

An Assessment on the Level of Body Composition of Active and Inactive Boys



Physical Education

KEYWORDS : BMI, FAT %, ACTIVE AND INACTIVE BOYS

Dr. Susanta Jana

A. T., Bathanberia Srinibash Vidyamandir (H. S.), Purba Medinipur, W. B.

Mr. Kalidas Karak

Research Scholar & Lecturer, SBSS Mahavidyalaya, Goaltore, Paschim Medinipur, W.B.

ABSTRACT

The purpose of the study was to compare the level of Body Composition of Active and Inactive boys (age 12-14 years). Fifty (50) Active and Fifty (50) Inactive boys were randomly selected for the study. To measure Body Composition of Active and Inactive boys Body Mass Index (BMI), Lean Body Mass and Percentage of Body Fat 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 Active boys have lower level of Body Mass Index and lower Percentage of Body Fat as compare to Inactive boys. There was no significant difference in Lean Body Mass of Active and Inactive Boys.

INTRODUCTION

Physical fitness has been of great significant in the lives of human beings from time immemorial. In the pre-historic times, Physical fitness was the key element of the survival of human beings. People during those times were confronted with the hostile environment and only fit individuals could survive. Hence survival of fitness is the dictum 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. Active boys were those boys who regularly used to go for physical activities willingly and participated in matches and tournaments. On the Other hand inactive Boys were those boys who never used to take part in physical activities willingly and participated in matches and tournaments.

METHODOLOGY

Fifty (50) Active and Fifty (50) Inactive boys (age 12-14 years) were randomly selected from Bathanberia Srinibash Vidyamandir Higher Secondary School in Purba Medinipur. Active student are those boys who regularly used to go for physical activities willingly and took part in various games and sports and also participated in matches and tournaments on the other hand inactive boys are those student who never used to take part in any physical activity willingly and regularly. To measure Body Composition of Active and Inactive boys Body Mass Index (BMI) and Percentage of Body Fat 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. 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 Active and Inactive Boys.

Group	Mean	SD	MD	t-value
Active boys	10.5	2.47	3.2	3.3*
Inactive boys	13.7	7.12		

*Significant at 0.05 level

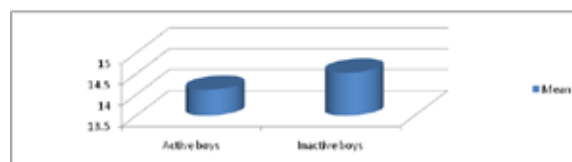


Fig. 1: Graphs Showing Body Mass Index of Active and Inactive Boys.

Table -1 show that there were significant differences in Body Mass Index of Active and Inactive Boys. The Mean of Body Mass Index of Active and Inactive Boys were 10.5 and 13.7 respectively. 't' test was applied and t-value (3.3) 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 Active and Inactive Boys.

Group	Mean	SD	MD	t-value
Active boys	8.85	1.19	2.82	8.20*
Inactive boys	11.67	1.32		

*Significant at 0.05 level

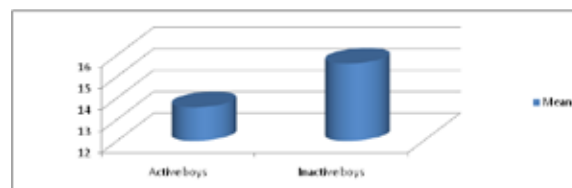


Fig. 2: Graphs Showing Percentage of Body Fat of Active and Inactive Boys.

Table-2 gives information regarding Percentage of Body Fat of Active and Inactive Boys. Table shows that there were significant differences in Percentage of Body Fat of Active and Inactive Boys. The Mean of Percentage of Body Fat of Active and Inactive Boys were 8.85 and 11.67 respectively. 't' test was applied and t-value (8.20) 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 Active and Inactive Boys.

Group	Mean	SD	MD	t-value
Active boys	25.50	3.14	0.92	0.92NS
Inactive boys	24.58	2.99		

NS is Not Significant.

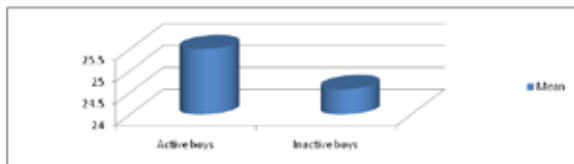
**Fig. 3: Graphs Showing Lean Body Mass of Active and Inactive Boys.**

Table-3 gives information regarding Lean Body Mass of Active and Inactive boys. Table shows that there were no significant differences in Lean Body Mass Active and Inactive boys. The

Mean of Lean Body Mass of Active and Inactive boys were 25.50 and 24.58 respectively. 't' test was applied and t-value (0.92) 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 Active boys have lower level of Body Mass Index than the Inactive boys.
- The Active boys have lower Percentage of Body Fat as compare to Inactive boys.
- There was also no significant difference in Lean Body Mass of Active and Inactive boys.

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