



COMPARATIVE STUDY ON HEALTH RELATED PHYSICAL FITNESS BETWEEN TRIBAL AND NON TRIBAL SCHOOL GOING BOYS

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Abstract: *The health related physical fitness has been associated mainly with the physical well-being, which ultimately influence the mental and social qualities. The importance of health related physical fitness depends on activities that focus not only of improving the physical health but also the daily life style of one self. The main purposes of this study were to compare the status of health related physical fitness of school going boys between tribal and non-tribal students. Thirty subjects on each group of tribal and non-tribal in the age group of 12-14 yrs. from a secondary school were chosen randomly for the present study. The criterias were cardiorespiratory endurance, abdominal strength endurance, upper body strength endurance, flexibility, and body composition which were measured by 1 mile run & walk, curl-ups, push-ups, V-sit & reach and body mass index. The result revealed that the non-tribal students have more flexibility, abdominal strength endurance and higher BMI than the tribal students and less cardio respiratory endurance and upper body strength endurance.*

Key words: *Fitness, health related physical fitness, tribal, socioeconomic, Flexibility, Cardio respiratory endurance*

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INTRODUCTION

Physical fitness concerned with major area of search of physical and mental well-being of human being. The major components of physical fitness are the health related and performance related physical fitness. The health related physical fitness mostly known as the aerobic capacity consisted mainly with the cardiorespiratory endurance, flexibility, upper body strength endurance, abdominal strength endurance and body composition. The benefits of good health related physical fitness in day-to-day life is very well known to human being. Walking for long time or running for daily work is the cardio respiratory fitness; lifting something is the application of strength; having maximum angular movements with economic use of force of different body parts through the joints is flexibility and good stature with proper muscle mass without extra fat is good body composition requires a certain level of health related physical fitness. This is also important during childhood and adolescence period for proper growth and development. Information about the status of health related physical fitness is a very crucial public health related issue for the tribal population of India who are having a very poor socio economic condition and traditional culture. Hence, in order to get some information about health related physical fitness of tribal school going boys and compare those with the other higher economic class, the present study was planned.

There are different types of tribes found in almost all the corners of West Bengal. About 38 in number, the tribes comprise nearly 5.5% of the entire population of West Bengal as per 2001 census [12]. They are, in general, confined to the rural belt of the state. Bauls, Bhuyiya, Santhal, Oraon, Paharia, Munas, Lepchas, Bhutiyas, Chero, Khariya, Garo, Magh, Mahli, Mru, Munda, Lohara and Mal Pahariya are amongst the popular tribes in West Bengal [11]. Santals constitute more than half (51.8 per cent) of the total Tribal population of the state. Oraons (14 per cent), Mundas (7.8 per cent), Bhumij (7.6 per cent) and Kora (3.2 per cent) are the other major Tribes having sizeable population [12]. Santal constitutes nearly 85 per cent of the state's total Tribal population. The Lodhas, Mahalis, Bhutias, Bedias, and Savars are the remaining Tribals, and having population of one per cent or more. These tribes are renowned for their arts and crafts. Textiles (muslin and silk), terracotta, carpentry, drawing, earthenware, brass-copper ware, needle work, stitching, wooden work and cane works are their specialty. Farming, fishing, carpentry, weaving and hunting are their major



employment sector. As considering their poor socioeconomic condition the women even the school children also always engaged for earning money through some laborious work. More than half of the total Tribal population of the state is concentrated in Medinipur, Jalpaiguri, Purulia, and Bardhaman districts. Of the remaining districts, Bankura, Malda, Hooghly, 24 pgs.(n), Nadia, Uttar Dinajpur and Dakshin Dinajpur have sizable Tribal population[12].

The main purposes of this study were to find out the status of health related physical fitness and to compare that status between tribal and non-tribal school students. The study may provide some information regarding the present status of health related physical fitness of two different classes of students.

Study to assess the health related physical fitness status of the male students studying from 9th to 12th classes in the higher secondary school showed that there has been a significant difference between one age group to other age group among rural and urban boys in all the health-related physical fitness components [1]. Comparative study on physical fitness of tribal and non-tribal high school students on a sample of 1200 drawn from high altitude concluded that the tribal (boys and girls) were found superior in explosive strength than the non-tribal (boys and girls), the non-tribal (boys and girls) were better in extend flexibility than the tribal (boys and girls), the tribal boys were found superior in agility and dynamic flexibility to the non-tribal boys, the non-tribal boys were better in endurance than the tribal boys, the tribal girls were better in speed and endurance than the non-tribal girls, the non-tribal (boys) of lower altitude were better in dynamic flexibility than the non-tribal boys of higher altitude [4]. The comparative study on anthropometric and motor quality of girls 8-14 years age of eastern and north-east region of India concluded on positive correlation with age, height and weight, but 30 m. run, agility run and 800 m. run showed significant negative relationship. It may also be concluded that the regional variation for different anthropometric and motor quality variables may be attributed due to geographical variation, environmental influences, genetic factor, nutritional variation and difference in socio-economic status of ER and NER girls [5]. The Comparison on physical performance and body dimension between tribal and non-tribal school students of age range 14 to 17 years showed that there was significant difference in body dimension between tribal and non-tribal boys except for weight, arm girth and thigh girth. Tribal boys showed significantly



better sports performance abilities than that of non-tribal students. The broad jump score and push up score were found to be significantly correlated with calf girth and arm girth respectively [6]. It has concluded in a study that the sports events where strength is the determinant factor, the tribal students if find opportunity may prove to be better performance than the non-tribal students and hence they may be provided with proper training and other factors to come up at the national level [7]. The comparison on the physical fitness of the tribal and the urban students of age ranging between 16 to 20 years in Tripura considering the AAHPER youth fitness test has found that urban tribal students were better in pull up and softball throw for distance and their performance was statistically significant at .05 level of confidence. But the remaining five test items i.e. 50 meter dash, 600 meter run/walk, sit-up, shuttle run and standing broad jump, the performance of none of the groups was found statistically significant at .05 level of confidence [10]. A study on possible difference between 100 Negroes and 100 white boys on measures of physical fitness, Negro boys obtained higher means scores than white boys on muscular explosiveness and Negro boys also scored significantly higher than white on overall physical fitness level [3]. The administration of the AAHPER youth fitness test to 100 rural and 100 urban boys, found that the urban boys were superior to the rural boys and the difference was significant at the .01 level [8].

MATERIALS AND METHODS

Thirty subjects on each group (total 60) in the age group of 12-14 yrs. from a secondary school of Gohat sub division, in the district Hooghly were chosen randomly for the present study. The subjects were not of same socioeconomic condition and culture. The criterias were Cardiorespiratory Endurance measured by 1-Mile run & Walk, Abdominal Strength Endurance measured by Curl-ups, upper body strength endurance measured by Push-up, Flexibility measured by V-sit & reach and Body Mass Index measured by Weight/Height^2 . The data were collected in a single day with the help of two other physical education professionals. The other fitness components except the cardio respiratory endurance were measured in the school hall and finally the cardio respiratory endurance was measured in field.

RESULTS AND DISCUSSIONS



After collecting the data the calculations were done through statistics and the analysis were done accordingly.

Table 1: Mean, S.D. and 't' ratio of the variables

Test Items	Tribal		Non Tribal		't' ratio
	Mean	S.D.	Mean	S.D.	
V-sit & reach	2.85	2.36	3.83	2.07	1.26
Push Up	18.87	7.38	15.87	11.60	1.76
Curl Up	27	10.36	31	12.60	.99
1 mile run/walk	9.08	.87	8.88	.86	.66
BMI	18.07	7.20	20.62	6.40	1.07

('t' tab value 2.04)

at 0.05 level of significance

The result reveals that the non tribal students have more flexibility, abdominal strength endurance and body fat % than the tribal students. On the other hand in case of cardio respiratory endurance and upper body strength endurance the tribal students are more efficient than the non tribal students. So this is clear from the above result that there is the difference between the two groups of students but the difference is not significant as all the calculated 't' values are less than the 't' table value.

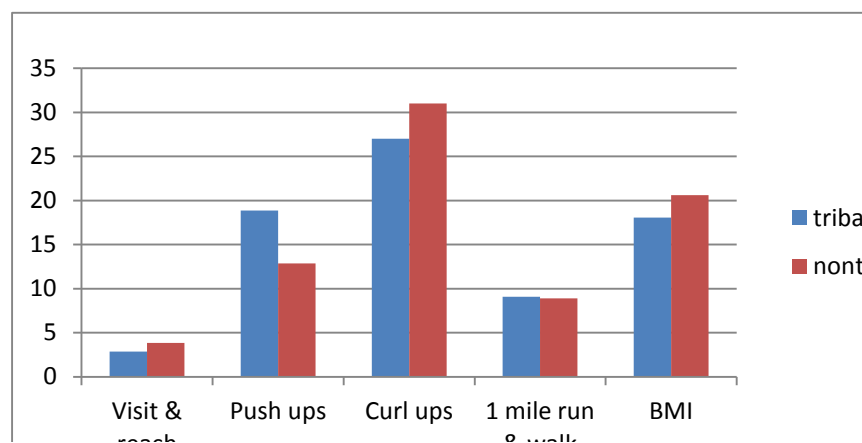


Fig 1: The comparative graphical representation of different measures

The differences are probably for the Genetic factor and for the socio economic condition of the tribal students. Genetically and due to the poor fiscal condition the tribal students are generally laborious and always in hunt of their daily livings. For this naturally their cardio respiratory endurance and strength are higher than that of their counter part. These findings also support the conclusions drawn by [4] [7]. On the other hand due to the lack of money the daily food intake capacities i.e. the caloric intake is also low in case of tribal



students and as a result of this the BMI values are also less in case of the tribal students. In case of upper body strength endurance and flexibility the nontribal students are better than the tribal students. It is very difficult to conclude any reason regarding this. As the boys were from the same area with same environment and almost same lifestyle there were no such significant differences occurred [10]. Only very minor differences occur due to the heredity, different socioeconomic condition and different culture.

CONCLUSIONS

Within the limited scope of study on the basis of the result obtained the following general conclusions were drawn.

1. The non-tribal students are more flexible, having better abdominal strength endurance and higher body fat% than the tribal students.
2. The Cardio respiratory endurance and the upper body strength endurance of the tribal students are more than the non-tribal students.

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