help relieve stress and stay on track with your fitness and nutrition goals:

- Get plenty of sleep.
- Practice deep breathing and relaxing your muscles one at a time.
- Take a break and go for a walk.
- Take short stretch breaks throughout the day.
- Try taking a yoga or tai chi class to energize yourself and reduce stress.
- Try a new hobby, like a pottery class or any activity that sparks your interest.
- Surround yourself with people whose company you enjoy.
- Laughter is one of the most relaxing, healthiest things you can do for yourself.
- If you can't bear to take a break from your computer, find positive activates online. Think of activities that will give your spirits a little lift.

6. Weigh every week and keep records:

- People who weigh at least once a week tend to be more successful at maintaining a weight loss.
- Keeping records like a weight chart is helpful for some people as one can see overall progress as well as any increases in weight.
- Keeping a record of food consumed each day can help maintain the focus on the diet plan and provide additional information related to progress.
- Keeping an activity chart can help in keeping track of whether physical activity goals are being met.
- Keep your fitness goals realistic by understanding how your body mass relates to your weight. Measuring yourself of how your clothes fit can be great indication of how you're reshaping your body, even if the pounds aren't failing off.

5. ROLE OF MEDICATION IN THE TREATMENT OF OBESITY

Medication treatment of obesity should be used only in patients who have health risks related to obesity. Medications should be used in patients with a BMI greater than 30 or in those with a BMI of greater that 27 who other medical conditions (such as high blood pressure, diabetes, high blood cholesterol) that put them at risk for developing heart disease.

Like diet and exercise, the goal of medication treatment has to be realistic, with successful medication treatment; one can expect an initial weight loss of at least 5 pounds during the 1-3 months of treatment and a total weight loss of 10-15% of the initial body weight. For further information you can consult your doctor.

6. POSITIVE ATTITUDE IS MUST

The purpose of life is not only to be happy. It is to be useful, to be honorable, to be compassionate and to have it make some difference that you have lived and lived well always bear in mind that your own resolution to succeed is more important than any other one thing. Your mental attitude is something you can control outright and you must use self discipline until you create a positive mental attitude your mental attitude attracts to you everything that makes you what you are.

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COMPARISON OF ABDOMINAL STRENGTH BETWEEN B.P.ED. BOYS AND B.ED. BOYS

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ABSTRACT

The purpose of this study was to compare the abdominal strength between B.P.Ed. Boys and B.Ed. Boys. For the purpose of the study forty (40) male student from Kalka Institute for Research and Advance Studies Partapur bye pass, meerut, who had participated in different intercollegiate tournaments were randomly selected as the subject for this study. The subject age was ranged between 20 to 25 years. All the subjects were physically fit and thus were capable to performing the test efficiently. The necessary data of abdominal strength was collected at the time of match practice session. The data of abdominal strength was collected with the help of bent knee sit-ups and score was recorded in numbers. In order to find out the abdominal strength between B.P.Ed. Boys and B.Ed. Boys "Independent T-Test" was applied and the level of significance was set at 0.05. The study reveals that there was significant difference found in abdominal strength between B.P.Ed. Boys and B.Ed. Boys.

Keywords: Abdominal Strength and Bent Knee Sit-ups.

1. INTRODUCTION

Physical education trends have developed recently to incorporate a greater variety of activities besides typical sports. Introducing students to activities like bowling, walking/hiking, or Frisbee at an early age can help students develop good activity habits that will carry over into adulthood. Some teachers have even begun to incorporate stress-reduction techniques such as yoga, deep-breathing and tai chi. Tai chi, an ancient martial arts form focused on slow meditative movements is a relaxation activity with many benefits for students. Studies have shown that tai chi enhances muscular strength and endurance, cardiovascular endurance, and provides many other physical benefits. Physical fitness is a general concept defined in many ways by differing scientists. Here two major categories are considered: general fitness (a state of health and well-being), and specific fitness (a task-oriented definition based on the ability to perform specific aspects of sports or occupations). Physical fitness is generally achieved through correct nutrition, exercise, hygiene and rest Physical fitness has been defined as a set of attributes or characteristics that people have or achieve that relates to the ability to perform physical activity. In previous years, fitness was commonly defined as the capacity to carry out the day's activities without undue fatigue,

Strength is a conditional ability i.e. it depends largely on the energy liberation processes in the muscles. Strength is also perhaps the most important motor ability in sports as it is a direct product of muscle contractions. All movements in sports are caused by muscle contractions and, therefore, strength is a part and parcel of all motor ability, technical skills and tactical actions. Strength and strength training, therefore, assume high importance for achieving good posture and for prevention of injuries is usually overlooked which in the long run can prove harmful. Zimmermann (1989) has very rightly pointed out the positive effects of strength training on muscles, bones, joints, heart, circulatory system, metabolism and nervous system. Abdominals are the muscles in your stomach. You can improve your abdominal strength (how powerful your muscles are) by doing curl-ups. Abdominal strength is important in promoting good posture and correct pelvic alignment. Strength of the abdominal muscles is important in maintaining lower back health. Abdominal strength and endurance compresses these organs and keeps them in place by increasing infra-abdominal pressure, Weak abdominal muscles may impair digestive processes. The benefits of abdominal strength and endurance are similar to strength and endurance in other skeletal muscles. Greater abdominal strength increases the amount of force that your abdominal contractions can generate against resistance. Flexing your abs repetitively or sustaining abdominal contractions for longer periods of time requires greater abdominal endurance. The unique benefits of abdominal strength and endurance derive from the function of this muscle group. Abdominal muscles support your posture b- supporting skeletal structures, such as your pelvis and lower back. Abdominal muscles surround more

than sixty percent of your lower, says The American Academy of Spine Physicians. Abdominal strength and endurance increases spinal stability and reduces your risk of spinal injury. Abdominal weakness imposes additional stress on your lower back muscles, which can hyperextend your lower spine and cause backache. Abdominal strength is most important in childhood because if he have more abdominal strength he able to do more work.

2. OBJECTIVE OF THE STUDY

The purpose of this study was to compare the abdominal strength between B.P.Ed. Boys and B.Ed Boys.

Methodology:
Selection of Subjects The purpose of this study was to compare the abdominal strength between B.P.Ed. Boys and B.Ed. Boys. For the purpose of the study forty (40) male student from Kalka Institute for Research and Advance Studies ,Partapur bye pass, meerut, India as subjects for this study.

Selection of Variable:
Abdominal Strength was selected as variable for this study.

Criterion Measure:
The following test was selected and score was considered as criterion measure for this investigation.

Abdominal Strength:
Abdominal strength was measured by bent knee sit-ups and performance was recorded in numbers.

Tools of the Study:
Stopwatch, pen and pencil, floor mattress were used for the data collection.

Collection of Data:
The data was collected by administering the respective testi.e. bent knee sit-ups.

Statistical Technique:
To compare the abdominal strength between B.P.Ed. Boys and B.Ed. Boys. The independent 'T" test was applied at 0.05 level of significance.

3. RESULTS OF THE STUDY

The analysis of data on selected variable that was abdominal strength collected on forty (40) male students. Twenty (20) students from each group i.e. B.P.Ed. Boys and B.Ed. Boys from Kalka Institute for Research and Advance Studies, Partapur bye pass, Meerut, India. The data was analyzed by independent "T" test to compare the abdominal strength between B.P.Ed. Boys and B.Ed. Boys.

Table l: Significance of Differences of Mean, Standard Deviation and "T" Value in Abdominal Strength between B.P.Ed. Boys and B.Ed. Boys

Group	Mean	S.D.	t-value
B.P.Ed. Boys	43.40	2.137	8.096*
B.Ed. Boys	37.50	2.460	

**Significant at 0.05 level tab "T"* $_{(0\cdot 05)(38)}$ *=2.04*

Table no. 1 indicates mean and standard deviation of B.P.Ed. Boys is 43.40,2.1.37 and B.Ed. Boys is 37.50,2.460 and "T" value is 8.096.

4. DISCUSSION OF FINDINGS

The statistical findings of the present study revealed that the abdominal strength between B.P.Ed, Boys and B.Ed. Boys are significantly different. Because B.P.Ed. Boys are participating physical activity per day due to need and requirement of the course, but B.Ed. Boys are not participating any physical activity per day (except participating intercollegiate tournaments, if any) duo to their different nature of course.

5. CONCLUSION

- Within the limitations of the present study the following conclusion was drawn:
- There was significant difference found in abdominal strength between B.P.Ed. Boys and B.Ed.Boys.

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योगसूत्र के अस्तांग योग की आयुर्वेद के संदर्भ में व्याख्या

डॉ. धर्मवीर यादव

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1. परिचय

आयुर्वेद तथा योग एक समान प्राचीन मानव हितकारी विद्याएँ हैं। आयुर्वेद आयु अर्थात् जीवन का विज्ञान है। जिसमें शरीर + इन्द्रिय + सत्व तथा आत्मा के संयोग को आयु कहा गया है। जहाँ आयुर्वेद एक ओर त्रिसूत्री शास्त्र के रूप में विकसित शारीरेन्द्रियसत्त्वात्मसंयोग रूप जीव के स्वास्थ्य रक्षण तथा व्याधि के निदान, लिंग तथा चिकित्सा का दायित्व लेकर चलता है वहीं योग सिद्धान्ततः सत्व तथा चेतना का विज्ञान है। यह तत्वज्ञान तथा तत्वानुभूति के अतिरिक्त आत्यन्तिक दुःख निवृत्ति तथा मोक्षपर्वतक विद्या तथा विधि है। योग और आयुर्वेद दोनों ही समान शैक्षणिक पद्धतियाँ है, दोनों में औषधि, मन्त्र, जप और समाधि आदि पर मुख्य रूप से बल दिया गया है।[1] प्रस्तुत शोध का उद्देश्य है कि योगसूत्र में वर्णित अष्टांग योग को आयुर्वेद में किस प्रकार से बताया गया है। योगसूत्र के अष्टांग योग व आयुर्वेद में वर्णित अष्टांग योग में क्या–क्या समानताएं व विषमताएँ है?

योग व आयुर्वेद में समानता :– योग और आयुर्वेद दोनों ही अत्यन्त प्राचीन विद्याएँ है। दोनों का विकास और प्रयोग समान उद्देश्य के लिए एक ही काल व एक ही देश में हुआ है।[2] आयुर्वेद को आरोग्य के लिए एक बहुउद्देशयी विज्ञान के रूप में विकसित किया गया है, जिसकी सहायता से जीवन के चारों लक्ष्य धर्म, अर्थ, काम और मोक्ष की प्राप्ति की जा सकती है।[3] योग आयुर्वेद का ही एक अंग रहा है और आयुर्वेद के समानान्तर उसे उक्त उद्देश्य तक पहुंचाने में सहायक रहा है। योग का प्राथमिक उद्देश्य मनुष्य की स्वाभाविक प्रकृति की पूर्णता के लिए नहीं था, अपितु इसका प्रयोजन मोक्ष प्राप्ति के लिए किया गया था। आयुर्वेद पूर्णरूप से जीवन का विज्ञान है जबकि योग जीवन–विज्ञान का एक विशिष्ट अंग है, जो विशेष रूप से पुरुष के आध्यात्मिक विकास से सम्बन्धित है।[4] यह कहा जा सकता है कि योग और आयुर्वेद दोनों मानव जीवन के एक समान सिद्धान्त पर आधारित हैं। प्राचीन भारतीय दर्शन के अनुसार शरीर, इन्द्रिय, सत्त्व एवं आत्मा का संयोग ही आयु है।[5] आयुर्वेद में शारीरिक, मानसिक व आध्यात्मिक अस्तित्व का वर्णन किया गया है। इसके साथ ही आधिदैविक, आधिभौतिक व आध्यात्मिक कष्टों के निवारण हेतु आरोग्य परमावश्यक है। क्योंकि आरोग्यता द्वारा ही धर्म, अर्थ, काम व मोक्ष की प्राप्ति संभव है। आयुर्वेद में आठ अंगों का निरूपण किया गया है।[6] पतंजल योगसूत्र की मुख्य योग साधना में भी आठ अंगों का निरूपण महर्षि पतंजलि करते है।[7] चित्त शुद्धि हेतु योग में भी औषधियों की उपयोगिता पर बल दिया गया है। आयुर्वेद में भी योगाभ्यास का वर्णन मिलता है।[8] योगसूत्र में पाँच क्लेशों को बन्धन का कारण माना है[9] जिसे चित्त शुद्धि द्वारा दूर किया जाता है। आयुर्वेद ऋषियों ने भी इसका सम्यक् निरूपण इसी रूप में किया है।[10] आयुर्वेद और योग के न केवल विषय और उद्देश्य समान है बल्कि इनकी शिक्षण पद्धति अर्थात् गुरूपदेश परम्परा भी एक समान ही है।

योगसूत्र में मैत्री, करुणा, मुदिता व उपेक्षा को चित्त को प्रसन्न करने का साधन बताया है।[11] आयुर्वेद में रोग को दूर करन के लिए इन्हें वैद्य की चार वृतियाँ बताया हैं।[12]

आयुर्वेद में अष्टांग योग वर्णन :– सर्वविदित है कि अष्टांग योग अर्थात् आठ अंगों वाला योग मार्ग महर्षि पतंजलि द्वारा उपदेशित है। अष्टांग मार्ग की प्रमाणिकता को उस समय ओर भी बल मिलता है जब हमें इसका वर्णन आयुर्वेद में भी प्राप्त होता है। वैसे अष्टांग योग का निरूपण भगवान श्रीकृष्ण गीता में भी करते है व साथ ही हठयोग गुरु गोरक्षनाथ जी अष्टांग योगमार्ग का निरूपण अपनी प्रसिद्ध रचना सिद्धसिद्धान्तपद्धति में भी करते है।[13] अतः अष्टांग योगमार्ग को योग का श्रेष्ठ मार्ग सभी आचार्यों ने माना हैं।

योगसूत्र में योग के आठ अंग यम–नियम–आसन–प्राणायाम–प्रत्याहार–धारणा–ध्यान और समाधि का वर्णन है।[14] जिनको आयुर्वेद में सद्वृत, आचार रसायन, दिनचर्या व ऋतुचर्या के अन्तर्गत अभिनिवेशित किया गया है।

यमः– योगसूत्र मे यम को पाँच भागों में विभाजित किया गया

है–अहिंसा, सत्य, अस्तेय, ब्रह्मचर्य व अपरिग्रह।[15]

1.अहिंसा : अर्थात् मन वाणी और शरीर से किसी भी प्राणी को किसी भी प्रकार का दुःख/कष्ट न देना अहिंसा कहलाती है। हिंसा तम का द्योतक है, यह अभिघात और प्रतिरोध को उत्पन्न करती है। आयुर्वेद में इसे पापकर्म बताकर त्यागने की बात कही है।[16] इसे सद्वृत्त के रूप में वर्णित किया गया है। तथा रसायन सेवन से पूर्व एवं आचाररसायन के अन्तर्गत भी अहिंसा का वर्णन आयुर्वेद में किया गया है।[17]

2. सत्य: अर्थात् जैसा देखा हो, सुना हो व अनुभव किया हो उसे वैसे ही कहना सत्य है। योगसूत्र में सत्य पर दृढ़ होने पर साधक में क्रियाफल के आश्रय का भाव आ जाता है।[18] आयुर्वेद में भी आचार–रसायन में सर्वप्रथम सत्यवादिनम् ही कहा गया है।[19] व सद्वृत में भी झूठ न बोलने की बात कही गई हैं।[20]

3. असतेय: अस्तेय का अर्थ है चोरी का अभाव। महर्षि पतंजलि कहते है कि जब व्यक्ति में चोरी के अभाव की प्रवृत्ति जागृत हो जाती है तब उसके सामने समस्त रत्न स्वयं प्रकट होने लगते है।[21] आचार्य वाग्भट ने स्तेय को दशविध पापकर्म के अन्तर्गत बताया है और शरीर, मन व वाणी से इसे त्यागने की बात कही है।

4. ब्रहमचर्य: वेदों को पढ़ना, ईश्वर की उपासना करना और वीर्य की रक्षा करना, ब्रह्मचर्य है।[22] आयुर्वेद में जीवन के तीन उपस्तम्भों में ब्रह्मचर्य की गणना की गई है।[23] आचार रसायन में मद्य एवं मैथून से निवृत्त रहने के लिए कहा है। ज्वर चिकित्सा में आचार्य चरक कहते है कि ब्रह्मचर्य के द्वारा ज्वर से छुटकारा मिलता है।[24] महर्षि पतंजलि कहते है कि ब्रह्मचर्य पर दृढ़ होने से वीर्य लाभ एवं अपूर्व शक्ति का प्रादुर्भाव होता है।[25]

5. अपरिग्रह : अपरिग्रह का अर्थ है अनावश्यक वस्तुओं का संग्रह न करना।[26] इसके अनुष्ठान से जन्म के विषय में जानने की इच्छा तीव्र हो जाती है।[27] सद्वृत प्रकरण में दान करने के लिए व लोभ–मोह न करने का वर्णन कर अपरिग्रह के पालन की बात कही है।

2. नियम

योग में नियम के भी पाँच भाग बताये है–शौच, संतोष, तप, स्वाध्याय, ईश्वरप्रणिधान को नियम बताया है।[28]

1. शौच : शौच दो प्रकार की है, पहली बाह्य शुद्धि और दूसरी आन्तरिक शुद्धि।[29] चिकित्साचतुष्पाद के सन्दर्भ में आचार्य चरक ने उत्तम वैद्य के चार गुणों में शौच को एक प्रधान गुण मान है।[30] शौच से कायिक, वाचिक एवं मानसिक शुद्धता का अभिप्राय है। बाह्यशुद्धि के लिए आयुर्वेद में अंग प्रक्षालन, स्नान, दन्तधावन आदि कर्म कहे है। आश्यन्तर शुद्धिक में धी–धृति–स्मृति का ज्ञान व व्यवहार को रखा है।

2. संतोष : पूर्ण पुरुषार्थ के पश्चात् जितना आनन्द, बल, धनादि प्राप्त हो उसमें ही सन्तुष्ट रहना सन्तोष है।[31] आयुर्वेद में लौल्यं को कष्ट उत्पन्न करने वालों में श्रेष्ठ कहा गया है।[32] यह सन्तोष का विपरीतार्थक है। इसे गणना धारणीय वेगों में की गई है। योगसूत्र में सन्तोष को सर्वोत्तम सुख की संज्ञा दी गई है।[33]

3. तप : धर्माचरण करते हुए भुख–प्यास, सर्दी–गर्मी, हानि–लाभ, मान–अपमान आदि द्वन्दों को प्रसन्नतापूर्वक सहन करना तप कहलाता है।[35] आचार रसायन के अर्न्तगत–प्रतिदिन जप, शौच, दान एवं तपस्या करनी चाहिए।[36] तथा देवता, गौ, ब्राह्मण, आचार्य, गुरू की सेवा में रत रहना चाहिए।

4. स्वाधयाय: मोक्ष प्राप्ति वेदादि ग्रन्थों को पढ़ना, ओम् आदि पवित्र मन्त्रों का जप करना तथा आत्म चिन्तन करना स्वाध्याय कहलाता है। आयुर्वेद में इसे दिनचर्या का भाग माना है। प्रातःकाल उठकर दोपहर एवं रात्रि में स्वाध्याय करने की बात कही है। योगसूत्र में कहा है कि स्वाध्याय करने से इष्टदेव का दर्शन होता है।[37]

5. ईश्वर प्रणिधान : शरीर, बुद्धि, बल, धन आदि समस्त साधनों को ईश्वर प्रदत्त मानकर अपने समस्त कर्मों का अर्पण ईश्वर में कर देना व किसी भी फल की आशा न रखना ईश्वर प्रणिधान के अन्तर्गत आता है। योगसूत्र में इसे समाधि प्राप्त का सशक्त साधन माना है अर्थात् इसके अनुष्ठान द्वारा साधक को ईश्वर प्राप्ति अथवा समाधि की प्राप्ति होती है।[38] आयुर्वेद में मानस दोष चिकित्सा के रूप में ईश्वर का ध्यान–पूजा–पाठ बताया गया है। ज्वर आदि की चिकित्सा में भी विष्णु सहस्त्र नाम जप आदि बताया गया है।[39] आयुर्वेद में दैवव्ययश्रय चिकित्सा में चिकित्सा का आधार ईश्वर प्रणिधान को ही माना है।

3. आसन

प्रायः आसन को ही योग समझा जाता है परन्तु यह योग का एक अंग मात्र है परन्तु हठयोग का मुख्य आधार आसन ही है। महर्षि पतंजलि ने आसन को अष्टांग योग के तीसरे अंग के रूप में उल्लेखित किया है। महर्षि पतंजलि आसन को परिभाषित करते हुए कहते है कि शरीर को सुखपूर्वक व स्थिर अवस्था में रखना आसन कहलाता है।[40] आयुर्वेद में अध्ययन विधि में कहा गया है कि समतल पवित्र स्थान में सुखपूर्वक बैठकर अपने दोष एवं त्रुटियों को दूर करने हेतु एकाग्र मन से बैठना चाहिए।[41] सद्वृत के पालन में भी कुछ अवस्थाएँ बताई गई है जिनमें अधिक देर तक न बैठने के लिए कहा गया है। जैसे घुटनों को ऊपर उठाकर देर तक न बैठे।[42] शरीर को टेढ़ा करके छींक, भोजन, शयन आदि न करने को लिए भी

कहा गया है।[43]

4 प्राणायाम

प्राणवायु का हमारे शरीर में प्रविष्ट होना श्वास तथा बाहर निकलना प्रश्वास कहलाता है। इन दोनों गतियों में विच्छेद होना ही प्राणायाम कहलाता है।[44] आयुर्वेद में वायु को प्राण की संज्ञा प्रदान की है। वायु को आयु कहा गया है तथा वायु के द्वारा ही प्राणायाम निमेषादि क्रियाएँ सम्पन्न होती है।[45] अष्टांग योग में प्राणायाम के चार प्रकार बताये है जबकि आयुर्वेद में ऐसा नहीं है। आयुर्वेद में वायु को यत्र–तत्र धारण करने वाली कहा है। प्राण, उदान, व्यान, समान, अपान को आत्मा का रूप कहा गया है जो शरीर की सभी चेष्टाओं का नियन्त्रण एवं प्रणयन करती है। सभी इन्द्रियों को अपने विषयों में प्रवृत्त करने वाली भी यही है।[46]

4. प्रत्याहार

अपनी इन्द्रियों को बाह्य वृत्ति से हटाकर उन्हें मन में विलीन करने के अभ्यास को प्रत्याहार कहते है।[47] आयुर्वेद में मन का कर्म बताते समय कहा गया है कि इन्द्रियों का संचालन करना तथा स्वय अपने को अपने से ही अहितकर विषयों से रोकना मन के कर्म है।[48] तथा इन्द्रियों का अतियोग, मिथ्या योग और अयोग न करना, प्रज्ञापराध न करना आदि ये भी प्रत्याहार ही है।

5. धारणा

शरीर के बाहर अथवा भीतर किसी एक देश में चित्त की वृत्ति को लगाने को धारणा कहते है।[49] आयुर्वेद आचार्य चरक कहते है कि मानस रोग उपस्थित होने पर धर्म–अर्थ एवं काम का ध्यान करना चाहिए तथा आत्मा का ज्ञान अर्थात् धारणा करना चाहिए।[50]

6. ध्यान

धारणा वाले स्थान पर एक वस्तु के ज्ञान का प्रवाह बना रहना ध्यान कहलाता है।[51] आचार्य चरक ने समाधि से पूर्व ज्ञान–विज्ञान–धैर्य एवं स्मृति का उल्लेख इसी संदर्भ में किया है।[52]

7. समाधि

ध्यान करते–करते जब चित्र ध्येयाकार में परिणित हो जाता है, उसके अपने स्वरूप का अभाव हो जाता है, उस समय ध्यान को समाधि कहते है।[53] आचार्य चरक मानस रोगों का चिकित्सा सूत्र बताते समय समाधि का उल्लेख करते है। दूसरे आचार्यो ने भी धी–धृति एवं आत्मा का ज्ञान मानस दोष चिकित्सा के लिए उत्कृष्ट औषधि बताया है।[54]

इस प्रकार आयुर्वेद में धारणा, ध्यान का धी–धृति आत्मा में चित्त लगाने के रूप में इनका ज्ञान करने के रूप में कहा गया है तथा समाधि को उसी रूप में उसी शब्द से ग्रहण किया है। आत्मा आदि के ज्ञान को योग शब्द से ग्रहण किया है। समाधि आदि संयम मोक्ष के लिए उपयोगी है और उपर्युक्त योग भी मोक्ष प्रर्वतक है।[55]

8. निष्कर्ष

महर्षि पतंजलि द्वारा प्रणित अष्टांग योग की महता सर्वविदित है। प्रस्तुत शोध में हमने जाना कि अष्टांग योग का वर्णन केवल योगसूत्र में ही न होकर आयुर्वेद में भी इसका अत्यन्त सुन्दर वर्णन हमें प्राप्त होता है। इससे अष्टांग योग की प्रमाणिकता को और भी बल मिलता है। अष्टांग योग का क्षेत्र इतना व्यापक है कि अनेकों प्रकार के योग इसके अन्दर समाहित है। स्वयं भगवान श्रीकृष्ण ने इसको गीता में उपदेशित किया है व साथ ही हठयोगी गोरक्षनाथ इसे अपनी रचना सिद्ध सिद्धान्त पद्धति में लिखकर इसको ओर भी सम्मानीय व आचरणीय बना देते है। अतः अष्टांग योग की महता महान है।

9. सन्दर्भ

[1] पद्ध जन्मौषधिमन्त्रतपः समाधिजाः सिद्धयः। (यो.सू. 4। 1) ;पपद्ध त्रिविधमौषधमिति दैवत्यपाश्रयं युक्तिव्यपाश्रयं सत्वावजयश्च। (च.सू. 11। 52)
[2] पद्ध आयुर्वेदयतीत्यायुर्वेदः। (च.सू. 30। 20) ;पपद्ध हिताहितं सुखं दुःखमायुस्तस्य हिताहितम्। मानं च तच्च यत्रोक्तयायुर्वेदः स उच्चते।। (च.सू. 1। 40) ;पपपद्ध प्रयोजनं चास्य स्वस्थस्य स्वास्थ्यरक्षणमातुरस्यविकार प्रशमनं च। (च.सू. 6। 30। 24)
[3] धर्मार्थकाममोक्षणामारोग्यंमूलमुत्तमम्। (च.सू. 1। 15)
[4] योगो मोक्षप्रवर्तकः। (च.शा. 1। 136)
[5] पद्ध शरीरेन्द्रियसत्वामसंयोगोधारि जीवितम्। नित्यगश्चानुबन्धश्च पर्यायैरायुरूच्यते।। (च.सू. 1। 41) पपद्ध सत्वमात्माशरीरं च त्रयमेतत्त्रिदण्डवत्। पपपद्ध लोकस्तिष्ठति संयोगात्तत्र सर्वं प्रतिष्ठितम्।। (च.सू. 1। 45)
[6] कायबालग्रहोर्ध्वाङ्गशल्यदंष्ट्राजरावृषान्। (वा.सू. 1। 5)
[7] यमनियमासनप्राणायामप्रत्याहारधारणाध्यानसमाधयोऽष्टावाङ्गानि। (यो.सू. 2। 29)
[8] योगारम्भे सततमनिर्वेदः। (च.शा. 5। 21)
[9] अविद्यास्मितारागद्वेषाभिनिवेशाः पञ्च क्लेशाः।। (यो.सू. 2। 3)
[10] धीधैर्यात्मादिविज्ञानं मनोदोषौषधं परम्। (अ.हृ.सू. 1। 26)
[11] मैत्रीकरूणामुदितोपेक्षाणां सुखदुःखपुष्यापुण्यविषयाणांभावनातश्चित्तप्रसादनम्।। (यो.सू. 1। 33)
[12] मैत्री कारूण्यमार्तेषुशक्येप्रीतिरूपेक्षणम्। प्रकृतिस्थेषु भूतेषु वैद्यवृत्तिश्चतुर्विधा।। (च.सू. 9। 26)
[13] यम–नियम–आसन–प्राणायाम–प्रत्याहार–धारणा–ध्यान–समाध्यः–अष्टौ अङ्गानि।। (सि.सि.प. 2। 5)
[14] यमनियमासनप्रणायामप्रत्याहारधारणाध्यानसमाधयोऽष्टावाङ्गानि। (यो.सू. 2। 29)
[15] अहिंसासत्यास्तेयब्रह्मचर्यापरिग्रहा यमाः। (यो.सू. 2। 30)
[16] हिंसास्तेयान्यथाकामं पैशुन्य पुरुषानृते। सम्भिन्नालायं व्यापादमभिध्यां दृग्विपर्ययम्।। पापं कर्मेति दशधा कायवाङ्मानसैस्त्यजेत्।। (वा.सू. 2। 21–22)
[17] अहिंसकमनायासं प्रशान्तं प्रियवादिनम्।
[18] सत्यप्रतिष्ठायां क्रियाफलाश्रयत्वम्।। (यो.सू. 2। 36)
[19] सत्यवादिनमक्रोधं निवृत्तं मद्यमैथुनात्। अहिंसकमनायासं प्रशान्त प्रियवादिमम्।। (च.चि. 1। 4। 30)
[20] नानृतं ब्रूयात्.....। (च.सू. 8। 19)
[21] अस्तेयप्रतिष्ठायां सर्वस्त्नोपस्थानम्।। (यो.सू. 2। 37)
[22] स्वामी सत्यपति परिव्राजक, योगदर्शनम् (पृ. 175)
[23] त्रय उपस्तम्भाः–आहारः स्वप्नो ब्रह्मचर्यमिति। (च.सू. 11। 35)
[24] ब्रह्मचर्येण ज्वरात् प्रमुच्यते। (च.चि. (3)

[25] ब्रह्मचर्यप्रतिष्ठायां वीर्यलाभः (यो.सू. 2। 38)
[26] दर्शनाचार्य ज्ञानेश्वरार्यः, योगदर्शनम्, पृ. 39
[27] अपरिग्रहस्थैर्ये जन्मकथन्तासम्बोधः।। (यो.सू. 2। 39)
[28] शौचसन्तोषतपः स्वाध्यायेश्वरप्रणिधानानि नियमाः।। (यो.सू. 2। 32)
[29] दर्शनाचार्य ज्ञानेश्वरार्यः, योगदर्शनम्, पृ. 35
[30] श्रुते पर्यवदातव्यं बहुशोदृष्टकर्मता। दाक्ष्यं शौचमिति ज्ञेयं वैद्ये गुण चतुष्टयम्।। (च.सू. 9। 6)
[31] दर्शनाचार्य ज्ञानेश्वरार्य, योगदर्शनम्, पृ. 35
[32] लौल्यं क्लेशकराणां श्रेष्ठम्। (च.सू. 25)
[33] सन्तोषादनुत्तमसुखलाभः।। (यो.सू. 2। 42)
[34] दर्शनाचार्य ज्ञानेश्वरार्य, योगदर्शनम्, पृ. 36
[35] कायेन्द्रियसिद्धिरशुद्धिक्षयात् तपसः।। (यो.सू. 2। 43)
[36] जपशौचपरं धीरं दाननित्यं तपस्विनम् देवगोब्राह्मणाचार्यगुरुवृद्धार्चनेरतम्।। (च.चि. 1। 4। 31)
[37] स्वाध्यायादिष्टदेवतासंप्रयोगः।। (यो.सू. 2। 44)
[38] समाधिसिद्धिरीश्वरप्रणिधानात्।। (यो.सू. 2। 45)
[39] विष्णुं सहस्त्रमूर्धानं चराचरपतिं विभुम्। स्तुवन्नामसहस्त्रेण ज्वरान्सर्वानपोहति।। (च.चि. 2। 310)
[40] स्थिरसुखमासनम्।। (यो.सू. 2। 46)
[41] समे शुचौ देशे सुखोपविष्टो मनः पुरः सराभिर्वाम्भिः। (च.वि. 8। 7)
[42] देहवाक्चेतसां चेष्टाःप्राक्श्रमाद्विनिवर्तयेत्। नोहर्वजानुश्चिरं तिष्ठेन्नक्तं सेवेत न द्रुमम्। (अ.हृ.स. 2। 37)
[43] नानृजुः श्रुयान्नाद्यान्न शयीत (च.सू. 8। 21)
[44] तस्मिन् सति श्वासप्रश्वासयोर्गतिविच्छेदः प्राणायामः।। (यो.सू. 2। 49)
[45] वायुः प्राणसंज्ञाप्रदानम्, वायुः आयुः, वायुः प्राणापानौ, प्रावो रक्ष्यश्चतुर्भ्यो हिप्रावात्र्जहति।।
[46] वायुस्तन्त्रयन्त्रधरः, प्राणोदानसमानव्यानापानात्मा, प्रर्वतकश्चेष्टानामुच्चावचानां, नियन्ता प्रणेता च मनसः सर्वेन्द्रियाणामुद्योजकः।
[47] स्वविषया संप्रयोगे चित्तस्य स्वरूपानुकार इवेद्रियाणां प्रत्याहारः।। (यो.सू. 2। 54)
[48] इन्द्रियाभिग्रहः कर्ममनसः स्वस्य निग्रहः। (च.शा. 1। 21)
[49] देशबन्धश्चितस्य धारणा।। (यो.सू. 3। 1)
[50] मानसं प्रति भैषज्यं त्रिवर्गस्यान्ववेक्षणम्। तद्विद्यसेवा विज्ञानमात्मा दीनां च सर्वशः। (च.सू. 11। 47)
[51] तत्र प्रत्ययैकतानता ध्यानम्।। (यो.सू. 3। 2)
[52] मानसो ज्ञानविज्ञानधैर्यस्मृतिसमाधिभिः। (च.सू. 1। 58)
[53] तदेवार्थमात्रनिर्भासं स्वरूपशून्यमिव समाधिः।। (यो.सू. 3। 3)
[54] धीधैर्यात्मादिविज्ञानं मनोदोषौषधंपरम्। (अ.हृ.सू. 1। 26)
[55] मोक्षे निवृत्तिर्निः शेषा योगो मोक्षप्रर्वतकः। (च.शा. 1। 137)

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उत्तम स्वास्थ्य एवं शारीरिक विकास में योग की भूमिका

डॉ इंद्रा सिंह

सहायक प्रोफेसर, शिक्षा विभाग, किशन संस्थान ऑफ टीचर एजूकेशन मेरठ, उत्तर प्रदेश, भारत

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1. परिचय

किसी भी मनुष्य के जीवन में उसके बाल्यकाल से युवावस्था तक का सफर उसके व्यक्तित्व विकास में अहम् भूमिका निभाता है, क्योंकि बाल्यकाल में बालक का मन एवं मस्तिष्क कोरे कागज के समान होता है, जिस पर एक बार जैसा व्यक्तित्व प्रतिबिम्बित हो जाता है, जीवन पर्यन्त उसी प्रकार की जीवन शैली बनी रहती है। यही जीवन शैली भविष्य में उसे लक्ष्य चयन में सहायता प्रदान करती है। व्यक्तित्व को निखारने तथा जीवन लक्ष्यों को समाज द्वारा स्थापित नैतिक मूल्यों के आधार पर प्राप्त करने में शारीरिक शिक्षा की महत्वपूर्ण भूमिका है।

शारीरिक शिक्षा अंग्रेजी भाषा के शब्द फिजिकल एजूकेशन ;चैलेपबंस म्कनबंजपवदद्ध का हिन्दी रूपान्तर है। इसका प्रत्येक अक्षर शारीरिक शिक्षा का जीवन मूल्यों के साथ सम्बन्धों पर प्रकाश डालता है। यदि शारीरिक शिक्षा के प्रत्येक अक्षर को देखकर उसका आँकलन किया जाए तो वह इसमें छिपे रहस्यों को उजागर करता है और शारीरिक शिक्षा की नवीनतम आधुनिक परिभाषा को प्रस्तुत करता है–

PHYSICAL	EDUCATION
P – Personality	E – Emotion
H – Health	D – Development
Y – Young	U – Unity
S – Social	C – Care
I – Interest	A – Adjustment
C – Character	T – Tension
A – Ability	I – Identification
L – Learning	O – Observation
	N – Norms

आधुनिक जीवन वैश्वीकरण एवं मशीनीकरण के कारण भाग–दौड़ और मानसिक चिन्ताओं का हो गया है। व्यस्तता, शारीरिक थकान तथा मानसिक अंसतुलन पैदा करती है। मानसिक संतुलन तभी हो सकता है जब व्यक्ति शारीरिक दृष्टि से सुदृढ़ हो।

योग हमारे देश की प्राचीनतम ऐसी स्वास्थ्य वर्धक विद्या है जो न केवल शारीरिक स्वास्थ्य प्रदान करती है, बल्कि मानसिक रूप से भी बालक को स्वस्थ रखती है। योगसानों, योग क्रियाओं से हम स्थिर मनोशारीरिक स्वास्थ्य प्राप्त कर सकते है। इससे शारीरिक पेशीयता के संतुलन के साथ–साथ मानसिक संतुलन भी स्थिर भी हो जाता है। यौगिक क्रियाएँ माँसपेशियों का क्रमशः विकास करती हैं। यौगिक क्रियाएँ मांसपेशियों पर सीधा एवं गहरा प्रभाव डालती है। इससे शारीरिक शक्ति व मानसिक दृढ़ता आती है। रोगों का निदान तथा अन्य समस्याओं का समाधान संभव हो जाता है।

योग शब्द 'युज' धातु से बना है। योग शब्द का अर्थ है 'जोड़ना'। योग के माध्यम से शरीर और मन को एकाग्र कर हम आत्मा को परमात्मा से जोड़ते है। योग हमारे मन, शरीर और आत्मा को शक्ति प्रदान करता है। इससे शरीर विकार रहित हो जाता है, मन में शुद्ध विचार उठते हैं, व्यक्ति अपने हित के अलावा समाज, राष्ट्र और विश्व को सकारात्मक सोच प्रदान करता है। योग शारीरिक शुद्धि में सहायक है, योगासनों, योगक्रियाओं, प्राणायाम आदि द्वारा समस्त बीमारियाँ नष्ट हो जाती हैं। इसके लिए यम, नियम, आसन, प्राणायाम ऐसे अचूक साधन है, जिनसे शारीरिक रूग्णता दूर होने के साथ ही अनेक सिद्धियाँ अनायास प्राप्त हो जाती है। योग शिखोपनिषद कहता है–

"यो प्रानअपान योरेक्य स्वरेजो रेत सोरतथा, सूर्य:

चन्द्रमसो योग: जीवात्मा परमात्नो"

''अर्थात् प्राण और अपान को मिलाना, रज और वीर्य को मिलाना, सूर्य और चन्द्रमा को मिलाना, शीतलता और तेजस्विता को मिलाना, आत्मा और परमात्मा को मिलाना योग है। 'योगदर्शन' में कहा गया है– ''अथ योगानुशासनम'' अर्थात् अनुशासन ही योग है। महर्षि पतञजलि ने योग सूत्र में कहा है– ''योगाश्चित वत्ति निरोधः'' अर्थात् अपनी चित्त वृत्तियों का निरोध करना या रोकना ही योग है। चित्त या मन अत्यन्त चंचल होता है। योग के द्वारा इन चित्तवृत्तियों को एकाग्रता में लाना होना है। भगवान श्रीकृष्ण ने श्रीमद्भगवद्गीता में योग का संदेश देते हुए कहा है– योगः कर्मस कौशलम्'' अर्थात् कार्य में कुशलता ही योग है। जो व्यक्ति अपने कार्य में सम्पूर्ण मन को एकाग्र कर दक्षता से कर लेता है वह सच्चा योगी है।

राष्ट्र की वर्तमान आवश्यकता है कि हमारे देश के भावी नागरिक मानसिक एवं शारीरिक रूप से बलशाली बने। शारीरिक, मानसिक एवं संवेगात्मक विकास की प्रक्रिया योग द्वारा सुगमता से अपनायी जा सकती है। लेकिन वर्तमान में भौतिकता की दौड़ में न तो व्यक्ति शारीरिक रूप से बलिष्ठ हो पा रहे हैं और न ही मानसिक रूप से स्वस्थ। विद्यार्थियों के लिए आवश्यक है कि उनका विद्याध्ययन के दौरान मानसिक व शारीरिक संतुलन बना रहे। योगाभ्यास व्यक्ति को मानसिक रूप से स्वस्थ रखने में महत्वपूर्ण योगदान देता है। शारीरिक तनाव का क्षरण, शारीरिक शक्ति योगाभ्यास के परिणामस्वरूप प्राप्त होती है। पर्याप्त योगाभ्यास द्वारा व्यक्ति मानसिक स्थिरता, आत्म–संयम, ध्यान की एकाग्रता, चित्त की चंचलता को दूर कर सरलतापूर्वक लक्ष्य प्राप्ति कर लेता है।

योग के आठ अंग है। इनको व्यक्ति जब अपने आचरण में लाता है तब चित्त के विकारों का नाश होकर, मन निर्मल होकर आत्म साक्षात्कार के योग्य बन जाता है। योग शास्त्र के आठ

अंग बताए गए है तथा 'योग सूत्र' में भी इन्हीं आठ अंगों का वर्णन किया गया है–

''यम नियमासन प्राणायामा प्रत्याहार धारणा ध्यान समाधयोऽष्टवंगानि।''

- यमः– योग की वे सभी अवस्थाएँ जिससे बालक में वाह्य संसार से अन्तर्मुख होने की प्रवृत्ति बढ़ती है यह कहलाता है। इसके अन्तर्गत सत्य, अहिंसा, अस्तेय ब्रह्मचर्य, दया, आर्यव, क्षमा, धति, मिताहार, शौच आदि आते है।
- नियमः– वे आचार–विचार जो हमारे अन्दर आन्तरिक गुण उत्पन्न करते हैं जिन पर चलने से हमारा जीवन नियमित हो जाए वह नियम है। इसके अन्तर्गत तप, संतोष, आस्तिकता, लज्जा, मति, जप, व्रत, ईश्वर पूजन, दान, कल्याणकारी श्रवण आते हैं।
- आसनः– जिस स्थिति में हम सूखपूर्वक बैठ सकें वह आसन कहलाता है। आसनों से स्थिरता आती है।
- प्राणायामः– आसन–सिद्धि होने के बाद प्राणवायु का शरीर में प्रविष्ट होना श्वास है और बाहर निकलना प्रश्वास है।

इन दोनों की गति रूक जाना अर्थात् प्राणवायु की गमनागमन क्रिया का बंद हो जाना प्राणायाम कहलाता है। इसमें तीन प्रक्रियाएँ होती है– 1. पूरक 2. कुंभक 3. रेचक

प्राणायाम से मुख्यतः नाड़ी शोधन होता है तथा दृढ़ता आती है। इसमें कुछ प्रमुख प्राणायाम हैं–

- लोम विलोम प्राणायाम
- सूर्यभेदन प्राणायाम
- उज्जायी प्राणायाम
- शीतकारी प्राणायाम
- शीतली प्राणायाम
- भस्त्रिका प्राणायाम
- भ्रामरी प्राणायाम
- केवली प्राणायाम
- मूर्छा
- केवली

प्रत्याहारः- मनुष्य में पाँच ज्ञानेन्द्रिय है– चक्षु, जिह्या, घ्राण, त्वक और श्रोत्र। इनके पाँच विषय है– रूप, रस, गंध, स्पर्श और शब्द। इन इन्द्रियों को अपने विषयों से हटा लेना ही प्रत्याहार है।

धारणाः- 'लययोग संहिता' के अनुसार जब तक षटचक्र भेदन पूर्ण नहीं होता तब तक चित्त किसी एक चक्र पर स्थिर नहीं होता। अतः षटचक्र भेद पूर्ण करने से ही धारणा होती है।

''ज्योतिषा मंत्र नादाम्यां षटचक्र चक्रणांहि भेदनम् धारणा।''

ध्यानः- समाधि से पूर्व की अवस्था ध्यान है। चित्त की एकाग्रता जिस ध्येय के लिए की जाती है ऐसी एकाग्र चित्त की अवस्था, जहाँ ध्येय मात्र ही रह जाता है उसके बीच में किसी प्रकार का व्यवधान उत्पन्न न हो।

समाधिः- योगशास्त्र के अनुसार ध्यान के समय जब चित्त ध्येय के साथ एकाकार हो जाए स्वयं का अनुभव भी समाप्त हो जाए वह समाधि है। इसमें भूख, प्यास, नींद, दुख–सुख, ठंडा–गरम, रस, रूप, शब्द, स्पर्श, गंध का अनुभव समाप्त हो जाता है।

सामान्य रूप से योगासन का अर्थ शरीर को विशेष स्थिति में साध कर उसे संतुलित करने से है लेकिन आसन कोई व्यायाम नहीं है यह एक स्थिति है, जिसमें कितनी ही देर तक स्थिरतापूर्वक सुख से बैठा जा सकें। आसन हमारी विकृति को बाहर निकालने का कार्य करता है। एक ही मुद्रा में कभी–कभी अधिक समय तक कार्य करना होता है, इन स्थितियों में थकान उत्पन्न हो जाती है। अतः यह आवश्यक है कि आसन से इस थकान को दूर कर पुनः शक्ति सम्पन्न बनाया जाए।

आसन हमारी स्नायविक प्रणाली को ठीक रखता है। योगाभ्यास हमारे पाचनतंत्र को स्वस्थ बनाता है। पाचनतंत्र के स्वस्थ होने से रक्त का संचार सुचारू रूप से होने लगता है। स्त्रियों के लिए योगाभ्यास अत्यन्त लाभकारी है। स्त्रियों के ऋतुधर्म में ये सहायक होते है। इसके अतिरिक्त गर्भवती महिलाओं को भी कुछ विशेष प्रकार के योगासनों को करने की सलाह दी जाती है जिससे माता तथा गर्भस्थ शिशु स्वस्थ रहें। इस प्रकार यह स्पष्ट है कि योग की प्रत्येक व्यक्ति के जीवन में महती भूमिका है जिसे किसी भी रूप में नकारा नहीं जा सकता।

2. निष्कर्ष

इस समग्र विवरण से स्पष्ट है कि शिक्षा की भाँति योग भी बालक के सर्वागीण विकास के लिए अत्यन्त महत्वपूर्ण है। योग की गुरूस्थली भारत ही है। प्राचीन काल के ऐसे अनेक प्रमाण उपलब्ध हैं जहाँ शिक्षा के साथ–साथ योगासनों को भी शिक्षा का महत्वपूर्ण अंग माना गया था। आज अन्तर्राष्ट्रीय स्तर पर योग का एक महत्वपूर्ण स्थान है। इस सांस्कृतिक देन के द्वारा वर्तमान युग में इसका उपयोग विभिन्न प्रकार की बीमारियों को दूर करने के लिए किया जा रहा है। इसलिए आज दवाईयों के साथ–साथ किसी भी असाध्य रोग के निवारण हेतु योगासनों का भी प्रयोग किया जा रहा है जो काफी सीमा तक प्रभावकारी भी सिद्ध हो रहा है।

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शारीरिक शिक्षा और सामान्य शिक्षा में सम्बंध

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सार

शारीरिक शिक्षा वर्षो से प्रचलित शिक्षा पाठ्यक्रम का एक अंग रहा है। जो प्रभावी ढंग से समाज के उन्नयन में अपना योगदान देता रहा है। दोनों ही सम्पूर्ण शिक्षा प्रक्रिया का अंगभूत हिस्सा है तथा परस्पर एक देसरे पर आश्रित है प्रस्तुत लेख सामान्य शिक्षा व शारीरिक शिक्षा के अंर्तसमबंधो पर किये गये अध्ययन का संकलन है।

कुंजीशब्द : सामान्य शिक्षा, शारीरिक शिक्षा, आधुनिक समाज।

1. परिचय

आधुनिक समाज में तेजी से हो रहे बदलावों व अनेक समस्याओं के उत्पन्न होने के फलस्वरूप शारीरिक शिक्षा व सामान्य शिक्षा की आवश्यकता एंव महत्व को हम कम करके नही आंक सकते। इसी उददेश्य को प्राघ्प्त करने के लिए यह आवश्यक है कि इन दोनो के सम्बन्धो की विवेचना की जाए। इनका प्रमुख उददेश्य है

छात्रों में आधुनिक जीवन के लिए शारीरिक शिक्षा की आवश्यकता एंव महत्व के बारे में सजगता पैदा करना एंव छात्रों को सामान्य शिक्षा व शिक्षा के बीच सम्बन्धों के योग्य बनाना।

2. आधुनिक समाज में शारीरिक शिक्षा की अवश्यकता एवं महत्व

शारीरिक शिक्षा ने आज के युग में विशेष सार्थकता, अद्वितीय भूमिका और असीमित योगदान दिया है। जैसे कि जैविक, सामाजिक और मनोवैज्ञानिक आवश्यकताओं को पूरा करना। स्वामी विवेकानन्द ने बल दिया है, ''भारत को आज भवगत गीता की नही बल्कि फुटबाल के मैदान की जरूरत है।'' शारीरिक शिक्षा की न केवल वर्तमान अपितु भविष्य में भी महान् उपयोगिता है। शारीरिक शिक्षा की आवश्यकता एंव महत्व पर बल देते हुए रोशयू ने कहा है, ''यह शरीर का ठोस गठन ही है जो मन का सही और निश्चित संचालन करता है।'' सैकेंडरी एजुकेशन कमीशन भी शारीरिक शिक्षा की आवश्यकता एंव महत्व से परिचित था उसने कहा था कि, देश के युवा का शारीरिक कल्याण राज्य के मुख्य सरोकारों में से एक होना चाहिए और जीवन की इस अवधि में शारीरिक कल्याण के सामान्य नियमों से भागने के परिणाम हो सकते है।'' आधुनिक जीवन में घर–घुस्सुवाद, यंत्रवत जीवन और कम्प्युटीकरण ने एक नये प्रकार के मानव को पैदा किया है जो दिन में घंटो के लिए बैठते है। 21वीं शताब्दी, अंतरिक्ष और प्रौद्योगिकी की भीमकायता का युग है, जो गति, शोर और तनाव पैदा करने वाले कारकों से आवेशित है। हमारे समाज और आर्थिक व्यवस्था की मांग द्वारा पैदा किये बल बुद्विवाद की ओर हमारा सर्म्पण विस्मयकारी है। शहरी जीवन शैली ने कई तनावों को पैदा किया है और ये मानवता के लिए विनाशकारी साबित होंगे।

आधुनिकता हमारे ऊपर अपरिहार्य प्रतिकूल प्रभाव डाले है। पर्यावरण, संस्कृति का हास, सामाजिक विघटन, धार्मिक असहिष्णुता आदि ने पारिस्थिक एंव सामाजिक संतुलन को बिगाड दिया है। आज मानव अस्तित्व और समायोजन संकट का सामना कर रहा है, जो अब से पहले कभी उसके सम्मुख नही था। अपना अस्तित्व बचाने और इन संकटो पर विजय पाने के लिए व्यक्ति को साहस, निर्भीकता, शारीरिक, मानसिक, भावनात्मकऔर बौद्विक रूप से अपने आप को मजबूत बनाना होगा। शारीरिक शिक्षा वह एजेंसी है जो शारीरिक शिक्षा कार्यक्रम में व्यापकता व भिन्नता लाकर सामाजिक दायित्वों को प्रभावी छंग से निभा रही है।

3. शारीरिक शिक्षा का महत्व

आधुनिक समाज में मनुष्य द्वारा स्वयं अपने चारों ओर खडी की गई समस्याआं से बाहर निकलने में शारीरिक शिक्षा जो मदद करती है उसे भी कम करके नहीं आंका जाना चाहिय। आधुनिक समाज में शारीरिक शिक्षा के महत्व का सार इस

प्रकार है–

- सर्वांगीण विकास– शारीरिक शिक्षा बच्चे के संगठित मानसिक, सामाजिक, नैतिक और शारीरिक गुणों का सर्वागीण विकास, शारीरिक क्रियाकलापों के माध्यम से उपलब्ध कराती ळें
- शारीरिक वृद्वि और विकास– शारीरिक क्रियाकलाप आवश्यक हैं क्योंकि यह आंशिक व्यवस्था और मानव शरीर की क्रियाशीलता के विकास में सहायक होते है। यह उसकी थकान से लडनें की सामर्थ्य बढ़ाती है उसके प्रदर्शन में सुधार और उसे और अधिक स्वस्थ बनाती है।
- बौद्विक विकास– शारीरिक क्रियाकलाप अवश्य सीखने चाहिए, अतः बौद्विक तंत्र के बल सोचने की आवश्यकता है जिसका परिणाम ज्ञान ग्रहण करना है। शारीरिक क्रियाकलाप बच्चे के वैज्ञानिक अर्न्तमन, बौद्विक और श्रेष्ठ विचारधारा का विकास, परमावश्यक है।
- भावनात्मक विकास– शारीरिक शिक्षा भावनाओं पर नियंत्रण के अवसर उपलब्ध कराती है। खेल जीतना और हारना दोनों ही भावनाओं के छुटकारे और भावनाओं के नियंत्रण का क्षेत्र है।
- समाजिक समायोजन– शारीरिक शिक्षा प्रतिभागियों व अन्यों के साथ मेलमिलाप का अवसर प्रदान करती है। जिससे हम सामाजिक गुणो जैसे खेल भावना, ईमानदारी, मित्रता, भाईचारा, शिष्टाचार, आत्म–अनुशासन, सहयोग और ऐसी संस्था के प्रति आदर की भावना, जो व्यक्ति को सामाजिक समायोजन में मदद दे, को सीखते है।
- व्यक्तिगत समायोजन– शारीरिक शिक्षा व्यक्ति को आत्म–अभिव्यक्ति का पूरा–पूरा अवसर देती है और उसे जीवन में व्यक्तिगत समायोजन के लायक बनाती है।
- चारित्रिक विकास– सामूहिक प्रयास, टीम के प्रति वफादारी और मजबूत इरादे, खेल और शारीरिक क्रियाकलापो के लिए आवश्यक है। ये एक नैतिक चरित्र के लिए बड़े उपयोगी साबित होते है।
- शारीरिक फिटनेस– कसरत और व्यक्ति के शरीर के विषय में ज्ञान और शारीरिक फिटनेस के लिए आवश्यक योगदान शारीरिक शिक्षा के माध्यम से मिलता है। नियमित कसरत या व्यायाम हमारी शारीरिक कार्यक्षमता और बनावट को सुधारता है।
- मानसिक विकास– शारीरिक शिक्षा सीखने की कला, खेलों, नियमों, तकनीकों और व्यूह रचनाओं एंव नई स्थितियों में व्यक्ति को प्रभावी ढंग से निर्णय लेने में सक्षम बनाती है। शारीरिक शिक्षा कार्यक्रम व्यक्ति को स्वच्छता, स्वास्थय और सफाई के प्रति सचेत कर उसका मानसिक विकास करता है।
- स्नायु पेशी विकास– शारीरिक क्रियाकलापों के माध्यम से व्यक्ति पेशी व स्नायु तंत्र में समन्वय बिठाता सीखता है। स्नायु पेशी तंत्र संयोजन का विकास अच्छी तरह तभी होता है जब विभिन्न प्रकार की कसरतो को दोहराते हुए लम्बा समय हो गया हो। किसी काम को सही तरीके से करने या सीखने की कला, अच्छा स्नायु–पेशी नियं.ण अपरिहार्य है। यह हमें तीव्र और सक्षम गति उपलब्ध कराता है।
- स्वस्थ संवेग अभिव्यक्ति– खेल संवेगों का अभियान है और मौलिक प्रवृतियों के प्रकटीकरण के अनेक अवसर प्रस्तुत करता है। खेल के गत्यात्मक गुणों को बच्चे की मूल प्रवृत्तियों के तृष्टिकरण के लिए उपयोग में लाया जा सकता है।
- सांस्कृतिक विकास– खेल और शारीरिक क्रियाकलाप सभी लोगो की संस्कृति में महत्वपूर्ण भूमिका अदा करते है। ऐसे क्रियाकलापो के दौरान विभिन्न संस्कृतियो के व्यक्ति आपस में एक दूसरे से मिलते है और एक दूसरे के बारे मं जानते है। उनके रीति–रिवाजों, परम्पराओं और जीवन शैली के बारे मं परिचित होते है, जिससे सांस्कृतिक विकास को बढावा मिलता है।
- नेतृत्व गुण– एक अच्छे नेता में आत्म विश्वास, बुद्वि, वफादारी, ईमानदारी, समर्पण, और साधन सम्पन्नता जैसे गुण होने चाहिए। इन गुणों को और अधिक विकसित व सिंचित करने का मौका खेल की स्थिति और खेल के मैदान में मिलता है, जो ऐसे गुणों के विकास की प्रयोगशाला होती है।
- स्वास्थ्य एंव सुरक्षा आदतें– शारीरिक शिक्षा, व्यक्ति को स्वाथ्य एंव सुरक्षा आदतों के लिए निर्देश देती है, और खेल व क्रीड़ाएं सुरक्षा व स्वास्थ प्रेरक पद्वति के तरह ही खेली जाती है।
- लेकतांत्रिक मूल्य– शारीरिक शिक्षा संगठन और प्रशासन लोकतंत्र के सिद्वान्तो, लो और दो तथा संस्था का आदर करो पर आधारित है। कार्यक्रमो की योजना व संचालन में अवसर द्वारा शारीरिक शिक्षा लोकतांत्रिक आदर्शो और मूल्यों को छात्रों के मन में बिठा देती है।
- स्वस्थ दृष्टिकोण विकसित करना और खेल भावना को प्रोत्साहन– शारीरिक शिक्षा हार और जीत को शालीनता से स्वीकारने की कला सीखाती है। अन्यों से दूर रहने की भावना और नियमों का पालन और मैत्री भाव का दृष्टिकोण बनाये रखना आदि सकारात्मक दृष्टिकोण बनायें रखना आदि सकारात्मक दृष्टिकोण के विकास और खेल भावना को प्रोत्साहन देता है।
- खाली समय का रचनात्मक उपयोग– शारीरिक शिक्षा खाली समय के रचनात्मक उपयोग में भी अपना योगदान देती है। दक्षताओं और शारीरिक क्रियाकलापों से व्यक्ति अपनी अतिरिक्त उर्जा का समुचित उपयोग करना सीखता है। और खाली समय के घंटो का सदुपयोग करना सीखता है।
- अभिव्यक्ति और रचनात्मकता– शारीरिक शिक्षा की भाषा, भावनाओं की अभिव्यक्ति और रचनात्मकता की इजाजत देती है तथा मूवमेंट और विचारों की नयी तर्ज को जन्म देती है।
- नागरिकता के गुण– शारीरिक शिक्षा अच्छे नागरिक गुणों का भी विकास करती है जैसे–कानून का पालन करना, स्वच्छ खेल, खेल भावना, साफ रहन–सहन, दुसरों का आदर और देश भक्ति की भावना जो कि लोकतांत्रिक जीवन में आवश्यक है, को विकास करती है।
- आर्थिक उपादेयता– आजकल शारीरिक शिक्षा तेजी से कमाई वाले व्यवसाय के रू‍प में बदल रही है। व्यवसाय के लिए अवसर और स्वरोजगार व विभिन्न एजेंसियों में रोजगार के अवसर पैदा कर रही है। प्रायोजित करने की अवधारणा ने खेलों के क्षेत्र को नयी और अर्थ पूर्ण दिशा दी है।

- मानसिक शान्ति– शारीरिक क्रियाकलापों जैसे योगा, एरोबिक्स, फिटनेस कार्यक्रम, मनोरंजन क्रियाकलापों, खेल और क्रीडाएं, आधुनिक जीवन शैली में मानसिक तनावों को कम कर और उनसे मुक्त होने व ध्यान बटाने में मदद करते है और हताशा से भी मुक्ति दिलाते है।
- राष्ट्रीय एकता– भारत में जहां विभिन्न धर्मो, जातियों, नस्लों व भाषाओं के लोग रहते है वहां शारीरिक शिक्षा इनमें एकत की भावना लाने और राष्ट्रीय एकता को प्रोत्साहित करने मं महत्वपूर्ण भूमिका निभाती है।
- अर्न्तराष्ट्रीय मेलमिलाप– शारीरिक शिक्षा राष्ट्रीय सीमाओं के अवरोधों को तोडकर एक बड़ा प्लेटफार्म प्रदान करती है। अर्न्तराष्ट्रीय स्पर्धाएं, विभिन्न देशों के खिलाडियों को व्यक्तिगत मेलमिलाप का अवसर देती हैं और उन्हें साथ लाकर व एक दूसरे के निकट लोकर परस्पर अनुभवों एंव वैश्विक भाईचारे की भावना को बढ़ाने का अवसर देती है।

4. शारीरिक शिक्षा का सामान्य शिक्षा से सम्बंध

शारीरिक शिक्षा को लम्बे समय से शिक्षा प्रक्रिया के ही एक अंगभूत भाग के रूप में मान्यता मिली हुई है। मानव शरीर, मन और आत्मा का संघठित रूप है और शिक्षा इस एकीकरण को और भी मजबूत बनाती है। मानव को पूरी शिक्षा दी जानी चाहिए। शिक्षा की कोई भी संकुचित व्याख्या जैसे वह स्कूली पाठ्यक्रम, स्कूलेत्तर या बौद्विक विकास के पहलू से सम्बन्धित हो, के रूप में करना शिक्षा के उददेश्य से भटकना होगा। कोई भी व्यक्ति, समुदाय, राष्ट्र जीवन के एक ही पहलू पर निर्भर नहीं हो सकता। मानव मनो–शारीरिक जीव है और मन व शरीर को अलग–अलग करके नहीं देखा जा सकता। मोब्ग ने इसे बिल्कुल सही ढंग से व्याख्यायित किया है, यह केवल आत्मा नही हैं, केवल शरीर नहीं है जिसे हम प्रशिक्षण दे रहे हैं, यह व्यक्ति है और हमें इसे दो हिस्सों में नहीं बांटना चाहिए। जॉन लाकी ने भी इसी तरह से विचार प्रकट किये हैं, एक स्वस्थ शरीर में एक स्वस्थ मन विश्व स्तर पर स्वीकार की जाने वाली संक्षिप्त अपितु परिपूर्ण प्रस्तुति प्रसन्नता–पारक स्त्रोंत है।

शिक्षा की परिभाषा में 3 आरज (रीडिंग, रायटिंग, अर्थमेटिक) से 3 एमज (मैन, मैटीरियल, मैथड) ने व्यक्तित्व के सर्वोमुखी विकास में महत्वपूर्ण बदलाव ला दिया। इससे यह स्पष्ट रू‍ से स्थापित होता है कि शारीरिक शिक्षा, और सामान्य शिक्षा, समस्त शिक्षा का एक अंगभूत हिस्सा है।

अब यह सुस्थापित हो चुका है कि व्यक्ति की वृद्वि और विकास ही शिक्षा वास्तविक सारांश है। स्वामी विवेकानन्द के अनुसार, सभी शिक्षाओं, सभी प्रशिक्षणों का परिणाम मनुष्य को बनाना चाहिए। आधुनिक शिक्षा ने व्यक्ति के समग्र विकास जैसे–मानसिक, शारीरिक, भावनात्मक, बौद्विक और सामाजिक पर बल दिया है तथा इन सभी का मकसद व्यक्ति के सम्पूर्ण विकास से संबधित है। जे0पी0 थॉमस के शब्दों में, शारीरिक शिक्षा शारीरिक क्रियाकलापों के माध्यम से दी जाने वाली वह शिक्षा हैजिससे बच्चे के सम्पूर्ण व्यक्तित्व का विकास होता है और इसकी पूर्ति एंव पूर्णता शरीर, मन और आत्मा में है।

शिक्षा का पहला सबक बच्चा शारीरिक कार्य व्यवहार से ही सीखता है। डी0 ओबर्टयूफ ने इसी तरह के विचारों को रेखांकित किया है और कहा हैं, शारीरिक शिक्षा उन अनुभवों का संकलन है जो व्यक्ति अपने कार्य व्यापारों के माध्यम से सीखता है। फ्रोबेल ने कहां है, खेल बचपन के अंकुरित पत्रों का स्वाभाविक प्रकटीकरण है। खेल एक अन्तर्निष्ठ प्रवृत्ति है और प्रकृति की देन है। वास्तव में खेल प्रकृति प्रदत्त शिक्षा का पाठ्यक्रम है और बच्चे को स्वतंत्रता, स्वाभाविकता और आत्म–अभिव्यक्ति उपलब्ध कराकर इसका शारीरिक, मानसिक, भावनात्मक और सामाजिक विकास करता है। एल0 पी0 जैक्त का बयान है कि जीवन में खेल की दिशा में खोजी गयी शैक्षणिक सम्भावनाओं को भी आज के महान अविष्कारों में गिना जाना चाहिए। यह उल्लेखनीय है, मैं इससे सहमत हूँ, यह शिक्षा के नये युग का उषाकाल है– समस्त सभ्य विष्व स्तर पर आज शिक्षा को मनोरंजन के लिए समझने की धारणा को विचारको ने चुनौती के रूप में देखा है। शरीर की उदात्र शिक्षा ही मन की भी शिक्षा है।

खेल का मैदान एक छोटे क्लास रूम की तरह काम करता है, यह एक प्रयोगशाला है जिसमें एक साथ कई शैक्षणिक प्रक्रियाएं चलती है जो ज्ञान उपलब्ध करवा, मन को उदार बनाती कौशल में सुधार, मुक्त सोच को बढ़ावा, रचनात्मक प्रतिभा को प्रोत्साहन व सकारात्मक दृष्टिकोण को विकास करती है। बच्चे को सीखने और अपने आप को अभिव्यक्ति करने एंव दूसरों के व्यवहार जानने का अवसर प्राप्त होता है। जिससे उसका सम्पूर्ण विकास होता है। बुक वाल्टर के अनुसार शारीरिक शिक्षा उददेश्य व्यक्ति के शारीरिक, सामाजिक, मानसिंक एकीकरण ओर समायोजन का अधिकतम विकास करना है इसे इस प्रकार भी कहा जा सकता है कि सामान्य शिक्षा और शारीरिक शिक्षा के उददेश्य सामान्य हैं और यह दोनों समान दिशा में निर्देश देते है जैसे–व्यक्ति का सम्पूर्ण एंव सुव्यवस्थित विकास।

यहां तक कि शिक्षा के लक्ष्य भी संगत है और शारीरिक शिक्षा के लक्ष्यों से मेल खाते है। अन्वेषक मन की प्राप्ति द्वारा, जीवन दर्शन के शिक्षण द्वारा, आत्म–अभिव्यक्ति और स्वयं के शरीर के मूल्यांकन के द्वारा शारीरिक शिक्षा स्वयं को पहचानने के शिक्षा लक्ष्यों को प्राप्त करने में योगदान देती है। शारीरिक शिक्षा, विभिन्न क्रियाकलापों के माध्यम से सामाजिक, संसक्ति का विकास, सहयोग और नेतृत्व गुणों के बहुत से अवसर उपलब्ध कराती है जो सब अच्छे मानव सम्बन्धों को ही सिंचित करते है। शिक्षा का एक और लक्ष्य है– शारीरिक शिक्षा आर्थिक क्षमता में भी योगदान देती है। शिक्षा का तीसरा लक्ष्य है शिक्षण के द्वारा पेशे या व्यवसाय की सफलता आंकना जो कि स्वास्थ्य और फिटनेस पर निर्भर करती है। शिक्षा का चौथा लक्ष्य है कि नागरिक दायित्वों, शारीरिक शिक्षा के माध्यम से अच्छी नागरिकता के गुण, नेतृत्व, देशभक्त, मानवतावाद और कानून का पालना आकद गुणों को उसके मन में बैठना। हालांकि अपनायी जाने वाली प्रक्रिया अलग हो सकती है, शारीरिक शिक्षा निश्चित तौर पर और वास्तविक रूप में सामान्य शिक्षा के लक्ष्यों से मेल खाती है।

शारीरिक शिक्षा सामाजिक और सांस्कृतिक मूल्यों का भी प्रसारण करती है और समाज की विचारधाराओं को निरंतर क्रियाओं के माध्यम से नई पीढ़ी तक पहुंचती है। यह बच्चों को न केवल उसके बढ़ने और विकसित होने मं मदद देती है बल्कि यह उन्हें सामाजिक माहौल में सामंजस्य बिठाने और सकारात्मक, मानसिक, सामाजिक और शारीरिक जिम्मेदारियों के समायोजन करने लायक बनाती है। शारीरिक शिक्षा का अधिक

बचपन मुक्त निरंतर खेल रहता है, किशोरावस्था में कलात्मक क्रियाकलापों में और बुढ़ापे में मनोंरजनात्मक क्रियाकलापों पर अधिक बल रहता है जो कि जीवन की कुंजी है।

शारीरिक शिक्षा, शिक्षा के क्षेत्र का अपरिहार्य अंग है जो व्यक्ति के स्वास्थ्य, सामाजिक, भवनात्मक और मानसिक विकास में योगदान देती है। आधुनिक उच्च तकनीकी समाज में हम सामान्य शिक्षा में व शारीरिक शिक्षा में सम्बन्ध की महत्ता को कम करके नही आंक सकते। ये दोनों एक दूसरे के पूरक है। इनके उद्देश्य ऐव लक्ष्य एक ही ओर बढ़ते है, व्यक्तित्व का सर्वोत्मुखी विकास, व्यक्ति को समृद्व बनाना, परिपूर्ण और सुव्यवस्थित जीवन। इसलिए शारीरिक शिक्षा सामान्य शिक्षा का ही अंगभूत तत्व है और इनका सम्बन्ध नकारा नहीं जा सकता। ये दोनो परस्पर जुड़े हुए हैं और परस्पर एक दूसरे पर आश्रित हैं और अविभाज्य है।

5. निष्कर्ष

शारीरिक शिक्षा केवल वर्तमान में ही उपयोगी है बल्कि यह भविष्य के लिए उतनी ही उपयोगी है। आधुनिक जीवन शैली ने व्यक्ति के लिए अनेकानेक समस्याएं खड़ी कर दी है। सामाजिक और आर्थिक व्यवस्था की मांग से भारी तनाव व दबाव पैदा होते है। आधुनिक साइबरयुग में शारीरिक शिक्षा की महत्त एंव आवश्यकता को कम करके नही आकां जा सकता। शारीरिक शिक्षा व्यक्तित्व के सभी पहलुओं का विकास करने का यत्न करती है जैसे–व्यक्ति के शारीरिक, ससामाजिक, भावनात्मक, सांस्कृतिक और बौद्विक प्रवृत्तियों का सर्वोमुखी एंव सन्तुलित विकास करती है। शारीरिक शिक्षा व सामान्य शिक्षा दोनों ही उद्देश्य प्राप्ति की होड़ में एक दूसरे के पूरक है और दोनो के तत्व अविभाज्य है।

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खो-खो भारतीय संस्कृति धरोहर के रूप में एक स्वदेशी खेल

रजनीश कुमार भारती
छात्र शारीरिक शिक्षा विभाग,
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1. परिचय

जब कोई देश हमारे साथ दुर्भावनापूर्ण बर्ताव या हरकत करता है। तो हमारे अंदर देशभक्ति कि भावनाएँ हिलोरे लेने लगती है जो अच्छी लगती है। लेकिन फिर वही भावनाएं सुषुप्तावस्था में चली जाती है। ओर हमारे विचारो से और कार्यकलापो से वही भावनाएं दूर चली जाती हैं क्या हमारी क्षणिक और आवेग पूर्ण देशभक्ति की भावनाओ से हम देश का कोई भला कर पायेगे?

मेरा मकसद किसी की भी देशभक्ति पर संदेह करना नहीं है बल्कि यह बताना है कि क्या हम क्षणिक और आवेगपूर्ण देशभक्ति वाली भावनाओ से बाहर निकलकर अपने अन्दर देशभक्ति की ऐसी भावना विकसित नही कर सकते जो हमारी छोटी–छोटी बातो में दिखाई दे और उससे देश को भी एक मजबूती मिल सके।

देशभक्ति एक व्यापकता वाला शब्द है केवल क्षणिक आवेश अथवा संकट के समय देश प्रेम के उठने वाले भावो को ही सम्पूर्ण देशभक्ति नही माना जा सकता है। बल्कि सदैव देश के प्रति स्व का भाव होना और उसके अनुरूप ही व्यवहार करना ही हमारी सच्ची देशभक्ति माना जा सकता है। कई बार देखा जाता है कि हम देशहित से जुड़े किसी मुददे पर आन्दोलन करते है। ओर आवेश में आकर सरकारी और निजी सम्पत्ति का नुकसान करते है। अब भला मुझे ये बताए कि ये कैसी देशभक्ति हम अपने अन्दर पनंपा रहे है हम तो उल्टा अपने ही देश का नुकसान कर रहे है और मन में भाव ये पाले हुए है कि घरों से बाहर निकलकर आन्दोलन कर रहे है।

भाषा के मामले में बात करे तो उसमें भी स्व का भाव विकसित नही कर पाए है। हमारी राष्ट्रभाषा हिन्दी है जिसको हम अच्छी तरह बोल भी लेते है। और लिख भी सकते है। लेकिन हमको भले ही अंग्रेजी का आवश्यक ज्ञान हो लेकिन टुटी–फुटी या रटी हुई अंग्रजी बोलने में भी हम गर्व का अनुभव करते है। कुछ ऐसा ही हाल खेलो में देखा जा सकता है जहां हम अपने राष्ट्रीय खेल व स्वदेशी खेल कि बजाय अन्य विदेशी खेल क्रिकेट, टेनिस, टेबिल–टेनिस

आदि के प्रसंशक बनने में अपनी शान समझते है। दरअसल सम्पूर्णता हम अभी तक देश के प्रति स्व का भाव पैदा ही नही कर पाए है। और यही कारण है। कि हमारा देशप्रेम का भाव केवल संकट के समय ही उभर कर आता है।

जब कि खो–खो स्वदेशी भारतीय खेलो के सबसे प्राचीनतम रूप में से एक है। जिसका उद्भव प्रागैतिकहासिक भारत में माना जाता है खो का अर्थ संस्कृत भाषा में "जाओ और दौड़ो" कहा जाता है मुख्य रूप से आत्मरक्षा, आक्रमण व प्रत्याक्रमण के कौशल को विकसित करने के लिए इसकी खोज हुई थी। खो–खो का जन्म स्थान बडौदा कहा जाता है। यह गुजरात, महाराष्ट्र, मध्यप्रदेश, दिल्ली आदि प्रदेशों में अधिक खेला जाता है। किन्तु भारत के अन्य प्रदेशो में भी इसका प्रचार अब बहुत बढ़ गया है। यह खेल सरल है। और इसमें कोई खतरा नही यह केवल महिलाओं का ही नही पुरूषो व महिला दोनो समान रूप के इस खेल को खेला जाता हैं इस खेल में कोई खेल उपकरण जो की आवश्यकता न होने के कारण खेल खर्चा भी नहीं होता है

2. खेल का संक्षिप्त परिचय

खो–खो खेल के लिए 27×16 भीतर मैदान की आवश्यकता होती हैं और 24 मीटर मैदान पर 1.20 सेमी0 के पोल लगे होते है जिनकी परिधि 10 सेमी0 होती है। खो–खो मैदान में पोल से बाहर दोनों तरफ की जोन 1.50–1.50 मी0 का होता है।

इस खेल में एक टीम में 12–12 खिलाड़ी होते है जिसमें 8 खिलाड़ी बैठते है। एवं एक खो देता है जिसे चेन्जर कहते है।

दोड़ने वाले खिलाड़ी तीन–तीन ग्रुप में आते है एक के बाद एक को छुते है। इसका समय निधारर्ण किया जाता है। इसमें दो पारिमा होती । तब वह अपने ही दल के खिलाड़ी को पीछे

जाकर खो शब्द का उच्चारण करता है तो वह उठकर भागने लगता है। और दोड़ने वाले खिलाड़ी का पीछा करता है तथा विरोधी दल के खिलाडी को छूने का प्रयास करता है। जिसका निर्णय,केवल निर्णायक नियम के आधार पर करते है

खो–खो मैच के निम्न निर्णायक नियुक्त किये जाते है।–

क्र0 सं0	निर्णायक के नाम	निर्णायको की संख्या
1	एम्पायर	02
2	रैफरी	01
3	टाइमकीपर	01
4	स्कोर	01

खिलाड़ीयों को तब तक हर समय चौकन्ना रहना पड़ता है तथा खेल का एक–एक सेकेंण्ड भी खिलाड़ीयों पर भारी पड़ती हैं इसी लिये पलक झपकते क्या से क्या हो सकता है।

इंदौर में 8 से 10 अप्रैल 2016 में पहली महिला और तीसरा पुरूष एशियाई खो–खो प्रतियोगिता का आयेजन किया गया था जो जैसे स्वदेशी खेल भारतीय खेलों की आत्मा है। जो कि उस प्रतियोगिता में भारत, बाग्लादेश, मलेशिया, नेपाल, पाकिस्तान, सिंगापुर दक्षिण कोरिया और श्रीलंका की आठ टीमे भाग ले चुकी है। जिसमें भारत मेजवान करते है विजय रहा है। खो–खो का विकास अतंर्राष्ट्रीय स्तर पर करने के लिए हर संभव प्रयास किये जा रहे है। जो कि एशियाई खो–खो परिसंद्य एवं भारतीय खो–खो परिसंद्य के साथ मिलकर कर रहे है। और इसी के साथ देश में स्वदेशी खेल संस्कृति को बढ़ावा मिलेगा।

अतः मेरा यह मानना है कि

भारतीय संस्कृति स्वेदशी खेल खो–खो की धरोहर है और मुझे गर्व है। कि मे अपने भारतीय खेल खो–खो को खेलता हूँ यदि मे इसके विकास के लिए सभी भारतीय खेल श्रेनियों को संगठित करने का प्रयास करता रहूँगा। जय हिंद!

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शिक्षक प्रशिक्षणार्थियों की अधिगम उपलब्धि पर व्याख्यान विधि के प्रभाव का तुलनात्मक अध्ययन (लिंग के आधार पर विश्लेषण)

रूबी चौहान[1], एवं बी0सी0 दुबे[2]*

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सार

वैदिक काल में छात्र की शिक्षा गुरू के संरक्षण में पूर्ण की जाती थी एवं गुरू के पद हेतु शिक्षा को निरन्तर जारी रखने पर पद प्रदान किया जाता था। गुरू का स्थान वहीं ग्रहण कर पाता था जिसमें सर्वगुण सम्पन्नता के लक्षण दृष्टिगोचर होते थे एवं गुरू द्वारा शिक्षा प्रदान करने का माध्यम केवल प्रवचन करना नही होता था। बल्कि गुरू द्वारा दिये गये ज्ञान को व्यवहार में दृष्टिगोचर करना आवश्यक होता था बिना उसके शिष्य को किसी भी तरह की पदोन्नति अथवा पदवी प्रदान नही की जाती थी। वर्तमान समय में शिक्षक का सम्बन्ध प्रमाण–पत्रों से है अंक पत्र में जिस छात्र का अंक सबसे ज्यादा होता है उसी को सबसे योग्य शिक्षक माना जाता है वर्तमान समय में व्याख्यान विधि ही शिक्षण की प्रमुख विधि है इस समय शिक्षक प्रशिक्षण से ज्यादातर महिला वर्ग प्रभावित हुई है। एवं उसका झुकाव शिक्षक बनने हेतु ज्यादा दृष्टिगोचर हो रहा है। प्रमुख प्रश्न यह है क्या शिक्षक प्रशिक्षण की व्याख्यान विधि का महिला एवं पुरूष वर्ग पर अलग–अलग पडता है या दोनों समान रूप से प्रभावित होते है इसी तथ्य को ध्यान में रखते हुये प्रस्तुत समस्या पर अध्ययन किया गया और पाया यह गया कि व्याख्यान विधि का पुरूष एवं महिला शिक्षक प्रशिक्षणार्थियों पर कोई अलग–अलग प्रभाव नही पडता। प्रस्तुत शोध से सम्बन्धित सभी प्रक्रियाओं का वर्णन आगे प्रस्तुत प्रपत्रों में किया गया है।

कुंजीशब्द : प्रशिक्षणार्थियों की अधिगम उपलब्धि लिंग के आधार पर विश्लेषण

1. परिचय

शिक्षण प्रशिक्षण का उद्देश्य शिक्षक प्रशिक्षणार्थियों में शिक्षण के प्रति ज्ञान में वृद्धि करना, शिक्षण कौशलों को विकसित करना तथा शिक्षण व्यवसाय के प्रति सकारात्मक अभिवृत्ति विकसित करना होता है। ज्ञान का सम्बन्ध व्यवहार के ज्ञानात्मक पक्ष से, कौशलों का सम्बन्ध व्यवहार के मनोगात्यात्मक पक्ष से तथा अभिवृत्ति का सम्बन्ध भावात्मक पक्ष से होता है। शिक्षक प्रशिक्षणार्थियों को शिक्षण कौशलों से सम्बन्धित ज्ञान प्रदान करने के लिये तथा शिक्षण कला की बारीकियों को समझने के लिये उनके प्रशिक्षणकाल के दौरान विभिन्न प्रकार की शिक्षण विधियों जैसे व्याख्या विधि, योजना विधि, प्रदर्शन विधि वाद–विवाद विधि का प्रयोग कर अधिगम कराया जाता है जिसमें से व्याख्यान विधि भी एक है। यह अधिगम की सबसे प्राचीनतम विधि मानी जाती है जिसमें कि उन विधियों की तुलना में सबसे कम संसाधनों या अन्य साधनों के प्रयोग के बिना ही अधिक से अधिक विषय वस्तुत प्रेषित की जा सकती है। सर्वप्रथम यह विधि ज्ञान आधारित थी जिसमें कि अधिगमकर्ता ज्ञानेन्द्रियों के माध्यम से ज्ञान ग्रहण करता था बाद में यह क्रिया आधारित होती चली गई। वर्तमान समय में व्याख्यान विधि का उपयोग उच्च शिक्षा में जटिल से जटिल बिन्दुओं को छात्रों के सम्मुख सरल रूप से प्रस्तुत करने में किया जाता है जिससे कि छात्र उसे भली भांति समझ सके। शिक्षण विधि शब्द ही इस धारणा पर आधारित है कि शिक्षण एक कला है तथा शिक्षक एक कलाकर की भूमिका निभाता है तथा इस भूमिका निर्वहन में वह शिक्षण विधि का प्रयोग इस उद्देश्य से करता है कि छात्रों का अधिगम तीनों स्तर का हो। कोई शिक्षण विधि कितनी प्रभावशाली है इसका निर्धारण इस बात से किया जा सकता है कि विद्यार्थियों का विषय वस्तु पर कितना अधिकार है जिसके लिये उपलब्धि परिक्षाओं का आयोजन किया जाता है जिससे स्पष्ट होता है कि कोई शिक्षण विधि कितनी प्रभावशाली रही। जहाँ तक व्याख्यान विधि की बात है तो यह विधि पूर्णतः शिक्षक केन्द्रित विधि है। जिसमें व्याख्यान का सफल होना पूर्णतः शिक्षक की कुशलता पर निर्भर करता है। शिक्षक की कुशलता के साथ ही साथ छात्रों का

शिक्षक के प्रति पूर्णतः निष्ठावान होना भी परम आवश्यक है वर्तमान समय में छात्रों की शिक्षक के प्रति घटती निष्ठा इस विधि द्वारा अधिगम को प्रभावित कर रही है। अब शिक्षा शिक्षक केन्द्रित न होकर विद्यार्थी केन्द्रित हो गई और बहुन्द्रिय अनुभवों को बढावा दिया जा रहा है। अतः शिक्षक के द्वारा बहुन्द्रिया आधारित शिक्षण विधियां प्रयोग में लायी जाती है। जिससे कि प्रशिक्षणार्थी क्रियाशील रह कर ज्ञान की प्राप्ति कर सके क्योंकि ऐसा माना जाता है कि श्रव्य इन्द्रियों से प्राप्त ज्ञान सबसे कम स्थायी होता है, श्रव्य दृश्य इंद्रियों से प्राप्त ज्ञान उससे ज्यादा स्थाई होता है तथा बहुइन्द्रियों से प्राप्त ज्ञान सबसे ज्यादा स्थाई होता है इसके बावजूद शिक्षक प्रशिक्षण संस्थानों में प्रशिक्षणार्थियों के ज्ञान से वृद्धि करने के लिये आज भी व्याख्यान विधि का प्रयोग किया जाता है अब यह व्याख्यान विधि शिक्षक प्रशिक्षणार्थियों की अधिगम उपलब्धि पर क्या प्रभाव डालती है इस प्रश्न का उत्तर जानने के लिये शोधकर्ती ने निम्नाकिंत शोध समस्या का चयन किया।

2. उद्देशय

- शिक्षक प्रशिणार्थियों की अधिगम उपलब्धि पर व्याख्यान विधि के प्रभाव का तुलनात्मक अध्ययन। (लिंग के आधार पर विश्लेषण)
- शिक्षक प्रशिणार्थियों की अधिगम उपलब्धि पर व्याख्यान विधि के प्रभाव का तुलनात्मक अध्ययन। (शैक्षिक योग्यता के आधार पर विश्लेषण)
- शिक्षक प्रशिणार्थियों की अधिगम उपलब्धि पर व्याख्यान विधि के प्रभाव का तुलनात्मक अध्ययन। (राज्य एवं केन्द्र स्तरीय माध्यमिक शिक्षा के आधार पर विश्लेषण)

3. परिकल्पनाये

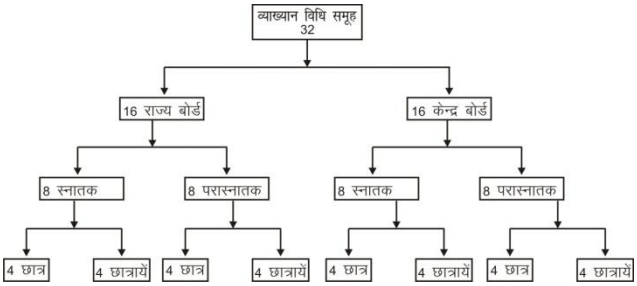
- शिक्षक प्रशिणार्थियों की अधिगम उपलब्धि पर लिंग के आधार पर व्याख्यान विधि के प्रभाव में कोई सार्थक अन्तर नही होगा।
- शिक्षक प्रशिणार्थियों की अधिगम उपलब्धि पर शैक्षिक योग्यता के आधार पर व्याख्यान विधि के प्रभाव में कोई सार्थक अन्तर नही होगा।
- शिक्षक प्रशिणार्थियों की अधिगम उपलब्धि पर राज्य एवं केन्द्र स्तरीय माध्यमिक शिक्षा बोर्ड के आधार पर व्याख्यान विधि के प्रभाव में कोई सार्थक अन्तर नही होगा।

शोधकार्य का सीमाकंन :- प्रस्तुत शोधकार्य मेरठ जनपद के स्वामी विवेकानन्द सुभारती विश्वविद्यालय शिक्षा विभाग तक सीमित रहा।

शोध विधि :- प्रस्तुत शोध कार्य में प्रयोगात्मक विधि का प्रयोग किया गया है।

शोध अभिकल्प :- प्रस्तुत शोध कार्य में प्रयोगात्मक डिजाइन के स्थिर समूह तुलना डिजाइन का प्रयोग किया गया है।

जनसंख्या व न्यादर्श:- प्रस्तुत अध्ययन में स्वामी विवेकानन्द सुभारती विश्वविद्यालय के बी0एड0 2015–17 के विद्यार्थियों को जनसंख्या के रूप में लिया गया एवं न्यायदर्श हेतु यादृच्छिक विधि का प्रयोग करते हुये निम्न सारणी के अनुसार न्यादर्श चयनित किया गया।



शोधकार्य में प्रयुक्त उपकरण:- प्रस्तुत शोध में अधिगम उपलब्धि मापने के लिये पढाये गये प्रकरण से स्वनिर्मित प्रश्नावली का उपयोग किया गया है।

सांखिकीय सूत्र:- प्रस्तुत अध्ययन में टी परीक्षण सांख्यकीय प्रविधि का प्रयोग किया गया है।

$$t = \frac{M_1 - M_2}{\sqrt{\frac{\sigma_1^2}{N_1} + \frac{\sigma_2^2}{N_2}}}$$

सारणी नं0 - 1

उददेश्य नं0 1:- शिक्षक प्रशिक्षणार्थियों की अधिगम उपलब्धि पर व्याख्यान विधि के प्रभाव का तुलनात्मक अध्ययन

(लिंग के आधार पर विश्लेषण)

लिंग के प्रकार	संख्या	औसत मान	प्रमाणित विचलन	टी प्राप्तांक	सार्थकता प्रभाव
छात्र	12	29	4.89	0.11	0.05त्र2.04 0.01त्र2.75 मान असार्थक
छात्रा	20	29.44	7.75		

*df= 30 सार्थकता स्तर 0.05 **0.01 सारणी मान 2.04 एवं ´2-75*

उपरोक्त सारणी के माध्यम से अध्ययनकर्ती ने व्याख्यान विधि का शिक्षक प्रशिक्षणार्थियों की अधिगम उपलब्धि पर (लिंग आधारित) प्रभाव का विश्लेषण करते हुये अन्तर की जांच की गई जिसमें प्रयोगात्मक विधि का प्रयोग एक समूह पर किया गया समूह में छात्रों की सख्या 12 एवं छात्राओं की 20 थी। स्वनिर्मित प्रश्नावली के माध्यम से प्राप्तांको का औसत मान क्रमंशः 29 व 29.44 था जिसके आधार पर निकाली गई त्रुटि का मान 3.37 प्राप्त हुआ जिससें ´´जष्प्राप्तांक ज्ञात किया गया जोकि 0.11 प्राप्त हुआ जो स्वतन्त्रता अंश 30 सार्थकता स्तर 0. 05 के सारणी मान 2.04 से कम है। अतः परिकल्पना सं0 1 को स्वीकराते हुये अध्ययनकर्ती इस निष्कर्ष पर पहुंची है कि व्याख्यान विधि से शिक्षण का छात्र एवं छात्राओं की अधिगम पर कोई अलग–अलग प्रभाव नही पडता है।

सारणी नं0–2

उद्देशय न 02 - शिक्षक प्रशिक्षणार्थियों की अधिगम उपलब्धि पर व्याख्यान विधि के प्रभाव का तुलनात्मक आध्ययान (शैक्षिक योग्यता के आधार पर विश्लेषण)

शैक्षिक योग्यता के स्तर	संख्या	औसत मान	प्रमाणित विचलन	ज प्राप्तांक	सार्थकता प्रभाव
स्नातक	16	29.27	4.94	0.40	0.05त्र2.04 0.01त्र2.75 मान असार्थक
परास्नातक	16	27.85	7.17		

*df= 30 सार्थकता स्तर 0.05 **0.01 सारणी मान 2.04 एवं **2.75*

उपरोक्त सारणी के माध्यम से अध्ययनकर्ती ने व्याख्यान विधि का शिक्षक प्रशिक्षणार्थियों की अधिगम उपलब्धि पर (शैक्षिक योग्यता) प्रभाव का विश्लेषण करते हुये अन्तर की जांच की गई जिसमें प्रयोगात्मक विधि का प्रयोग एक समूह पर किया गया जिसमें 16 स्नातक तथा 16 परास्नातक छात्र थे। स्वनिर्मित प्रश्नावली के माध्यम से प्राप्तांको का औसत मान क्रमंशः 29.27 व 27.85 था जिसके आधार पर निकाली गई त्रुटि का मान 3. 54 प्राप्त हुआ जिससें ''जष्प्राप्तांक ज्ञात किया गया जोकि 0.40 प्राप्त हुआ जो स्वतन्त्रता अंश 30 सार्थकता स्तर 0.05 के सारणी मान 2.04 से कम है। अतः परिकल्पना सं0 2 को स्वीकराते हुये अध्ययनकर्ती इस निष्कर्ष पर पहुंची है कि व्याख्यान विधि से शिक्षण स्नातक एवं परास्नातक छात्रों की अधिगम पर कोई अलग–अलग प्रभाव नही पडता है।

सारणी न0 - 3

उद्देशय न03 - शिक्षक प्रशिणार्थियों की अधिगम उपलब्धि पर व्यख्यान विधि के प्रभाव का तुलनतमांक अध्ययन (राज्य एव केन्द्र स्तरीय माध्यमिक शिक्षा के आधार पर विश्लेषण)

बोर्ड के प्रकार	संख्या	औसत मान	प्रमाणित विचलन	ज प्राप्तांक	सार्थकता प्रभाव
राज्य बोर्ड	16	27.85	6.99	0.81	0.05त्र2.04 0.01त्र2.75 मान असार्थक
केन्द्र बोर्ड	16	30.7	4.94		

*df= 30 सार्थकता स्तर *0.05 ´0.01 सारणी मान 2.04 एवं 0**2.75*

उपरोक्त सारणी के माध्यम से अध्ययनकर्ती ने व्याख्यान विधि का शिक्षक प्रशिक्षणार्थियों की अधिगम उपलब्धि पर (शैक्षिक मूल्यांकन बोर्ड) प्रभाव का विश्लेषण करते हुये अन्तर की जांच की गई जिसमें प्रयोगात्मक विधि का प्रयोग एक समूह पर किया गया समूह में 16 राज्य बोर्ड के छात्र तथा 16 केन्द बोर्ड के छात्र थे। स्वनिर्मित प्रश्नावली के माध्यम से प्राप्तांको का औसत मान क्रमंशः 27.85 व 30.7 था जिसके आधार पर निकाली गई त्रुटि का मान 3.49 प्राप्त हुआ जिससें ''जष्प्राप्तांक ज्ञात किया गया जोकि 0.81 प्राप्त हुआ जो स्वतन्त्रता अंश 30 सार्थकता स्तर 0.05 के सारणी मान 2.04 से कम है। अतः परिकल्पना सं0 3 को स्वीकराते हुये अध्ययनकर्ती इस निष्कर्ष पर पहुंची है कि व्याख्यान विधि से शिक्षण का राज्य बोर्ड व केन्द्र बोर्ड के छात्रों की अधिगम उपलब्धि पर अलग–अलग प्रभाव नहीं पडता है।

4. निष्कर्ष

उपरोक्त आंकडों के विश्लेषण के अनुसार यह स्पष्ट दृष्टिगोचर हो रहा है कि व्याख्यान विधि से जो शिक्षण कराया जाता है उसका छात्र एवं छात्राओं पर अलग–अलग प्रभाव नही पडता क्योंकि अधिगम एक ऐसा व्यक्तिगत कारक है जो व्यक्ति की व्यक्तिगत क्षमताओं, अभिप्रेरणा, रूचि से प्रभावित होता है लेकिन शिक्षण विधि (अभिप्रेरणा, रूचि) लिंग से प्रभावित नही होती।

दूसरे कारक के रूप में छात्रों की शैक्षिणक योग्यता स्नताक व परास्नतक के आधार पर छात्रों के दो समूहों को एक साथ व्याख्यान विधि से पढाया गया लेकिन आंकडों से दृष्टिगोचर हो रहा है कि शैक्षणिक योग्यता का प्रभाव छात्रों की उपलब्धि पर सार्थक रूप से प्रभावी नही हो रहा है जिसका प्रमुख कारण यह हो सकता है की बी0एड0 पाठ्यक्रम एक ऐसा व्यवसायिक पाठ्यक्रम है जिसकी विषयवस्तु का ज्ञान स्नातक व परास्नातक स्तरों पर नही कराया जाता जिससे लगता है कि शिक्षण की परम्परागत विधि दोनां समूहों पर समान रूप से प्रभावी रही।

तीसरे कारक के रूप में छात्रों के माध्यमिक शिक्षा मूलयांकन बोर्ड के आधार पर दो समूहों को एक व्याख्यान विधि से विषय वस्तु सम्प्रेषित की गई परन्तु आंकडों के विश्लेषण में दोनों समूहों पर व्याख्यान विधि का अलग–अलग प्रभाव देखने को नही मिला जिसका कारण यह हो सकता है कि व्याख्यान विधि एक ऐसी पाराम्परिक विधि है जिससे राज्य बोर्ड व केन्द्र बोर्ड दोनों में ही शिक्षण कराया जाता है जिससे दोनों समहों में अलग–अलग प्रभाव देखने को नही मिला।

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मेरठ जनपद के विश्वविधालयों में संचालित बी0एड0 पाठ्क्रम हेतु शैक्षिक एवं भोतिक संसाधनो की स्थिति का अध्ययन

समर जीया एवं बी0 सी0 दुबे

1 छात्रा, शिक्षा विभाग, स्वामी विवेकानंद सुभारती विश्वविधयालय मेरठ।

2 संकायाध्यक्ष, शिक्षा विभाग, स्वामी विवेकानंद सुभारती विश्वविधयालय मेरठ।

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सार

प्राचीन काल में शिक्षण को उच्च व्यवसाय में गिना जाता था। इस समय शिक्षण का कार्य विषय ज्ञान और कौशल सीखना नही था। छात्रों को चरम ज्ञान की प्राप्ति करना था। इस दृष्टि से शिक्षक बहुत ही योग्य व्यक्ति बन पाते थे। शिक्षक प्रशिक्षण एक पूर्व कालीन परम्पराधारित प्रणाली के रूप में अधिक मान्य एवं सर्वपरि है। पूर्व कालीन परम्पराधारित प्रणाली प्रशिक्षण स्नातक की उपाधि से सम्बन्धित रही जिसके अन्तर्गत प्रशिक्षण प्राप्त करने वाले छात्रों के ट्रेनी टीचर या प्यूपिल के रूप में देखा जाता है। शिक्षण अभ्यास के लिये प्रस्तुत विद्यालय को प्रदर्शन एवं अभ्यासात्मक विद्यालय के रूप में जाना जाता था। आज प्रशिक्षण के स्थान पर अधिक व्यापक शब्द ''शिक्षा'' का उपयोग किया जाता है। शिक्षक प्रशिक्षण के संकुचित दायरे को बढाते हुये उसे अध्यापक शिक्षा का नाम दे दिया गया।

अध्यापक शिक्षा कार्यक्रम मेरठ जनपद के अनेकों विश्वविद्यालयों में चलाया जा रहा है। शोधकर्ता ने मेरठ जनपद के दो विश्वविद्यालयों में बी0एड0 पाठ्यक्रम हेतु शैक्षिक भौतिक एवं प्रयोगिक संसाधानों का अध्ययन किया।

कुंजीशब्द : शैक्षिक एवं भोतिक संसाधनो की स्थिति का अध्ययन

1. परिचय

मानव जीवन में शिक्षा की बडी महत्वपूर्ण भूमिका है बालक जब जन्म लेता है तो वह पूरी तरह कोरी स्लेट के समान होता है। उसके व्यवहार में परिमार्जन के लिये शिक्षा आवश्यक होती है। शिक्षा व्यकित का शरीरिक, मानसिक, सामाजिक, नैतिक चारित्रिक, सवेंगात्मक तथा आध्यात्मिक शक्तियों का विकास करती है। मूलतः शिक्षा व्यक्ति के जन्म से लेकर मृत्युर्प्रयन्त चलाती रहती है परन्तु शिक्षा का यदि औपचारिक रूप से अवलोकन किया जाये तो जॉन डिवी के अनुसार–शिक्षा एक त्रिध्रुवीय प्रक्रिया है। जिसमें शिक्षक शिक्षार्थी तथा पाठक क्रम शामिल होता है। यदि इस त्रिध्रुवीय प्रक्रिया पर ध्यान दिया जाये तो शिक्षक का स्थान सर्वोत्तम है। इस पूर्ण प्रक्रिया में शिक्षक महत्वपूर्ण भूमिका निभाता है।

प्राचीन काल में शिक्षण को उच्च व्यवसाय में गिना जाता था इस समय शिक्षण का कार्य विषय ज्ञान और कौशल सिखाना ही नही था। छात्रों को चरम ज्ञान की प्राप्ति कराना था। इस दृष्टि से शिक्षक बहुत ही योग्य व्यक्ति ही हो पाते थे। शिक्षक प्रशिक्षण एक पूर्वकालीन परम्पराधारित प्रणाली के रूप में अधिक मान्य एवं सर्वपरि था। पूर्व कालीन परम्पराधारित प्रणाली प्रशिक्षण स्नातक की उपाधि से सम्बन्धित रही जिसके अन्तर्गत प्रशिक्षण प्राप्त करने वाले छात्रों को ट्रेनी टीचर या प्यूपिल टीचर के रूप में देखा जाता है। शिक्षण अभ्यास के लिये प्रयुक्त विद्यालय को प्रदर्शन एवं अभ्यासात्मक विद्यालय के रूप में जाना जाता था। आज प्रशिक्षण के स्थान पर अधिक व्यापक 'शब्द शिक्षा का उपयोग किया जाता है। शिक्षक प्रशिक्षण के संकुचित दायरे को बढातें हुये उसे अध्यापक शिक्षा का नाम दे दिया गया।

पाठपक्रम किसी भी शैक्षिक व्यवस्था का अनिवार्य एवं महत्वपूर्ण अंग है। शिक्षा के उददेश्य की पूर्ती में पाठयक्र का विशेष महत्व होता है। पाठयक्रय सम्पूर्ण शिक्षा का मैरूदण्ड होता है

पाठयक्रय के आभव में शिक्षा व्यवस्था निष्प्रयोज्य एवं निरर्थक हो जाती है। शिक्षा को विकास की प्रक्रिया माना जाता है। इस प्रक्रिया का केन्द्र बिन्दु पाठयक्रय होता है। इस प्रक्रिया का संचालक शिक्षक करता है। तथा शिक्षण क्रियाओं का आधार भी पाठयक्रय होता है। इसका स्वरूप परिवर्तनशील होता है। यह सामाजिक आर्थिक राष्ट्रीय एवं राजनैतिक आवश्यकताओं के अनुरूप निर्धारित होता है। शिक्षक प्रशिक्षण का प्रारूप सदैव बालको की मनोवैज्ञानिक स्थिति के अनुरूप बदलता है।

प्रशिक्षण संस्थानों में शैक्षिक संसाधनों से अभिप्राय है कि वे सभी संसाधन जो मुख्य रूप से प्रशिक्षण प्रक्रिया से सम्बन्ध रखते है। इन संसाधनों में योग्य प्रशिक्षक, उददेश्य लक्षित पाठयक्रम सुगम समय सारणी कुशल संचालक आदि सम्मिलित होता है। तथा प्रशिक्षण संस्थाओं में ऐसे सभी संसाधन जो शैक्षिक प्रक्रिया में सहायक होते है। जैसे प्रर्याप्त भवन शिक्षकों की उचित संख्या विशाल पुस्तकालय वाचनालय अनुकुल प्रबन्ध एवं स्वस्थ वातावरण खेल कूद के प्रर्याप्त साधन आदि संसाधनों के महत्वपूर्ण तथ्य है। मेरठ जनपद में चल रहे विशविद्यालयो में शिक्षक एवं भौतिक संसाधनोंएन0सी0टी0ई0के मानक के अनुरूप निर्धारित है।

आध्यायन की अवश्यकता:- राष्ट्र के विकास के लिए शिक्षा एक उपरिहार्य साधन है। शिक्षा का प्रसार योग्य शिक्षकों पर ही आधारित है और शिक्षकों के योग्य बनने के लिए प्रयिक्षण संस्थाओं का महत्वपूर्ण योगदान है। वर्तमान समय में प्रशिक्षण संस्थाओं के दो स्तर है– प्रथम कक्षा से आठ तक पढाने के लिये बी0टी0सी0 प्रशिक्षण प्राप्त अध्यापक सक्षम होते है तथा कक्षा नौ से बारह तक के छात्रों को शिक्षित करने कि लिये बी0एड0 प्रशिक्षित अध्यापकों की आवश्यकता है।

मेरठ जनपद में बी0एड0 प्रशिक्षण हेतु अनेक विश्वविद्यालय है। हमें ऐसा प्रतीत होता है कि इनकें अधिकतर विश्वविद्यालयों में शैक्षीक एवं भौतिक समाधानों की स्थिति संतोषजनक नही है। दोनों ही संसाधन एन0सी0टी0ई0 के मानक स्तर से अधिकतर नीचे है। निश्चित पाठयक्रम किया के लिए पर्याप्त प्रशिक्षक संख्या एवं अनुकुल वातावरण की महती आवश्यकता है।

शैक्षिक संसाधनों में दूसरों महत्वपूर्ण संसाधन पाठयक्रम है। सरकार द्वारा ही निश्चित किया गया पाठयक्रम ही साकारी और गैर सरकारी संस्थाओं में पढाया जाता है। इसकें अध्ययन में स्टॉफ की कमी शैक्षिक प्रक्रिया को प्रभावित कर सकती है। यदि स्टॉफ आवश्यकतानुसार पर्याप्त है तो निश्चित पाठयक्रम का कियान्वयन सुचारू रूप से सम्पादित किया जा सकता है। सामान्यतः बी0एड0 पाठयक्रम मे बाल मनोविज्ञान गणित सामाजिक विज्ञान खेल कूद स्टाउटिंग फ्रस्टेट आदि विषयों का ज्ञान कराया जाता है। बाल मनोविज्ञान और शिक्षण सिद्धान्त एवं प्रार्थी प्रणालियॉ अध्ययन के मुख्य विषय होते है। इनका समुचित ज्ञान प्रयान कराना प्रशिक्षण का मुख्य अंग होता है। शैक्षिक संसाधन के अन्य मुख्य बिन्दु कुशल प्रबन्धक व सुगम टाईम टेबल कुशल अनुभवी एवं कर्मठ प्रशिक्षक है जो शैक्षिक प्रक्रिया को सम्पन्न करते है और सफल बनाते है।

शैक्षिक संसाधनों के साथ साथ भौतिक संसाधनों की प्रर्याप्त उपलब्धता भी बहुत आवश्यक है। भौतिक संसाधों के अभाव में प्रशिक्षण प्रक्रिया पूर्ण नही हो सकती इन संसाधनों में भूमि भवन पढनें में सहायक वस्तुओं की उपलब्धता बहुत आवश्यक है।

2. उदेद्श्य

- विश्वविद्यालयों में संचालित बी0एड0 पाठयक्रम हेतु शैक्षणिक संसाधनों की स्थिति का अध्ययन।
- विश्वविद्यालयों में संचालित बी0एड0 पाठयक्रम हेतु भौतिक संसाधनों की स्थिति का अध्ययन।
- विश्वविद्यालयों में संचालित बी0एड0 पाठयक्रम हेतु प्रयोगिक संसाधनों की स्थिति का अध्ययन।

समस्या:- मेरठ जनपद के विश्वविद्यालयों में संचालित बी0एड0 पाठयक्रम हेतु शैक्षिक एवं भौतिक संसाधनों की स्थिति का अध्ययन।

शोध अभिकलप:- दो स्थायी समूह अभिकल्प का अनुसरण कर अध्ययनपूर्ण किया गया।

जन्संखिया:- मेरठ जनपद के बी0एड0 पाठ्यक्रम हेतु संचालित विश्वविद्यालय को इस अध्ययन में चयनित किया गया।

न्यायदर्श:- प्रस्तुत अध्ययन में यादृच्छिक विधि का प्रयोग करते हुये दो विश्वविद्यालय को चयनित किया गया ।

उपकरण:- प्रस्तुत अध्ययन में स्वनिर्मित प्रश्नावली का प्रयोग किया गया।

समस्या में प्रयुक्त शब्दों का परिभाषीकरण–

- **शैक्षिक संसाधन:-** प्रशिक्षण संस्थानों में शैक्षिक संसाधनों से अभिप्राय है किवे सभी संसाधन जो मुख्य रूप से प्रशिक्षण प्रक्रिया से सम्बनध रखते है इन संसधानों में प्रशिक्षण उददेश्य लक्षित पाठयक्रम सुगम समय सारणी कुशल संचालन आदि सम्मिलित है।
- **भौतिक संसाधन:-** प्रशिक्षण संस्थाानों में ऐसे सभी संसाधन जो शैक्षिक प्रक्रिया में सहायक होते है जैसे– प्रर्याप्त भवन प्रशिक्षकों की उचित संख्या विशाल पुस्तकालय वाचनालय अनुकुलन प्रबन्धक एवं स्वास्थ वातावरण खेल कूद के पर्याप्त साधन आदि संसाधन के महत्वपूर्ण तथ्य है।
- **बी0 एड0 पाठक्रम :-** कक्षा 6 से 12 तक के विद्यार्थियों को शिक्षा देने के लिए अध्यापकों को प्रशिक्षित किया जाता है। यह द्विवर्षीय डिग्री कोर्स है। इसमें प्रवेश के लिये–न्यून्तम योग्यता बेचलर डिग्री है। बी0एड0 पाठयक्रम में किन्ही दो विषयों में अध्यापक शिक्षण के लिए विशेष प्रशिक्षण दिया जाता है।

शोध कार्य का सीमांकन :- प्रस्तुत अध्ययन मेरठ जनपद के बी0एड0 पाठ्यक्रम हेतु संचालित विश्वविद्यालय के शैक्षिक, भौतिक एवं प्रयोगिक संसाधानों तक सीमित रहा।

संखिकीय सूत्र:- प्रस्तुत अध्ययन में सांख्यकी के औसत मान सांख्यिकी प्रविधि का प्रयोग किया गया है।

$$M = \frac{\Sigma fx}{N}$$

उददेश्य–1 विश्वविद्यालयों में संचालित बी0एड0 पाठयक्रम हेतु शैक्षणिक संसाधनों की स्थिति का अध्ययन।

सारणी नं0–1

क्र0 सं0	क्थन	संसाधनों की स्थिति	एन0सी0टी0ई0ये0 मानक
1.	कालाशो की संख्या	5	6
2.	बी0एड0 पाठयक्रम के लिये फैवशन	4	4
3.	आई0सी0टी0 लै0 में कम्प्यूटर	35	50
4.	शिक्षकों की योग्यता		
5.	पुस्तकालय में पुस्तकों की संख्या	2500	3000
6.	शिक्षकों की संख्या	9	16
7.	इन्टर्नशिप में छात्रों का प्रतिशत	70	90 प्रतिशत
8.	कालंश में विद्यार्थियों की उपस्थिति का प्रतिशत	40	80 प्रतिशत

उपरोक्त सारणी न0 एक के माध्यम से उददेश्य न0 एक का विश्लेषण करते हुये शैक्षिक संसाधनों से सम्बन्धित आठ कथनों को प्रस्तुत किया गया ह।। जिसमें एन0सी0टी0ई0 मानक के अनुरूप छानो की संख्या के अनुसार संसाधनों की व्यवस्था की गयी है। जिसमें विश्वविद्यालय स्तर पर सौ विद्यार्थियों से सम्बन्धित संसाधनों का उपरोक्त सारणी में वर्णन किया गया है। जिसमें विद्यार्थियों की कक्षा में उपस्थिति शिक्षकों की पर्याप्त व्यवस्था सफाई कर्म चारियों की संख्या एवं पुस्तकालय में पुस्तकों की संख्या तथा शिक्षको की शैक्षीक योग्यता मानक के अनुरूप नही है। जिसमें स्पष्ट हो रहा है कि एन0सी0टी0ई0 के मानको मे बदलाव के अनुरूप विश्वविद्यालय के बी0एड0 पाठयक्रम के संसाधनों में पर्याप्त बदलाव नही किया गया है अतः उपरोक्त अध्ययन के उपरान्त विवेचनकर्ता इस निष्कर्ष पर पहुचा है कि विश्वविद्यालय मे चल रहे बी0एड0 पाठयक्रमों के शैक्षीक संसधनों की स्थिति जैसे–विद्यार्थियों की उपस्थिति शिक्षकों की योग्यता पुस्तको की संख्या सफाई कर्मचारियों की संख्या आदि मानक के अनुरूप नही है एवं स्थिति भी सन्तोषजनक नहीं है।

उददेश्य–2 विश्वविद्यालयों में संचालित बी0एड0 पाठयक्रम हेतु भौतिक संसाधनों की स्थिति का अध्ययन।

सारणी–2

क्र0 सं0	कथन	प्रतिशत हॉ	प्रतिशत नही	एन.यी.टी. डे. मानक
1.	वाचनालय कक्षा की सुविधा	100		अनिवार्य
2.	दो सौ विद्यार्थी बैठनें हेतु प्रयोग हॉल	100		अनिवार्य
3	सम्प्रेष्ण प्रौद्योगिकी संसाधन केन्द्र	100		अनिवार्य
4	स्वास्थ शारीरिक शिक्षा केन्द्र		100	अनिवार्य
5	कला और शिल्पकला संसाधन केन्द्र		100	अनिवार्य
6	प्रशासनिक कार्यालय कक्ष की सुविधा	100		अनिवार्य
7	महिला एवं पुरूष प्रशिक्षणार्थियों के लिये अलग अलग कॉगन कक्षा	100		अनिवार्य
8	महिला तथा पुरूष प्रशिक्षाणार्थियों के लिये अलग–अलग प्रसाधन	100		अनिवार्य
9	अध्यापक तथा विद्यार्थियों वाहनों हेतु पार्किग	100		
10	शिक्षण सामग्री हेतु स्टोर के दो कक्ष	100		अनिवार्य
11	स्टोर कीपर	50	50	अनिवार्य
12	शुरू पेय जल	100		
13	दिव्यांग छात्रों के लिये प्रसाधन		100	
14	दिव्यांग के लिये व्हीलचेयर		100	अनिवार्य
15	अध्यापकों के लिये प्रसाधन सुविधा	100		अनिवार्य
16	पुस्तकालय जिसमें सौ विद्यार्थी बैठ सके	50	50	अनिवार्य
17	अध्यापकों के लिये स्टॉफ कक्ष	100		
18	दिव्यांग शिक्षकों के लिये अलग से शौचालय		100	
19	बागवानी के लिये स्थान	100		
20	विकास मूल्यांकन पडताल सूचिया तथा माप के साधन।	100		अनिवार्य

उपरोकत सारणी न0 2 के माध्यम से अध्ययनकर्ता ने बी0एड0 पाठ्यक्रम हेतु भौतिक संसाधनों की स्थिति का विश्लेषण किया जिसमें राष्ट्रीय शिक्षा परिषद अधिनियम 2014 के दो वर्षीय पाठ्यक्रम में मानक के अनुरूप स्वनिर्मित प्रश्नावली भौतिक संसाधनों से सम्बन्धित सुविधओं के बीस कथन दिये गये जिनमें प्राप्तांकों का प्रतिशत सारणी में अंकित है तथा एन0सी0टी0ई0 के मानक के अनुरूप स्थिति भी दर्शायी गयी है। जिसमें वाचनालय कक्ष सैमिनार, कक्ष दो सौ विद्याथ्रियों हेतु, आई0सी0टी0 लैब, प्रशासनिक कार्यालय, छात्र एवं छात्राओं के लिये अलग–अलग कॉमन कक्ष, वाहन पार्किंग के लिये स्थान, दो स्टोर कक्ष, अध्यापक तथा विद्यार्थियों के लिये अलग–अलग प्रसाधन सुविधा, शुद्ध पेयजल, पुस्तकालय की सुविधा, शिक्षा संसाधन केन्द्र, अध्यापकों के लिये स्टॉफ आदि मानक के अनुरूप मेरठ जनपद के विश्वविद्यालयों में उपलब्ध है।

लेकिन दिव्यांगों से सम्बन्धित सुविधाओं की स्थिति मानक के अनुरूप नही है। स्वास्थ्य एवं शारीरिक शिक्षा केन्द्र की सुविधायें उपलब्ध नही है। उपरोक्त विवेचना के माध्यम से अध्ययनकर्ता इस निष्कर्ष पर पहुँचा है कि विश्वविद्यालयों में संचालित बी0एड0 पाठ्यक्रम के भौतिक संसाधानों की स्थिति मानक के अनुरूप है तथा दिव्यांगों से सम्बन्धित संसाधनों की स्थिति मानक के अनुरूप नही है।

उदेश्याय- 3 विश्वविधियालय में संचालित बी0 एड0 पाठ्यक्रम हेतु प्रोयोगिक संसाधनो की स्थिति का अध्ययन

सारणी–3

क्र सं 0	कथन	प्रयोगिक संसाधन

1	संगीत यन्त्र	तबला	हारमेनियम	गीटर	पियानों	बसुरी				
		1	1	1	1	2				
2.	विज्ञान की प्रयोगशाला में समाग्री	मेज	कुर्सी	वर्ष	हाई बोर्ड	चार्ट	ग्लोब	मैप	विज्ञान किट	गणित किट
		9	45	5	1	4	1	1	5	3
3	आई0सी0टी0 लैब में शैक्षिक क्या भौतिक संसाधन	मेज	कुर्सी	पंख	कम्प्यूटर सेट	ऐ0सी0	प्रिन्टर			
		40	50	4	40	1	1			

उपरोक्त सारणी नं0 3 के माध्यम से अध्ययनकर्ता ने विश्वविद्यालय में संचालित बी0एड0 पाठ्यक्रम हेतु प्रयोगिक संसाधनों की स्थिति का अध्ययन किया जिसमें शिक्षा विभाग में प्रयोगिक संसाधन– तबला 1, हारमेनियम 1, गीटर 1, पियानों 1, बासुरी 2, मेज 49, कुर्सी 94, पंखे 9, व्हाईट बोर्ड 1, चार्ट 4, ग्लोब 1, मैप 1, विज्ञान किट 5, गणित किट 5, कम्प्यूटर 40, ए0सी0 1, प्रिन्टर 1 आदि। संसाधनों का अध्ययन किया।

उपरोक्त विवेचना के आधार पर निष्कर्षकर्ता इस निष्कर्ष पर पहुंचा है कि आई0सी0टी0 लैब में प्रयोगिक संसाधनों की स्थिति मानक के अनुरूप नही है तथा विज्ञानप की प्रयोगशाला एवं संगीत वायन यंत्र भी मानक के अनुरूप दृष्टिगोचल नही हो रही है। क्योंकि आई0सी0टी0 लेब में पचास कम्पयूटर तथा पचास विद्यार्थियों को बैइने की व्यवस्था होनी चाहिय जो नही है। इस आधार पर संसाधनों की स्थिति संतोष जनक नही है।

3. निष्कर्ष

उपरोक्त आंकडों के विश्लेषण से यह दृष्टिगोचर होात है कि मेरठ जनपद में चल रहे विश्वविद्यालयों में शिक्षा विभाग के बी0एड0 पाठ्यक्रम हेतु शैक्षिक, भौतिक एवं प्रयोगिक संसाधनें की स्थिति मानक के अनुरूप नहीं है। जिससे स्पष्ट हो रहा है कि ए0सी0टी0ई0 के मानक में बदलाव के अनुरूप भी विश्वविद्यालयों के बी0एड0 पाठ्यक्रम हेतु संसाधनों में पर्याप्त बदलाव नही किया गया।

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नोट्स

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