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Rasamoy Hansda

Research Scholar, Department of physical education, University of Kalyani, West Bengal, India

Dr. Kanchan Bandopadhyay

Professor (Retd.), Department of physical education, University of Kalyani, West Bengal, India

A comparative study on selected physical and psychosocial profile of Santal boys

Rasamoy Hansda and Dr. Kanchan Bandopadhyay

Abstract

The purpose of the study was to find out and compare the Agility, Power, Speed, Strength and Coordination as physical variables and Social maturity, Adjustment ability and Attitude as Psychosocial profile between tribal and general school going subjects. Total 416 boys (208 = Tribal community and rest 208=General community) were selected as subjects by the random sampling technique. The age of the subjects was ranged from 13 years to 16 years which were divided into four groups according to their age and categories into two i.e. TB for Tribal boys and GB for General boys. The Physical variables of the subjects such as Agility, Power, Speed, Strength, Coordination and Psychosocial profile such as Social Maturity, Adjustment Ability & Attitude were considered as criterion measure. The measuring procedure for the physical variable tests such as zigzag run, standing broad jump, 50-meter dash, six-pound medicine ball put were followed by Barrow & McGee- 1979 and wall pass test were followed by Johnson & Nelson-2007. Psychosocial tests were conducted by Rao's Social Maturity Scale, Adjustment Ability by Sinha and Singh and Attitude by S. L. Chopra. The mean and standard deviation (S.D.) were calculated for the analysis of the data as descriptive statistics. Statistical significance of two group i.e. Tribal boys and General boys in respective age group, mean difference was tested by Independent-Sample T. Test. All the statistics were calculated by using SPSS version 25.

Keywords: Tribal Boys, physical variables, psychosocial profile

Introduction

Sound body is the reflection of sound mind. If we want to get sound mind sound body is necessary. In the field of games and sports physical variables is responsible for wellness for the all-Round development of human being. In our daily life, physical variables play a very significant role. The physical variables have two aspect; i Health related physical variables i.e. strength, body composition, flexibility cardio-respiratory endurance, and muscular endurance-It means the tissue related system of our body and ii skill or performance related physical variables i.e. speed, endurance, power, agility, balance reaction time and co-ordination-it reflects the mechanism of human body related to fitness. In the field of games and sports these two ingredients are very much proportionately applicable for the sports performance. In a word, we can say a player can demonstrate his skills without being fatigued during his performance of sports and at the same time he has much enthusiasm after the completion of the assignment of his day to day work.

It is found in the books of Health and Physical Education of Higher Secondary level of West Bengal we can know that from the result of research work of psychologist nervous system of brain is related to other nervous system of our body and at the same time it has a close relation to our mind. Similarly, in the field of games and sports physical fitness is not solely responsible for the performance of games and sports. It depends upon other qualities too. Such as overall knowledge related to games and sports which reflects social maturity, adjustment ability and attitude. These three psychosocial factors very much necessary for the blossoming of personal thought and feelings in every walk of life.

To substantiate the views with a quote the line from Wikipedia; 'The psychosocial approach looks at individuals in the context of the combined influence that psychological factors and the surrounding social environment have on their physical and mental wellness and their ability to function.

A researcher himself being a tribal has realised that in reality to adapt with the environment it

Correspondence

Rasamoy Hansda

Research Scholar, Department of physical education, University of Kalyani, West Bengal, India

is very necessary to develop the physical qualities and psychosocial qualities of teenage school going Santal boys. For this reason, he has made a humble attempt on a study of Santal boys entitled as “A comparative study on selected physical and psychosocial profile of Santal boys”.

The social impact of the study helps the entire learners along with the society of teenagers to lead their life in a satisfactory manner both physically and mentally. They will be vibrant with the vitality of life. This study will give fillip to the games & sports and regular physical exercise. It will make the all-round development of the learners. Ultimately, they will emerge as true citizen of a country. Only then this attempt will be a success.

1.1 Purpose of the study

The purpose of the study was to find out and compare in between tribal boys and general boys of their selected physical variables such as Agility, Power, Speed, Strength, Coordination and psychosocial profile like Social maturity, Adjustment ability and Attitude of various age groups of schools going boys.

2. Material and Method

2.1 Subjects of the Study

In the present study total 416 school going boys were selected by random sampling technique from six different schools on condition of only two school were selected from each district of Bankura, Jhargram and Paschim Medinipur of West Bengal State. The equal number of subjects were selected from both tribal community (n=208) and general community (n=208). The age of the subjects was lie from 13 years to 16 years which grouped likewise into four age group and categorised

into two i.e. TB for Tribal boys and GB for General boys respectively.

2.2 Measuring criteria

As the criterion measured the Physical variables like Agility, Power, Speed, Strength & Coordination were measured by zigzag run, standing broad jump, 50-meter dash, six-pound medicine ball put & wall pass tests respectively and the Psychological variables like Social Maturity, Adjustment Ability & Attitude was assessed by Rao’s Social Maturity, by A. K. P. Singh & R.P. Sinha’s Adjustment Ability and Attitude by S. L. Chopra respectively. The measuring procedure of physical variable tests such as zigzag run, standing broad jump, 50-meter dash, six-pound medicine ball put were followed by Barrow & McGee- 1979, wall pass test were followed by Johnson & Nelson-2007 and the Psychosocial profile were assessed through specific questionnaire.

2.3 Statistical analysis

As the descriptive statistics, the mean and standard deviation (S.D.) were calculated for the analysis of data. Statistical significance of two group i.e. tribal boys and general boys in respective age group, mean difference was tested by Independent-Sample T-Test. All the statistical calculations were done by SPSS version 25.

For comparing the significance of two mean, mean difference, the level of significance was set as 0.05 level of confidence where the degree of freedom was 102.

3. Result and Discussion

3.1 Physical variables

Table 1: Age-wise comparison of means of Agility between TB and GB

Age (Year)	Group	Mean ± SD (sec)	SED	t value
13	TB	20.83 ± 1.46	0.28	-0.345
	GB	20.93 ± 1.40		
14	TB	20.51 ± 1.12	0.26	-1.309
	GB	20.85 ± 1.52		
15	TB	20.36 ± 1.38	0.25	-1.238
	GB	20.67 ± 1.18		
16	TB	19.99 ± 1.27	0.23	-2.418*
	GB	20.56 ± 1.12		

* To be significant at 0.05 level of confidence the t value >= 1.983.

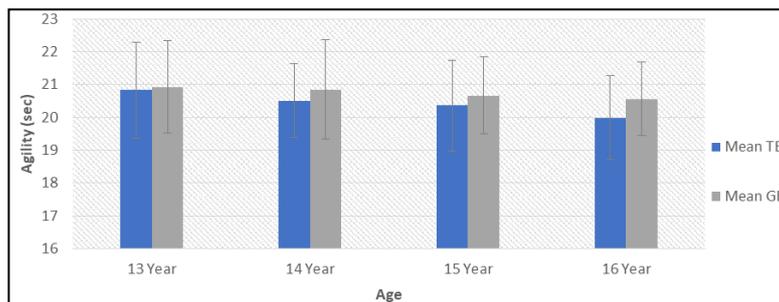


Fig 1: Graphical representation for comparison of means of Agility between the Group TB and GB

Table 2: Age-wise comparison of means of Power between TB and GB

Age (Year)	Group	Mean ± SD (Mt)	SED	t value
13	TB	1.57 ± 0.13	0.28	- 0.176
	GB	1.58 ± 0.16		
14	TB	1.64 ± 0.13	0.03	0.960
	GB	1.61 ± 0.18		
15	TB	1.69 ± 0.21	0.04	0.583
	GB	1.67 ± 0.19		
16	TB	1.70 ± 0.12	0.03	0.449
	GB	1.69 ± 0.13		

* To be significant at 0.05 level of confidence the t value >= 1.983.

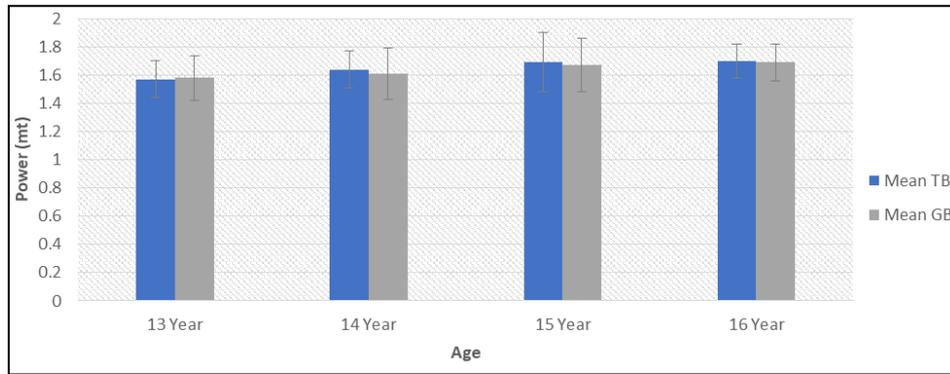


Fig 2: Graphical representation for comparison of means of Power between the Group TB and GB

Table 3: Age-wise comparison of means of Speed between TB and GB

Age (Year)	Group	Mean \pm SD (sec)	SED	t value
13	TB	9.55 \pm 0.50	0.09	-0.857
	GB	9.63 \pm 0.44		
14	TB	8.73 \pm 0.44	0.09	0.082
	GB	8.72 \pm 0.52		
15	TB	8.69 \pm 0.46	0.09	-0.068
	GB	8.70 \pm 0.43		
16	TB	8.40 \pm 0.48	0.10	-2.741*
	GB	8.66 \pm 0.51		

* To be significant at 0.05 level of confidence the t value \geq 1.983.

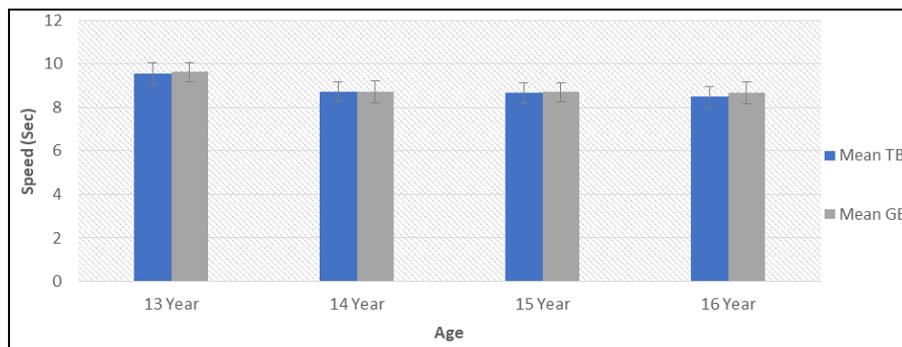


Fig 3: Graphical representation for comparison of means of Speed between the Group TB and GB

Table 4: Age-wise comparison of means of Strength between TB and GB

Age (Year)	Group	Mean \pm SD (Mt)	SED	t value
13	TB	5.80 \pm 1.12	0.19	2.193*
	GB	5.38 \pm 0.79		
14	TB	6.18 \pm 0.61	0.18	0.114
	GB	6.16 \pm 1.14		
15	TB	6.26 \pm 0.99	0.17	- 0.198
	GB	6.22 \pm 0.78		
16	TB	6.55 \pm 0.71	0.14	0.783
	GB	6.44 \pm 0.74		

* To be significant at 0.05 level of confidence the t value \geq 1.983.

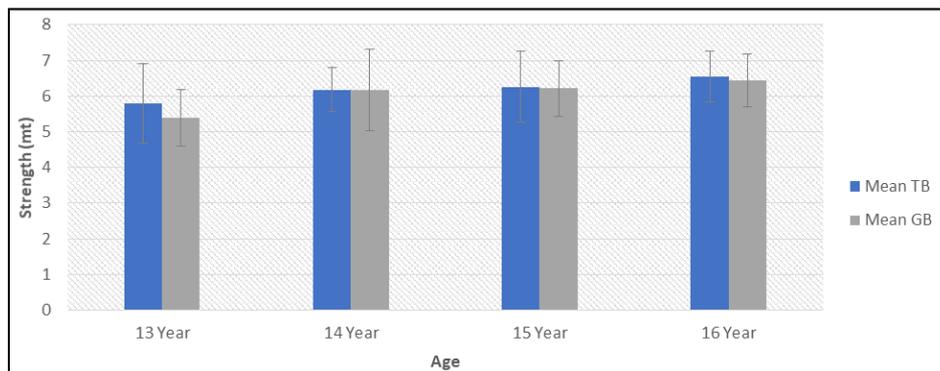


Fig 4: Graphical representation for comparison of means of Strength between the Group TB and GB

Table 5: Age-wise comparison of means of Coordination between TB and GB

Age (Year)	Group	Mean ± SD (no)	SED	t value
13	TB	13.50 ± 1.69	0.14	0.439
	GB	13.37 ± 1.43		
14	TB	14.65 ± 1.19	0.21	1.083
	GB	14.42 ± 0.98		
15	TB	14.71 ± 1.51	0.32	0.726
	GB	14.48 ± 1.72		
16	TB	14.75 ± 1.28	0.25	0.541
	GB	14.62 ± 1.26		

* To be significant at 0.05 level of confidence the t value >= 1.983.

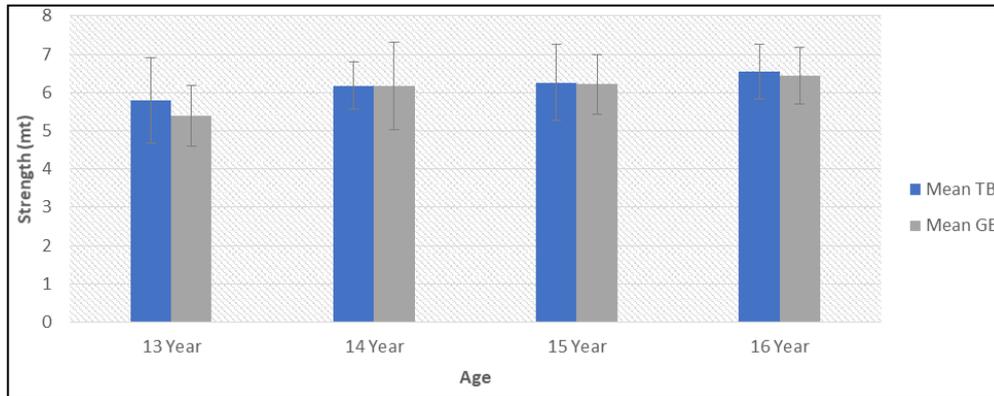


Fig 5: Graphical representation for comparison of means of Coordination between the Group TB and GB

3.2 Psychosocial Variables

Table 6: Age-wise comparison of means of Social Maturity between TB and GB

Age (Year)	Group	Mean ± SD (no)	SED	t value
13	TB	220.25 ± 13.69	2.85	- 0.777
	GB	222.47 ± 15.30		
14	TB	227.98 ± 12.60	2.89	0.738
	GB	225.48 ± 16.63		
15	TB	227.37 ± 15.40	3.06	- 2.003*
	GB	233.50 ± 15.83		
16	TB	232.56 ± 13.76	2.95	- 0.581
	GB	234.27 ± 16.19		

* To be significant at 0.05 level of confidence the t value >= 1.983.

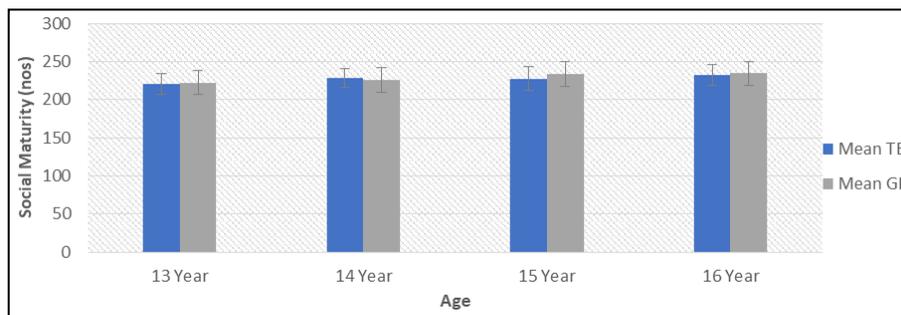


Fig 6: Graphical representation for comparison of means of Social Maturity between the Group TB and GB

Table 7: Age-wise comparison of means of Adjustment Ability between TB and GB

Age (Year)	Group	Mean ± SD (no)	SED	t value
13	TB	18.50 ± 5.07	1.07	1.183
	GB	17.23 ± 5.84		
14	TB	18.54 ± 5.50	1.03	1.688
	GB	16.81 ± 4.95		
15	TB	17.06 ± 5.18	0.99	0.600
	GB	16.46 ± 4.96		
16	TB	17.65 ± 5.59	1.00	2.075*
	GB	15.58 ± 4.57		

* To be significant at 0.05 level of confidence the t value >= 1.983.

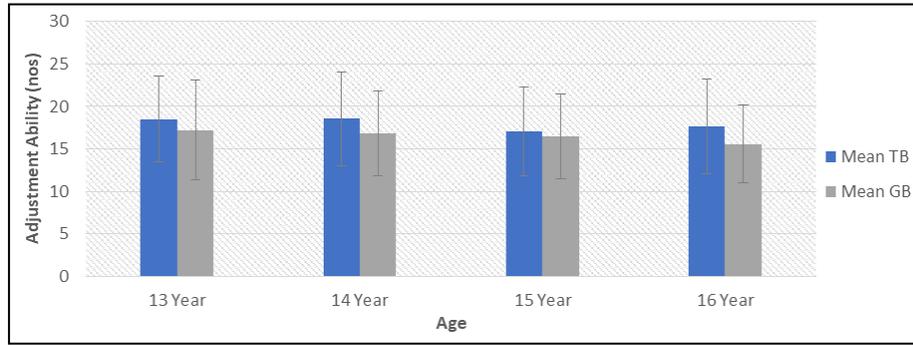


Fig 7: Graphical representation for comparison of means of Adjustment Ability between the Group TB and GB

Table 8: Age-wise comparison of means of Attitude between TB and GB

Age (Year)	Group	Mean ± SD (no)	SED	t value
13	TB	82.95 ± 14.87	2.57	- 0.682
	GB	84.70 ± 11.07		
14	TB	84.00 ± 9.91	1.92	0.273
	GB	83.47 ± 9.61		
15	TB	83.50 ± 9.82	1.84	- 0.041
	GB	83.58 ± 8.96		
16	TB	85.23 ± 9.06	2.40	0.766
	GB	83.39 ± 14.72		

* To be significant at 0.05 level of confidence the t value >= 1.983.

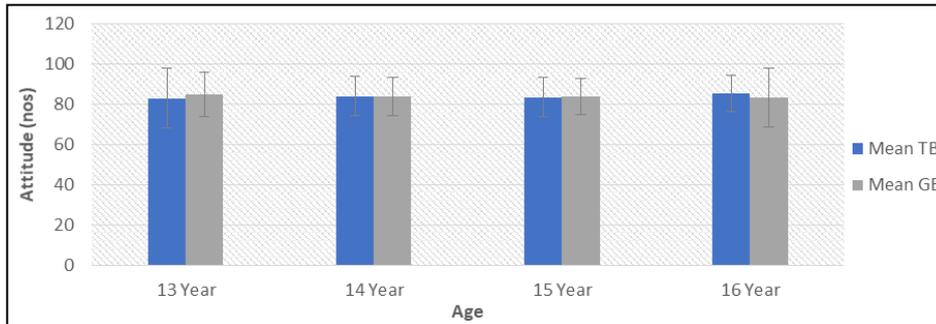


Fig 8: Graphical representation for comparison of means of Attitude between the Group TB and GB

4. Discussion of the Findings

4.1 Physical variables

The Physical variables like agility, power, speed, strength and coordination has been discussed. Agility is the ability to change positions and directions of the whole body rapidly and accurately. Muscular power is the ability to apply maximal strength in a rapid, explosive movement. Speed is the ability to change the location of a body part or to move the whole body in a single direction quickly. Coordination is the ability to integrate movements into repeatable patterns that are effective and efficient. (Tritschler, 2000) [8].

In table-1, the findings of the study showed that there was no significant difference in Agility between tribal boys and general boys except 16 years' age group. Tribal boys of 16 years' age group were superior to their counterpart in agility.

In table-2, the power of tribal boys and general boys were almost same in their respective age group. Reddy (2010) [4] mentioned in his study that the Mean and SD value of power (Standing broad Jump) of the urban student of Rayalaseema region of Andhra Pradesh for the age group 13– 5 years were 1.60±0.26mt, 1.61±0.33mt and 1.62±0.35mt respectively which is similar to the present study.

In table-3, the significant difference was observed in speed between tribal and general boys in their respective age group. In the age group of 16 years' tribal boys was superior to general boys so far speed of movement was concerned. Saha (1980) [5] opined that tribal students were better in speed than

their non-tribal counterpart. Singh M. K., Singh M & Singh S. (2016) [7] Singh M. K mentioned that the rural children of 12– 17 years were better performed in speed than the urban children of Punjab State. The study of Saha (1980) [5] and Singh M. K., Singh M & Singh S. (2016) [7] satisfied the present study.

In table-4, it is clear that 13 years tribal boys were significantly better in strength in comparison to their general boys counterparts. To satisfy the present study Savalia J. K. (2014) [6] observed significant difference between tribal and non-tribal students to their strength of arm, shoulder and abdominal muscular strength of the state of Gujrat. Singh M. K., Singh M & Singh S. (2016) [7] mentioned that the rural children of 12–17 years were better performed in Strength than the urban children of Punjab State.

In table-5, the coordination of tribal boys and general boys were almost same in their respective age group. Coordination develop as a result of repetitive practice of different kinds of movement through effective involvement in games and sports. The subjects of the present study did not receive any such types of training during their developmental stage.

4.2 Psychosocial Variables

In table-6, only 15 years age group were significantly differ in Social Maturity than the other age groups where General boys of 15 years' age group were significantly better in social maturity in comparison to Tribal boys.

In table-7, at the age group of 16 years there was a significant difference observed in Adjustment ability between the Tribal boys and General boys, where Tribal boys were lesser than the General boys. Remaining age group were found no significant difference in Educational Adjustment ability.

In table-8, no significant difference was observed in Attitude between tribal boys and general boys in their respective age groups. Considering the findings of the present study is supported by the study of Chatterjee S. (2013), Das S. K., Halder U. K., Mishra B. and Debnath D. (2014) and Sakariyau A. O., Taiwo M. O. and Ajagbe O. W. (2016) respectively. This study reflected high average of attitude towards education.

5. Conclusion

5.1 Physical Variables

The significant difference was observed in Agility and Speed for the age group of 16 years between tribal boys and general boys where tribal boys were superior in Agility and Speed than general boys. For the age group of 13 years Strength reflected the significant difference between tribal boys and general boys where tribal boys were better in strength than general boys. No significance difference was observed in Power and Coordination between tribal boys and general boys for the age group from 13–16 years.

5.2 Psychosocial Variables

The significant difference was observed in Social Maturity and Adjustment Ability for the age group of 15 years and 16 years respectively between tribal boys and general boys. In society, tribal boys were less in mature and adjustment ability than the general boys. No significance difference was observed in attitude between the tribal boys and general boys.

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