

An Assessment on the Level of Body Composition of Volley Ball and Football Players (Boys)



Physical Education

KEYWORDS : BMI, Body Fats Percentage, LBM, Volley Ball and Football Players

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ABSTRACT

The purpose of the study was to compare the level of Body Composition of Volley ball and Football players (age12-14 years). Fifty (50) Volleyball and Fifty (50) Football players were randomly selected for the study.

To measure Body Composition of Volleyball and Football players Body Mass Index (BMI), Percentage of Body Fat and Lean Body Mass (LBM) were measured. For statistical analysis and Interpretation of data 't' test was conducted. It was observed that there was significant difference in Body Mass Index (BMI) and Percentage of Body Fat. Result showed. The Football players have lower level of Body Mass Index and lower Percentage of Body Fat as compare to Volley ball players. But there was no significant difference in Lean Body Mass among Volley ball and Football players.

INTRODUCTION

Sports are a worldwide phenomenon today. It has gained immense importance and popularity in recent times demanding immaculate organization and planning. In fact, it entered a new horizon of sporting culture, leading to the emergence of sports sciences as the back bone of performance sports. With the increasing prestige being attached to winning of medals in international competitions, it is quite natural to give more stress on talent identification and to systematize the training methodology. Football in India is believed to have started in the early 1800s. However, the tradition dates back to the 1880 in West Bengal, when the British Army Introduced organized soccer. The game became popular first in Bengal, before it spread to the other parts of the country. Volleyball is a game played between two teams of six players each side. Initially it was played on side out system basis, which made the game lengthy in duration. To reduce the lengthy duration of the match and make the game more popular, attractive, rapid and powerful it has been changed from side out system to rally point .system Body Composition is the relative percentage of muscle, fat, bone and other tissues of which the body is composed. Various research studies revealed that Participation in physical activities and various games and sports helps in improving the Physical fitness by lowering Percentage of Body Fat and increasing the Lean Body Mass. Physical fitness is the product of physical exercises and exercise is very much related to health and wellbeing. But development of science and technology discouraging the human beings from doing vigorous activities as a result of which various physical and mental diseases are flourishing at a great speed throughout the world. The findings of the present study will encourage the youth of the nation to participate in Games and Sports.

METHODOLOGY

Fifty (50) Volleyball and Fifty (50) Football players (boys-age12-14 years) were randomly selected from Bathan beria Srinibash Vidyamandir Higher Secondary School in Purba Medinipur. Volleyball and Football players are those boys who regularly used to go for physical activities willingly and participated in matches and tournaments. To measure Body Composition of Volleyball and Football players Body Mass Index (BMI), Percentage of Body Fat and Lean Body Mass (LBM) were measured. Height and Weight of the subjects were measured for calculation Body Mass Index ($BMI = \text{Weight in kg} / \text{Height in Metre}^2$) and for measuring Percentage of Body Fat Skin fold Caliper was used. Skin fold measurements were taken from biceps, triceps, supra-iliac and sub scapula. Percentage of Body Fat was recorded from norms chart. Lean Body Mass was calculated by Subtracting the Fat Mass from the Total Body Mass. The data were analyzed by 't' ratio.

RESULTS AND DISCUSSION

For statistical analysis and Interpretation of data 't' test was conducted. The results are presented in tabular form as given here under:

Table – 1: Mean SD of BMI (KG/M²) and Comparison of t-test Between Means of Volley ball and Football players

Group	Mean	SD	MD	t-value
Volley Players	14.63	1.70	00.28	4.32*
Football Players	14.35	1.22		

*Significant at 0.05 level

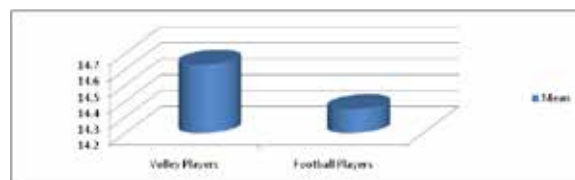


Fig. 1: Graphs Showing Body Mass Index of Volley ball and Football players.

Table -1 show that there were significant differences in Body Mass Index of Volley ball and Football players. The Mean of Body Mass Index of Volley ball and Football players were 14.63 and 14.35 respectively. 't' test was applied and t-value (4.32) appeared significant at 0.05 level of confidence. Table-1 was illustrated through graphical representation (Fig. 1) for clear understanding of this study.

Table – 2: Mean SD of Percent of Body Fat and Comparison of t-test Between Means of Volley ball and Football players

Group	Mean	SD	MD	t-value
Volley Players	15.17	3.41	03.43	8.67*
Football Players	11.74	2.26		

*Significant at 0.05 level

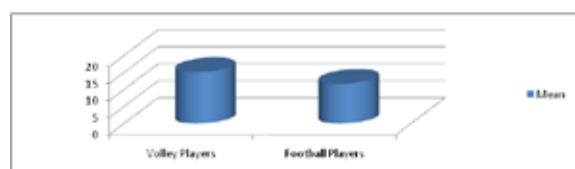


Fig. 2: Graphs Showing Percent of Body Fat of Volley ball and Football players

Table-2 gives information regarding Percentage of Body Fat of Volley ball and Football players. Table shows that there were significant differences in Percentage of Body Fat of Volley ball and Football players. The Mean of Percentage of Body Fat of Volley ball and Football players were 15.17 and 11.74 respectively. 't' test was applied and t-value (8.67) appeared significant at 0.05 level of confidence. Graphical representation (Fig. 2) also indicates similar trend of this study.

Table – 3: Mean SD of Lean Body Mass and Comparison of t-test Between Means of Volley ball and Football players

Group	Mean	SD	MD	t-value
Volley Players	23.51	3.29	01.74	0.99NS
Football Players	25.25	3.10		

NS is Not Significant.

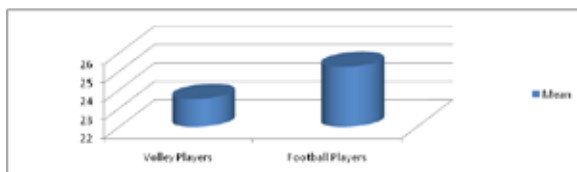
**Fig. 3: Graphs Showing Lean Body Mass of Volley ball and Football players.**

Table-3 gives information regarding Lean Body Mass of Volley ball and Football players. Table shows that there were no significant differences in Lean Body Mass of Volley ball and Football

players. The Mean of Lean Body Mass of Volley ball and Football players were 23.51 and 25.25 respectively. 't' test was applied and t-value (0.99) appeared not significant. Graphical representation (Fig. 3) also indicates similar trend of this study.

CONCLUSION

Based on the result of the present study and within the limitation, the following conclusions may be drawn.

- The Football players have lower level of Body Mass Index than the Volley ball players.
- The Football players have lower level of Percentage of Body Fat as compare to Volley ball players.
- Though the football players have slightly higher level of Lean Body Mass but it was not statistically significant.

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