ORIGINAL RESEARCH PAPER

Physical Education

KEY WORDS: Flexibility, Cardio Vascular Endurance, Muscular strength, Speed, Badminton & Volleyball male players.

COMPARATIVE ANALYSIS ON THE LEVEL OF SELECTED MOTOR FITNESS OF BADMINTON AND VOLLEY BALL PLAYERS

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ABSTRACT

INTRODUCTION: Motor fitness, or motor physical fitness, refers to how an athlete can perform at his or her sport, and involves a mixture of agility, coordination, balance, power, and reaction time. **PURPOSE:** Purpose of the study was to compare the selected Motor fitness variables of college level Badminton and Volleyball male players (age17-20 years). **MATERIALS & METHODS:** To achieve the purpose, thirty (30) college level badminton players and thirty (30) volley ball players age ranging between 17-20 years were randomly selected for the study from Fakir Chand College (University of Calcutta), Diamond Harbour, South 24 Parganas, West Bengal. To measure the selected Motor fitness of Badminton and Volleyball players, **flexibility, cardio-vascular endurance, Muscular Strength and speed** were measured. They were measured by sit and reach test, 1 mile run and walk test, standing broad jump and 50 yard dash test respectively. Badminton and volleyball players were those who regularly used to go for physical activities or training willingly and participated in various types of matches and tournaments. The training schedule were fixed in the morning session as well as in the afternoon session minimum time duration 60-90 minutes per session with various types of physical activity including slow warming up, warm down and resting time between the set of the exercises. The Independent Paired-'t' test is conducted for evaluate the data and the level of significance is fixed at 0.05 level of confidence. **RESULTS & DISCUSSION:** The data was analyzed statistically by computing mean, standard deviation and't' test. It was observed from the tables that the mean scores of Motor fitness variables of badminton players were 8.15, 3.56, 1.56, and 6.82 respectively. Similarly, the mean scores of Motor fitness variables of volleyball players were 7.26, 3.04, 1.74, and 6.20 respectively which are slightly difference. It was also evident from the table that the calculated value of the each variable is less than the Table value at 0.05 level of significant. So the result was insignificant. **CONCLUSION:** On the basis of the obtained result, it has been observed that there was no significant difference in Flexibility, cardio vascular endurance, Muscular Strength and Speed of college level Badminton and Volleyball players.

INTRODUCTION:

Motor fitness is a term that describes an athlete's ability to perform effectively during sports or other physical activity. An athlete's motor fitness is a combination of five different components, each of which is essential for high levels of performance.

Motor fitness, or motor physical fitness, refers to how an athlete can perform at his or her sport, and involves a mixture of agility, coordination, balance, power, and reaction time. Improving this form of fitness is an indirect result of training in any of these attributes. It is also known as 'Skill Related Fitness' and this gives us a clue as to how these qualities help us when playing a game. Skill is the learned ability to carry out the result you want with maximum certainty and efficiency.

It also refers to the ability of an athlete to perform successfully at their sports. Speed, Strength and Flexibility are the basic components of Motor Fitness and are required for good performance in sports like Badminton and Volleyball. Fitness can be described as a condition that helps us look, feel and do our best. It is "The ability to perform daily task with vigorously and alertly, with energy left over for enjoying leisure-time activities and meeting emergencies demands. It is the ability to endure, to bear up, to withstand stress to carry on in circumstances where an unfit person could not continue and is a major basis for good health and well-being.

The world is becoming more and more competitive. Quality of performance has become the key factor for personal progress. Better Motor Ability means high level of physical fitness which helps in the positive self perception and improves the total performance.

According to Nixon, "Physical Fitness refers to the organic capacity of the individual to perform the normal task of daily living without undue fatigue or tiredness having reserves of strength and energy available to meet satisfactorily any emergency demands suddenly placed upon him."

Total fitness looks at the overall individual, combining the absolute levels of physiological, psychological, social and cognitive fitness. Our nation is becoming more concerned with physical fitness. People want quality in life, and adults particularly are becoming more concerned about their health and fitness life style.

Sports are a worldwide phenomenon today. It has gained immense importance and popularity in recent times demanding immaculate organization and planning. Physical fitness is that state of body in which a person can carry his daily duties and responsibilities efficiently and with the energy left he can enjoy hobbies and other recreational activities and can meet the unusual. In other words Physical fitness can be defined as the state of body in which a person can do work for a longer duration without undue fatigue. Motor Fitness refers to the ability of an athlete to perform successfully at their sports. Speed, Strength and Flexibility are the basic components of Motor Fitness and are required for good performance in sports like Badminton and Volleyball. Fitness can be described as a condition that helps us look, feel and do our best. It is "The ability to perform daily task with vigorously and alertly, with energy left over for enjoying leisure-time activities and meeting emergencies demands. It is the ability to endure, to bear up, to withstand stress to carry on in circumstances where an unfit person could not continue and is a major basis for good health and well-being. The findings of the present study will give information regarding Motor ability of college level Badminton and Volleyball male players.

PURPOSE OF THE STUDY:

The purpose of the study was "*COMPARATIVE ANALYSIS ON THE LEVEL OF SELECTED MOTOR FITNESS OF COLLEGE LEVEL BADMINTON AND VOLLEY BALL PLAYERS*"

HYPOTHESES:

i) There would be no significant improvement in flexibility among the c badminton and volley ball players.
ii) There would be no significant improvement in muscular strength among the college level badminton and volley ball players.

iii) There would be no significant improvement in cardio-vascular endurance among the college level badminton and volley ball players.
iv) There would be no significant improvement in speed among the college level badminton and volley ball players.

METHODOLOGY:

Subjects:- Total sixty (60) college level badminton (30) and volleyball (30) players were randomly selected for the study from Fakir Chand College (University of Calcutta), Diamond Harbour, South 24 Parganas, West Bengal. The Motor fitness variables were flexibility, cardio-vascular endurance, Muscular strength and speed.

Procedure:- Total sixty (60) college level badminton (30) and volleyball (30) players were randomly selected for the study from Fakir Chand College (University of Calcutta), Diamond Harbour, South 24 Parganas, West Bengal. To measure the selected Motor fitness variables of Badminton and Volleyball players, flexibility, cardio-vascular endurance, Muscular Strength and speed were measured. They were measured by sit and reach test, standing broad jump, 1 mile run and walk test and 50 yard dash test respectively. Badminton and volleyball players were those who regularly used to go for physical activities or training willingly and participated in various types of matches and tournaments. The training schedule were fixed in the morning session a s well as in the afternoon session minimum time duration 60-90 minutes per session with various types of physical activity including slow warming up, warm down and resting time between the set of the exercises. To get the final result Mean, SD, Mean Difference and't'-test were calculated.

Statistical Analysis:
The Independent Paired-'t' test was conducted for evaluate the data and the level of significance was fixed at 0.05 level of confidence. To get the final result Mean, SD, Mean Difference and 't'-test were calculated.

Selected Variables & Their Test And Units:-

SL. NO.	MOTOR FITNESS VARIABLES	TESTS	UNITS
1.	Flexibility	Sit and reach test	Cm.
2.	Cardiovascular Endurance	1 mile run and Walk test	Min/Sec.
3.	Muscular strength	Standing broad jump.	Meter.
4.	Speed	50 Yard dash test.	Sec.

RESULTS:

The result of the study is discussed under the following table with the graphical presentation.

Table–1: Mean SD of Flexibility and Comparison of t-test between college level Badminton and Volleyball players.
NS is Not Significant

Group	Mean	SD	MD	t-value
Badminton Players	8.15	2.35	0.89	0.35NS
Volley Ball player	7.26	2.21		

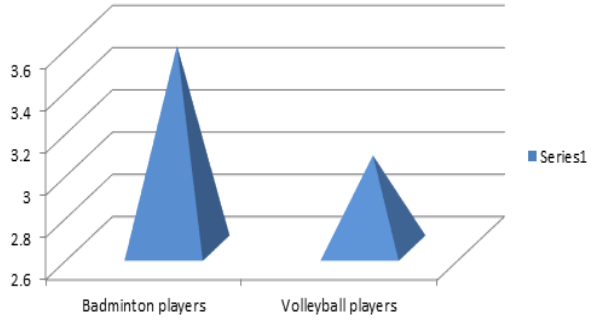

Fig. 1: Graph Showing Flexibility of college level Badminton and Volleyball players.

Table– 2: Mean SD Of Cardio Vascular Endurance And Comparison Of T-test Between The College Level Badminton And Volleyball Players.

Group	Mean	SD	MD	t-value
Badminton Players	3.56	0.79	0.52	0.38NS
Volley Ball players	3.04	1.42		

Ns Is Not Significant

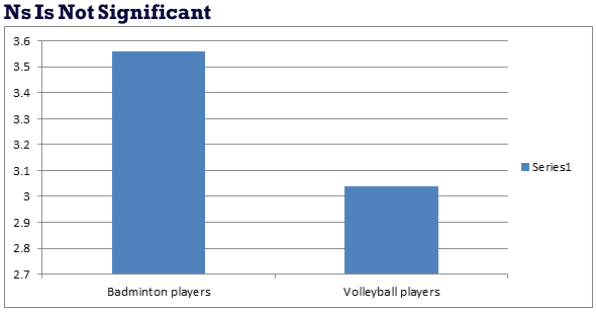

Fig. 2: Graph Showing the Cardio Vascular Endurance of college level Badminton and Volleyball players

Table– 3: Mean SD of Muscular Strength and Comparison of t-test between the college level Badminton and Volleyball players.

Group	Mean	SD	MD	t-value
Badminton Players	1.56	0.71	0.18	0.26NS
Volley Ball players	1.74	1.92		

NS is Not Significant

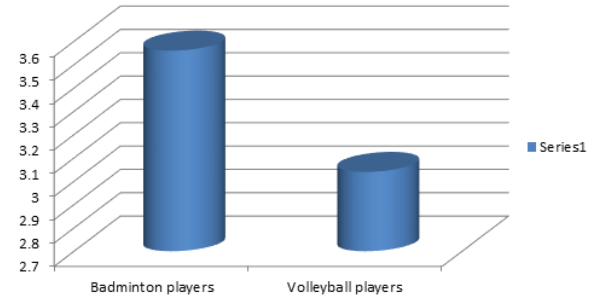

Fig. 3: Graph Showing the Muscular strength of college level Badminton and Volleyball players.

Table– 4: Mean SD Of Speed And Comparison Of T-test Between The College Level Badminton And Volleyball Players.

Group	Mean	SD	MD	t-value
Badminton Players	6.82	0.81	0.62	0.65 NS
Volley Ball player	6.20	0.42		

NS is Not Significant

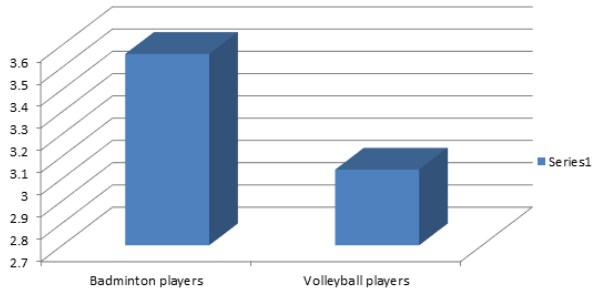

Fig.4: Graph Showing the Speed of college level Badminton and Volleyball players

DISCUSSIONS:

Better Motor Ability means high level of physical fitness which helps in the positive self perception and improves the total fitness. It was observed from the above tables that there were no significant differences in Motor fitness variables i.e Flexibility, Muscular Strength, cardio-vascular endurance and

speed of college level Badminton and Volleyball male players. The mean scores of Motor fitness variables of badminton players were 8.15, 3.56, 1.56, and 6.82 respectively and volleyball players were 7.26, 3.04, 1.74, and 6.20 respectively which are slightly difference. It was also evident from the table that the calculated value of the each variable is less than the Table value at 0.05 level of significant. So the result was insignificant. **Table-1** gives information regarding Flexibility of college level Badminton and Volleyball players. It shows that there was no significant difference in Flexibility of Badminton and Volleyball players. The Mean of Flexibility of Badminton and Volleyball players were 8.15 and 7.26 respectively. The Independent Paired-'t' test was applied and t-value (0.35) appeared not significant. **Table-2** shows that there was no significant difference in cardio vascular endurance of Badminton and Volleyball players. The Mean of cardio vascular endurance of Badminton and Volleyball players were 3.56 and 3.04 respectively. The Independent Paired-'t' test was applied and t-value (0.38) appeared not significant. **Table-3** shows there was no significant difference in Muscular Strength of Badminton and Volleyball players. The Mean of Muscular Strength of Badminton and Volleyball player were 1.56 and 1.74 respectively. The Independent Paired-'t' test was applied and t-value (0.26) appeared not significant at 0.05 level of confidence. **Table-4** shows that there was no significant improvement in speed among the college level badminton and volley ball players. The Mean of Speed of college level Badminton and Volleyball male players were 6.82 and 6.20 respectively. The Independent Paired-'t' test was applied and t-value (0.65) appeared not significant at 0.05 level of confidence.

CONCLUSIONS:-

Many research studies have been done on the various types of training programmes. On the basis of the results obtained from the present empirical investigation and within the limitation, the following conclusions may be drawn.

1. There was no significant difference in Flexibility of college level Badminton and Volleyball male players.
2. There was no significant difference in cardio vascular endurance of college level Badminton and Volleyball male players.
3. There was no significant difference in Muscular strength of college level Badminton and Volleyball male players.
4. There was no significant difference in Speed of college level Badminton and Volleyball male players.

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