



AN ASSESSMENT ON THE LEVEL OF BODY COMPOSITION OF FOOTBALL AND KHO-KHO PLAYERS (BOYS)

KEYWORDS

BMI, Body Fat Percentage, LBM, Football & Kho-Kho Players

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ABSTRACT The purpose of the study was to compare the level of Body Composition of Football and Kho-Kho players (age 12-14 years). Fifty (50) Football and Fifty (50) Kho-Kho players were randomly selected for the study. To measure Body Composition of Football and Kho-Kho 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 no significant difference in Body Mass Index (BMI), Percentage of Body Fat and Lean Body Mass of Football and Kho-Kho 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. Physical fitness is the pre-requisite of the ability to perform any motor tasks in day to day life as well as in sport. It has been considered as one of the most important aspects of human existence. 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. Physical fitness not only a state of younger's but is the reality for all ages. 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) Football and Fifty (50) Kho-Kho players (boys-age 12-14 years) were randomly selected from Bathanberia Srinibash Vidyamandir Higher Secondary School in Purba Medinipur. Football and Kho-Kho players were those boys who regularly used to go for physical activities willingly and participated in matches and tournaments. To measure Body Composition of Football and Kho-Kho 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

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

Group	Mean	SD	MD	t-value
Football Players	14.38	2.01	0.43	0.58NS
Kho-Kho Players	14.81	2.06		

NS is Not Significant

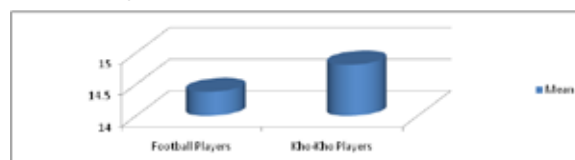


Fig. 1: Graphs Showing Body Mass Index of Football and Kho-Kho players.

Table -1 show that there were no significant differences in Body Mass Index of Football and Kho-Kho players. The Mean of Body Mass Index of Football and Kho-Kho players were 14.38 and 14.81 respectively. 't' test was applied and t-value (0.58) appeared not 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 Football and Kho-Kho players.

Group	Mean	SD	MD	t-value
Football Players	15.13	3.13	0.62	1.81NS
Kho-Kho Players	15.75	3.05		

NS is Not Significant

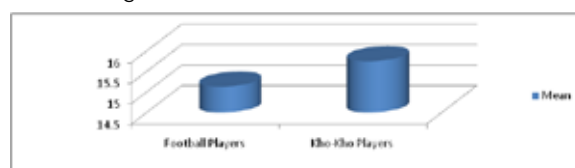


Fig. 2: Graphs Showing Percent of Body Fat of Football and Kho-Kho players.

Table-2 gives information regarding Percentage of Body Fat of Football and Kho-Kho players. Table shows that there were no significant differences in Percentage of Body Fat of Football and Kho-Kho players. The Mean of Percentage of Body Fat of Football and Kho-Kho players were 15.13 and 15.75 respectively. 't' test was applied and t-value (1.81) appeared not 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 Football and Kho-Kho players.

Group	Mean	SD	MD	t-value
Football Players	24.35	4.51	01.55	0.64NS
Kho-Kho Players	25.90	4.66		

NS is Not Significant.

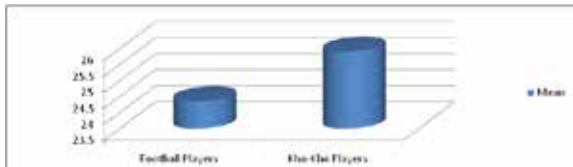


Fig. 3: Graphs Showing Lean Body Mass of Football and Kho-Kho players.

Table-3 gives information regarding Lean Body Mass of Football and Kho-Kho players. Table shows that there were no significant differences in Lean Body Mass of Football and Kho-Kho players. The Mean of Lean Body Mass of Football and Kho-Kho players were 24.35 and 25.90 respectively. 't' test was applied and t-value (0.64) 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.

- There was no significant difference in Body Mass Index of Football and Kho-Kho players
- There was no significant difference in Percentage of Body Fat of Football and Kho-Kho players
- There was also no significant difference in Lean Body Mass of Football and Kho-Kho players

REFERENCE

- Callister R, CallisterRJ, Fleek SJ. Physiological and performance Responses to overtraining in elite Judo athletes. *Med Sci Sports exerc*, (1990). 22: 816-824. | Callister R, CallisterRJ, Fleek SJ, Tesch P, Dudley GA. Physiological characteristics of elite Judo athletes. *Int. J Sports Med*, (1991). 12: 196-203. | Negi, Vidya Bandhu (2006). A Study of Motor Fitness and Selected Physiological Variables among Mongoloid and Medi-Terranean Senior Secondary School Students. Unpublished Ph. D. Thesis, Department of Physical Education, Himachal Pradesh University, Shimla (India). | Pandey, Priti and Pandey Alok, Comparative study of Health Related Fitness among girls of U.P. *Indian Journal of Movement Education and Exercise Sciences* (2011) 14-21. | Satpal Kaur (2011) "Physical Fitness", Proceedings of the UGC Sponsored National seminar, Global Trends in Physical Education and Sports, Punjab, India (pp.169-172). | Senthikumar, R. (2009) "Effect of Aerobic Training on Selected Physical Fitness, Physiological and Kinanthropometric Variables in Varied Periods". *Indian Journal of Sports Studies*, Vol. 9, (pp. 25 – 35). | Singh Sunil (2010). Comparative study Between Selected Physical Fitness and Physiological Variables of Offensive and Defensive Football Players of University Level, Abstract Book, National Seminar on Recent Trends & Future of Physical Education and Sports Science, Mahatma Gandhi Vidyapith, Varanasi (UP), India, Vol. 1, (p. 37). | Thakur Geeta (2011) "Comparison of Motor Fitness Components of Rural and Urban School Hockey Boys". Proceeding of the UGC Sponsored National Conference". *Physical Education as a Profession*, Arya College, Ludhiana, Vol. 1, No. 1. (pp. 32 – 36). | The Relationship between body fat and basic physical fitness for female athletes (part-2). In *National Judo Conference International Research Symposium Annals*. United States Olympic Training Center, Colorado Springs. | Thomas SG, Cox MH, Legal YMSmith HK. Physiological Profiles of the Canadian National Judo Team. *Can J Sports Sci*, (1989). 14: 142-147.