



## COMPARISON AMONG DIFFERENT SCHOOL STUDENTS OF BUNDELKHAND DISTRICT ON SELECTED HEALTH RELATED PHYSICAL FITNESS

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### ABSTRACT :

The purpose of the study was Comparison of selected health related physical fitness among students belonging to different schools of Bundelkhand district and the study was delimited to the government, semi government and public school students. The study was delimited to the boy's students of 14 -16 years. For the purpose of this study 150 students were selected (50 from government school, 50 from semi government school and 50 from public school). Four health related physical fitness variables were selected for study. Health related physical fitness variables were Cardio Respiratory Endurance, Abdominal Muscular strength and endurance, trunk flexibility and Percentage of body fat (four site biceps, triceps, sub-scapular, supra iliac). Health related physical fitness variables cardio-respiratory endurance was measured by 20 minute steady state jog , Bent-knee Curl-up for abdominal muscular strength and Endurance, Sit & Reach test for trunk flexibility and sum of biceps, triceps, subscapular & supra-iliac muscles for body composition. To compare the means of motor and health related physical fitness among children belonging to different schools descriptive analysis and one way analysis of variance (ANOVA) was used.



**KEYWORDS :** semi government and public school students.

### INTRODUCTION :

Over the past four decades, there has been an increase in the prevalence of overweight and physical fitness deterioration in children's across all genders, ages and racial/ethnic groups. The negative effects of degraded physical fitness on both the individual and society are serious and multi-dimensional. In the present scenario, the unity of mind and body is a widely recognized and accepted fact and the totality of life is universally emphasized. Being physically active and maintaining a healthy weight, both are needed for good health. Children, teens, adults and the elderly all can improve health and well-being and have fun by including moderate amounts of physical activity in their daily lives. Along with physical fitness motor fitness is one of the integral parts of physical education. Physical education has its own objective which deals with attainment of physical, mental, social and spiritual aspect of an individual. Physical education activities also assist the school to develop personal and social skills in students. When we talk about physical aspect; it solely has various objectives like to attain physical fitness, health related fitness, motor fitness, sports fitness and proficiency in sports skills at various levels. If we go through systematic manner physical fitness is prerequisite for motor fitness and development of fundamental motor movements. Means Physical

education is the process through which sport, outdoor adventure activities, dance, gymnastics, aquatics and games are used by physical educators to help students. The modern age of science and technology makes exacting demands on an individual, requiring high degree of physical fitness mental alertness and emotional stability. Health related fitness is a broad quality involving medical and dental supervision and care immunization and other protection against disease, proper nutrition, adequate rest, relaxation, good health practices, sanitation and other aspects of healthful living. Health related fitness is the basis of all the activities of our society. Fitness tests can be utilized by teachers to increase the effectiveness of fitness activities that have been incorporated into the physical education program over a period of time. These fitness test results may cause a revolution for enhancement of sports and health related status of schools in the country. On the basis of this the present study was hypothesized that there would be no significant difference among different school students of Bundelkhand district on selected health related physical fitness.

## METHODOLOGY

The research was designed to assess the health-related physical activity of 14-16 year-old male students. 150 students (50 from government schools, 50 from semi-government schools and 50 from public schools) were chosen for the purpose of this report. Criterion measures for testing the hypothesis was the following:- 1. Cardio vascular endurance was measure by 20 minute steady state jog recorded in nearest meter. 2. Muscular strength and endurance was measure by bent knee curl-up recorded in nearest to whole number. 3. Flexibility was measure by sit and reach test recorded in inches. 4. The four sites of Skin fold were measured by Skin Fold caliper and recorded in millimeters and sum of four sites converted with the help of Durnin and Rahaman table. The data was collected from Government School Semi Government School and Public School students. Necessary instruction was given to the subjects before administration of the test. One way variance analysis (ANOVA) was used to compare the means of health-related physical fitness among children belonging to different schools and to find out the difference in significance between the post-hoc LSD tests in the schools.

## RESULT AND DISCUSSION

**Table-1**

**Analysis of Variance of Cardio-respiratory endurance among Different school students**

Source of Variance	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1884996.480	2	942498.240	<b>5.285</b>	<b>.006</b>
Within Groups	26214708.480	147	178331.350		

*\*Significant at 0.05 levels F 0.05 (2, 147) = 3.06*

Table 1 showed that there was a substantial difference in cardio-respiratory endurance between government, semi-government and private school students as obtained F-ratio 5.285 was higher than the tabular value 3.06, needed to be significant at 0.05 (2, 147) for F-ratio. Since the one way analysis of variance was found significant, the LSD test was applied to find out differences of the means amongst the different school students.

**Table-2**  
**LSD for Mean Comparison between Selected School Students**  
**(Cardio-respiratory Endurance)**

Groups			MD	Sig.
Government	Semi Government	Private		
2979.4800	2953.8000		25.68	.762
2979.4800		3203.4000	223.92	<b>.009</b>
	2953.8000	3203.4000	249.6	<b>.004</b>

The table 2 showed that there is a substantial difference between government and private school students, semi-government and private school students. In relation to cardio-respiratory endurance at a level of significance of 0.05, a substantial difference is observed between government and semi-government school students.

**Table-3**  
**Analysis of Variance of Abdominal muscular strength Endurance among Different school students**

Source of Variance	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	326.453	2	163.227	<b>8.046</b>	<b>.000</b>
Within Groups	2982.220	147	20.287		

*\*Significant at 0.05 levels F 0.05 (2, 147) = 3.06*

Table 3 showed that there was a substantial difference in abdominal muscular strength between government, semi-government and private school students and Endurance was higher than the tabular value 3.06 as obtained F-ratio 8.046, needed for F-ratio to be significant at 0.05 (2, 147). Since the one way analysis of variance was found significant in relation to abdominal muscular strength and Endurance, the LSD test was applied to find out the differences of the means amongst the different school students.

**Table-4**  
**LSD for Mean Comparison between Selected School Students**  
**(Abdominal muscular strength Endurance)**

Groups			MD	Sig.
Government	Semi Government	Private		
24.0600	23.4200		.64	.479
24.0600		20.6600	3.4	<b>.000</b>
	23.4200	20.6600	2.76	<b>.003</b>

The table 4 showed that there is a substantial difference in abdominal muscle strength and endurance at 0.05level of significance between government and private school students, semi-government and private school students. In relation to abdominal muscle strength and stamina at 0.05 rate of importance, there is an insignificant disparity between government and semi-government school students.

**Table-5**  
**Analysis of Variance of Trunk Flexibility among Different school students**

Source of Variance	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.949	2	1.474	.595	.553
Within Groups	364.517	147	2.480		

*\*Significant at 0.05 levels F 0.05 (2, 147) = 3.06*

Table 5 showed that in terms of trunk versatility, there was negligible difference between government, semi-government and private school students, as obtained F-ratio .595 was lower than the tabular value 3.06, needed to be significant at 0.05 (2, 147).

**Table-6**  
**Analysis of Variance of Fat percentage among Different school students**

Source of Variance	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	66.142	2	33.071	<b>5.567</b>	<b>.005</b>
Within Groups	873.209	147	5.940		

*\*Significant at 0.05 levels F 0.05 (2, 147) = 3.06*

As obtained F-ratio 5,567 was higher than the tabular value 3.06, needed for F-ratio to be important at 0.05 (2, 147), the table showed that there was a significant difference between government, semi government and private school students in relation to fat percent. Since the one way analysis of variance was found significant in relation to fat, the LSD test was applied to find out the differences of the means amongst the different school students.

**Table-7**  
**LSD for Mean Comparison between Selected School Students (Fat percentage)**

Groups			MD	Sig.
Government	Semi Government	Private		
16.4300	15.8120		.618	.207
16.4300		17.4240	.994	<b>.043</b>
	15.8120	17.4240	1.612	<b>.001</b>

The table 7 shows that there is a substantial difference in fat at 0.05 level of significance between government and private school students, semi-government and private school students. There is an insignificant difference in fat at a level of importance of 0.05 between government and semi-government school students.

The outcome of the current study shows that a substantial gap between government and private school students and semi-government and private school students was observed in the case of cardio respiratory endurance. The result indicates that private school students were stronger at aerobic respiratory endurance; this can be due to the fact that physical exercise during the year is of great significance to private schools. Students have compulsory physical education classes and engage in different sports on a regular

basis, while government and semi-government schools are not so strict about physical education classes and do not arrange year-round sports events. The study findings also show that a substantial difference was observed in the case of abdominal muscular strength and stamina in government and private schools and semi-government and private schools, where no significant difference was found in students from government and semi-government schools. The results show that students in government and semi-government schools had better abdominal strength and endurance than students in private schools; this may be due to the fact that students in government and private schools are generally from lower middle class families and belong to village backgrounds. These students do physical labor in their daily routine life whereas the private school students are from upper middle class background and mostly belong to cities. There was no substantial difference between government and semi-government schools in the case of the fat ratio, where a significant difference was observed between government students and private schools and semi-government and private schools. The findings clearly show that students in private schools have a higher proportion of fat than students in government and semi-government schools. This can be due to the fact that, compared to government and semi-government school students who belong to a low socioeconomic group and can not afford rich diets and luxuries of life, private school students mainly belong to a higher socioeconomic group and thus get rich diet.

### CONCLUSION

Based on statistical findings it was concluded that there was significance difference found in cardio-respiratory endurance among Government school students, Semi-Government school students and Public school students. There was significance difference found in muscular strength and endurance among Government school students, Semi-Government school students and Public school students. There was significance difference found in body composition and among Government school students, Semi-Government school students and Public school students. There was insignificance difference found in Trunk Flexibility among Government school students, Semi-Government school students and Public school students.

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