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Comparative study of speed variables between Private School and Government School football players

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ABSTRACT

The purpose of this study was to compare the speed between private school handball team boys and girls' handball team players and government school boys' handball team and girls' handball team players in the Cuddalore district of Tamilnadu. To achieve this purpose of the study one hundred and twenty players of private school handball team and government school handball team players studying in the various schools in Cuddalore district, Tamil Nadu and India were randomly selected as subjects. Among them sixty boys players (thirty boys private school handball team and thirty boys government school handball team players) and sixty girls players (thirty girls private school handball team and thirty girls government school handball team players) were selected as subjects with an age of the subjects were ranged between 13 to 17 years were selected as subjects. The following speed was only selected as criterion variables. The following groups namely boys' private school handball team players boys' government school handball team players, girls private school handball team players girls government school handball team players were selected as independent variables. The data were collected from boys and girls private school handball team players and government school handball team players on selected criterion variables such as speed were assessed by using 50 mts run respectively and they were statistically analyzed by using 2 x 2 factorial ANOVA. Whenever the obtained 'F' ratio value for the interaction effect was found to be significant, the simple effect test was applied as a follow-up test. In all cases, the .05 level of confidence was fixed to test the level of significance which was considered appropriate. There was a significant difference between boys and girls players on speed irrespective of their games (private school and government school). Among them, boys' private school handball team players were better speed than other categories of players.

Keywords— *Speed, Boys, Girls, Private School and Government School players*

1. INTRODUCTION

In the history of humankind, physical fitness has been considered as a vital element of the everyday life of an individual. In being so, the ancient people were mainly dependent upon their individual strength, vigour and vitality for physical survival **(Manmeet Gill, et al, .2010).** These involved performances of some basic skills like strength, speed, endurance, flexibility, agility for running, jumping, throwing and climbing for the persistence of hunting, gathering food and building shelter for their living **(Mehtap Ozdirenc, Nihal Gelecek, 2005).**

The expert committee of the World Health Organization described physical fitness as the ability to undertake muscular work satisfactorily. Physical fitness is the capacity to early out, reasonably well, various forms of physical activities, without being unduly tired and includes qualities important to the individual's health and well-being. Every person has a different level of physical fitness which may change with time, place of work, situation and there is also an interaction between the daily activities, and the fitness of an individual, the point if where to put the level of optimum fitness. From the physiological point of view, physical fitness may say to be ability at the body to adapt and recover from strenuous exercise. In adults, the relationship among physical activity, health-related fitness, and health are fairly well established (**Boucher and Shepherd 1994). Charles (2006)** conducted a study on the "Differences in health for rural and urban Canadians". His report shows that Canadians living in rural areas generally have higher mortality rates than those living in urban areas. In the past, the normal routine of daily living required vigorous work and physical activity. Children did more walking for transportation and played outside more often. Today, concerns about safety prevent many parents from even allowing their children to play in their neighbourhoods. The wealth of a nation depends entirely upon the health of every citizen of the country. Hence physical fitness of school children is a major factor to be considered. So, School physical education programmer should include multi furious activities appropriate to each age group. The complex nature of physical fitness can best be understood in terms of its components such as cardiovascular endurance, strength, flexibility and muscular endurance. In addition to these components of physical fitness, there are many other factors which contribute to physical fitness including heredity, living standard, nutrition, hygienic conditions, environmental and climate factors etc. In general sense, health can be related

to physical fitness According to a recent view point, Physical fitness has two dimensions health-related fitness and motor fitness **(Malina, 1994)**.

2. METHODOLOGY

The purpose of the study was to compare the speed between private school boys' handball team and girls' handball team players and government school boys' handball team and girls players handball team in Cuddalore district of Tamilnadu. To achieve this purpose of the study one hundred and twenty players of private school handball team and government school handball team players studying in the various schools in Cuddalore district, Tamil Nadu and India were randomly selected as subjects. Among them sixty boys players (thirty boys private school handball team and thirty boys government school handball team players) and sixty girls players (thirty girls private school handball team and thirty girls government school handball team players) were selected as subjects with an age of the subjects were ranged between 13 to 17 years were selected as subjects. The following on speed was only selected as the criterion variable. The following groups namely boys' private school handball team players boys' government school handball team players, girls private school handball team players girls government school handball team players were selected as independent variables. The data were collected from boys' and girls' private school handball team players and government school handball team players on selected criterion variables such as speed were assessed by using 50 mts run respectively and they were statistically analysed by using 2 × 2 factorial ANOVA. Whenever the obtained 'F' ratio value for interaction effect was found to be significant, the simple effect test was applied as a follow up test. In all cases, the .05 level of confidence was fixed to test the level of significance which was considered as appropriate.

3. RESULT OF STUDY

3.1 Speed

Mean and standard deviation of speed among boys and girls private school handball team and government school handball team players were presented in table 1.

Table 1: Mean and standard deviation of speed among boys and girls private school and government school players

Gender	Private school Players	Government school Players	Combined
Boys	7.10 ± 0.07	7.94 ± 0.22	7.52
Girls	8.02 ± 0.15	8.46 ± 0.17	8.24
Combined	7.56	8.20	7.88

Table 1 indicates that the mean and standard deviation value of speed among boys private school players was 7.10 ± 0.07 and girls private school players was 8.02 ± 0.15 with combined mean values of 7.56. The boy's government school players mean and standard deviation values on speed were 7.94 ± 0.22 and girls' government school players was 8.46 ± 0.17 with combined mean values of 8.20. The combined mean values of boys' private school and government school players mean values was 7.52. The combined mean values of girls' private school and government school mean values were 8.24.

Table 2: Two-factor ANOVA for speed among boys and girls private school and government school players

Source of Variance	Sum of squares	df	Mean squares	'F' ratio
Factor A (School)	12.41	1	12.41	544.49*
Factor B (Gender)	15.44	1	15.44	437.51*
Factor A and B (Interaction)	1.20	1	1.20	42.37*
Residual	3.29	116	0.028	-

**Significant at 0.05 level of confidence.*

(The required table value for significant at .05 level of confidence with df 1 and 116 is 3.924).

Factor A was school related to speed irrespective of gender. The obtained 'F' ratio of 544.49 was greater than the table value of 3.924 required for significance at 0.05 level of confidence with df 1 and 116. This indicates that irrespective of private school handball team and government school handball team on speed among boys and girls players. Factor B was gender related to speed irrespective of school. The obtained 'F' ratio of 437.51 was higher than the table value of 3.924 required for significance at 0.05 level of confidence with df 1 and 116. This indicates that the difference in speed among boys and girls private school handball team and government school handball team players was significant. The interaction 'F' ratio 42.37 was greater than the table value of 3.924 required for significance at 0.05 level of confidence with df 1 and 116. This indicates that there was a significant variation occurs in speed between boys and girls private school handball team and government school handball team players. Since the interaction was significant simple effect was applied.

Table 3: The Simple Effect Scores of School (Rows) and Gender (Columns) on Speed

Source of variance	Sum of squares	df	Mean squares	Obtained 'F' ratio
Private school handball team and Gender	12.69	1	12.69	453.42*
Government school handball team and Gender	4.05	1	4.05	144.85*
Schools and Boys Players	10.58	1	10.58	378*
Schools and Girls Players	2.90	1	2.90	103.71*
Error	3.29	116	0.028	

**Significant at 0.05 level of confidence. (Table value required for significant at .05 level of confidence with df 1 and 116 is 3.924).*

Table 3 shows that the obtained F-ratio values for private school handball team and gender were 453.42 which was greater than the table value of 3.924 required for significant at 0.05 level of confidence with df 1 and 116. The result of the study indicates that a significant difference that exists between the paired means of private school handball team school irrespective of gender, on speed. It was concluded from the results of the study that there was a significant difference was found in speed between boys and girls private school handball team players. Shows that the obtained F-ratio values for government school handball team and gender were 144.85 which was higher than the table value of 3.924 required for significant at 0.05 level of confidence with df 1 and 116. The result of the study indicates that a significant difference exists between the paired means of government school handball team school irrespective of gender, on speed. It was concluded from the results of the study that there was a significant difference was found in speed between boys' government school handball team players.

Table 3 shows that the obtained F-ratio values for schools and boys players were 378 which is greater than the table value of 3.924 required for significant at 0.05 level of confidence with df 1 and 116. The result of the study indicates that there was a significant difference exists between the paired means of schools and boys players on speed. It was concluded from the results of the study that there was a significant difference in speed among boys of private school handball team and government school handball team. shows that the obtained F-ratio values for schools and girls players were 103.71 which is greater than the table value of 3.924 required for significant at 0.05 level of confidence with df 1 and 116. The result of the study indicates that there was a significant difference exists between the paired means of schools and girls players on speed. It was concluded from the results of the study that there was a significant difference in speed among girls of private school handball team and government school handball team. It is inferred that there was a significant difference occur in speed between private school handball team and government school handball team game and boys and girls players. Table – IV shows that the obtained 'F' ratio value of 42.37 on speed was greater than the required table value of 3.924 for significant at 0.05 level of confidence with df 1 and 116. Further, to know which team players have better in speed, the Scheffé *S* post hoc test was applied.

Table 4: Scheffĕ *s* test for the difference in mean values of speed among boys and girls private school handball team and government school handball team players

Mean Values					
Boys Private school	**Boys Government school**	**Girls Private school**	**Girls Government school**	**Mean Difference**	**Confidence Interval at .05 level**
7.10	7.94			0.84*	0.14
7.10		8.02		0.92*	0.14
7.10			8.46	1.36*	0.14
	7.94	8.02		0.08	0.14
	7.94		8.46	0.52*	0.14
		8.02	8.46	0.44*	0.14

** Significant at 0.05 level of confidence*

Table 4 shows that the mean difference between boys private school handball team players and boys government school handball team players, boys private school handball team players and girls private school handball team players, boys private school handball team players and girls government school handball team players, boys government school handball team players and girls private school handball team players, boys government school handball team players and girls government school handball team players and girls private school handball team players and girls government school handball team players were 0.84, 0.92, 1.36, 0.08, 0.52 and 0.44 on speed which was significant difference at .05 level of confidence. The result of the study shows that boys and girls government school handball team players have better speed than boys and girls private school handball team players. Moreover, boys' government school handball team players have better speed than the girl's government school handball team players. Girls' government school handball team players were better in speed than the boy's private school handball team players.

4. DISCUSSION OF STUDY

The results of the study indicated that there was a significant difference between boys and girls players on selected motor fitness component such as speed irrespective of their team (private school and government school handball team players). The results of the study further showed that there was a significant difference between private school and government school handball team players on selected motor fitness component such as speed irrespective of their gender (boys and girls). The results of the study also indicated that there was a significant difference between boys and girls private school and government school handball team players selected motor fitness component such as speed. These results are in conformity with the study conducted by Das, et al. (2007) to compare the physical fitness components of junior handballers and sprinters of Kolkata. Results revealed that there exist significant difference in flexed arm hang (arm and shoulder strength), bent knee sit-ups (muscular strength and endurance), shuttle run (coordinative ability), standing broad jump (explosive strength of legs), 600 yard run/walk (endurance) and sit and reach test (flexibility) of team and individual game players. Physical fitness variables are very important in both athletes and form a condition for higher performance. Mal (1982) stated that the components of physical fitness like strength, speed, endurance, flexibility and the various coordinative abilities are essential for a high technique and tactical efficiency. Depending upon the demand of the game, each factor of physical fitness should be optimally developed. In the present study, there was a significant difference observed between the individual game and team game athletes in all the selected physical fitness variables. Results show the muscular strength, agility, power, speed and cardiovascular endurance of individual games athletes were significantly greater when compared to team games athletes. Jan Percival et al. (1982) concluded that every individual has a different level of fitness, which may change from time to time, it may also change from place to place and sometimes it may changes with work or situation also.

5. CONCLUSION

(a) There was a significant difference between boys and girls players on speed irrespective of their team (private school and government school players).
(b) There was a significant difference between private school and government school players on speed irrespective of their gender (boys and girls).
(c) There was a significant difference between boys and girls private school and government school players on speed.
(d) Among the groups, boys private school cricket players were better on speed than other categories of players.

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