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## A comparative study on physical fitness among the physical education male students of different type physical education institution in West Bengal

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### Abstract

Considering the importance of physical fitness the present study has planned to the comparative study on physical fitness among the Physical Education male student of different type Physical Education Institution in West Bengal. The main purpose of the study was to find out the physical fitness status among the University level physical education students, government aided physical education college student and self-finance physical education college student. Total 114 male students were selected from three different type physical education institutions in West Bengal. Out of 114 subject 38 were selected from department of physical education (K.U),38 students were selected from U.C.T.C (Baharampur) and 38 student were selected from Sunildhar Memorial Physical Education college (Panchthupi).To conduct the study AAHPERD youth physical fitness test were taken as a criterion measure. After collecting the data descriptive statistical analysis were adopting and the following conclusions were drawn –in Physical fitness University department was better than Self Finance College and Govt. aided college also better than Self Finance College in most of the parameter. And University department was not better than Govt. aided college in all the fitness parameter.

**Keywords:** Fitness, AAHPERD, university, government, self-finance, training

### 1. Introduction

Evaluation of human life started with the movement. The importance of physical education and activity was recognised by Plato it was said “lack of activity destroys the good conditions of every human being which movement and methodical physical exercise save it and preserve it “ when the human movement it confined with universal drive to play, the combination forms one of the most powerful education media in physical education. The word physical education is derived from two separate words ‘Physical’ and ‘Education’. The plain dictionary meaning physical is relating to body; it may be physical strength, physical endurance, physical fitness, physical appearance or physical health.

The word education means systematic instructions or training or preparation for life or for some particular task. Physical education is and education of through human movement where many of the educational objectives or achieved by means of big muscle activities Involving sport, game, gymnastic, dance and exercise. (Borrow, 1983). Vigorous exercises properly more years to your life. (More house and Miller, 1976)<sup>[4]</sup>.

This aspect of physical fitness concerns with the development of qualities necessary to function efficiently and maintain a healthy life style. The components of healthy related fitness are cardio respiratory endurance, muscular strength and endurance, flexibility and body composition (Tanored, 1978).

### 1.1 Purpose of the study

The main purpose of the study are described in the below:

1. To understand the physical fitness status of physical education students in west Bengal.
2. The purpose of the study were to understand the difference in physical fitness among the different types of physical education institute in west Bengal.

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## 2. Methodology

114 Subjects were selected from three different institution of physical education in west Bengal. The subjects were from one university department, one government aided college and one self finance college. The age of the subjects were from 22 to 28 years. All the subjects were performed of the test with in stipulated time. The test includes 600 meters run for cardio vascular endurance, standing broad jump for explosive strength, pull ups for muscular endurance and strength of arm, 4 X10 meter shuttle run for agility, 50 meter dash for speed and sit up for abdominal muscular

strength. The subject were encouraged and instructed to perform their best. All the tests were conduct through standard procedure as per test manual.

After collection of the data of the subjects, the data were tabulated and statistically analysed for to find the result ANOVA was also computed.

## 3. Results and Discussion

The Mean and SD of personal data of different physical education institute in West Bengal were presented in table no-1

Table 1

Parameters	Different physical education institute		
	University department	Govt. aided college	Self-finance college
Age(yrs)	24.65±1.86	24.39±3.35	25.15±1.66
Height(cm)	161.57±4.83	164.31±3.58	164.21±4.06
Weight(kg)	60.60±6.80	58.97±5.06	58.78±4.90

From the table no.1 It was found that the Mean value and the SD of age of different physical education institute student i,e university department, government added college and self finance college were 24.65yrs±1.86, 24.39yrs±3.35 and 25.15yrs±1.66 respectively and the Mean and SD of height were 161.57cm±4.83, 164.31cm±3.58 and 164.21cm±4.06 respectively and the Mean and SD value of the weight of different physical education institute student

were 60.60kg±6.80, 58.97kg±5.06 and 58.78kg±4.90 respectively. Comparing the mean data of the groups it observed the students were homogeneous in personal data. The mean and SD of 50 meter run,600 meter run, Standing broad jump, Shuttle run, Pull up, Sit up of University department, Govt. aided college and Self finance college was presented in table -2.

Table 2

Parameters	Different physical education institute	Mean	Std. Deviation
50 meter run(Sec)	University department	6.868	.364
	Govt. aided college	7.041	.309
	Self finance college	7.339	.535
600 meter run(Sec)	University department	106.287	8.109
	Govt. aided college	111.623	6.267
	Self finance college	113.830	11.148
Standing broad jump(meter)	University department	2.454	.181
	Govt. aided college	2.435	.133
	Self finance college	2.224	.165
Shuttle run(Sec)	University department	9.577	.441
	Govt. aided college	9.279	.380
	Self finance college	10.635	.582
Pull up	University department	11.368	4.010
	Govt. aided college	11.263	3.916
	Self finance college	7.263	3.782
Sit up	University department	33.868	5.394
	Govt. aided college	33.237	5.268
	Self finance college	38.474	6.534

From the table no 2 it was found that the mean and SD of 50 meter run of University department were 6.868 and .364, Govt. aided college 7.041 and .369, and Self finance college 7.339 and .535 respectively.

The mean and SD of 600 meter run of University department were 106.287 and 8.109, Govt. aided college 111.623 and 6.267, and Self Finance College 113.830 and 11.148 respectively.

The mean and SD of Standing broad jump of University department were 2.454 and .181, Govt. aided college 2.435 and .133, and Self finance college 2.224 and .165 respectively.

The mean and SD of Shuttle run of University department were 9.577 and .441, Govt. aided college 9.279 and .380, and Self finance college 10.635 and .582 respectively.

The mean and SD of Pull up of University department were 11.368 and 4.010, Govt. aided college 11.263 and 3.916, and Self finance college 7.263 and 3.782 respectively.

The mean and SD of Sit up of University department were 33.868 and 5.394, Govt. aided college 33.237 and 5.268, and Self finance college 38.474 and 6.534 respectively.

Comparing the mean value the six components of the three groups some difference were observed among the three institutions of each parameter and to observed the difference in mean value F values were computed.

**Table 3:** F- Values in different fitness parameters among three groups.

<b>Variables</b>		<b>Sum of Squares</b>	<b>df</b>	<b>Mean Squares</b>	<b>F</b>	<b>Sig.</b>
50mtr.run(Sec)	Between Groups	4.32	2	2.16 0.17	12.60*	0.000
	Within Groups	19.04	111			
	Total	23.36	113			
600mtr.run(Sec)	Between Groups	1143.15	2	571.58 76.44	7.48*	0.001
	Within Groups	8484.64	111			
	Total	9627.80	113			
Standing broad jump (meter)	Between Groups	1.24	2	0.62 2.58	24.05*	0.000
	Within Groups	2.87	111			
	Total	4.11	113			
Shuttle run (Sec)	Between Groups	38.58	2	19.29 0.23	85.46*	0.000
	Within Groups	25.06	111			
	Total	63.64	113			
Pull up	Between Groups	416.28	2	208.14 15.24	13.66*	0.000
	Within Groups	1691.58	111			
	Total	2107.86	113			
Sit up	Between Groups	621.07	2	310.54 33.18	9.36*	0.000
	Within Groups	3682.68	111			
	Total	4303.75	113			

Comparing the mean value of 50meter run among three groups a F value was found 12.595 which was significant at

.05 level. To observe the difference between groups post hock test was conducted.

**Table 4**

<b>Dependent variable</b>	<b>(I)Group (J) Group</b>		<b>Mean Difference (I-J)</b>	<b>Std. Error</b>	<b>Sig.</b>
50 meter run	University department	Govt. aided college	-.173	.095	.072
		Self finance college	-.471*	.095	.000
		Govt. aided college	-.299*	.095	.002

From the table no 4 it was found that in 50 meter run no significant difference between university department and Govt. aided college was found, and the difference between university department and self finance college was found significant, and difference between Govt. aided college and self finance college was also significant. So, speed ability of university department was better than the self finance college and, Govt. aided college was also better than self

finance college. But the difference between university department and Govt. aided college was not statistically established.

Comparing the mean value of 600 meter run among three groups a F value was found 7.478which was significant at .05 level. To observe the difference between groups post hock test was conducted.

**Table 5**

<b>Dependent variable</b>	<b>(I)Group (J) Group</b>		<b>Mean Difference (I-J)</b>	<b>Std. Error</b>	<b>Sig.</b>
6000 meter run	University department	Govt. aided college	-5.337*	2.006	.009
		Self finance college	-7.543*	2.006	.000
		Govt. aided college	-2.206	2.006	.274

From the result of the post hock test in table no 5 it was found that in 600 meter, difference between university department and Govt. aided college was significant and the difference between university department and self finance college was also significant but difference between Govt. aided college and self finance college was not significant. So, Cardio vascular endurance of university department was better than the Govt. aided college and self finance college.

The compare between Govt. aided college and self finance college, Govt. aided college was not better than self finance college though a higher mean value was observed.

Comparing the mean value of standing broad jump among three groups a F value was found 24.054 which was significant at .05 level. To observe the difference between groups post hock test was conducted.

**Table 6**

<b>Dependent variable</b>	<b>(I)Group (J) Group</b>		<b>Mean Difference (I-J)</b>	<b>Std. Error</b>	<b>Sig.</b>
Standing broad jump (meter)	University department	Govt. aided college	0.19	.037	.613
		Self finance college	.230*	.037	.000
		Govt. aided college	.212*	.037	.000

From the table no 6 it was found that in standing broad jump no significant difference between university department and Govt. aided college was found, and the difference between university department and self finance college was found significant, and difference between Govt. aided college and self finance college was also significant. So, Explosive

strength of university department was better than the self finance college and, Govt. aided college was also better than self finance college. But the difference between university department and Govt. aided college was not statistically established.

Comparing the mean value of Shuttle run among three groups a F value was found 85.459 which was significant at .05 level. To observe the difference between groups post hock test was conducted.

Table 7

Dependent variable	(I)Group (J) Group	Mean Difference (I-J)	Std. Error	Sig.
Shuttle run (Sec)	University department	.298*	.109	.007
	Self finance college	-1.058*	.109	.000
	Govt. aided college	-1.356*	.109	.000

From the table no 7 it was found that in Shuttle run, difference between university department and Govt. aided college was significant and the difference between university department and self finance college was also significant and difference between Govt. aided college and self finance college was also significant. So in agility university department was better than Govt. aided college

and self finance college, and Govt. aided college also better than self finance college.

Comparing the mean value of Pull up among three groups a F value was found 13.658 which was significant at .05 level. To observe the difference between groups post hock test was conducted.

Table 8

Dependent variable	(I)Group (J) Group	Mean Difference (I-J)	Std. Error	Sig.
Pull up	University department	.105	.896	.907
	Self finance college	4.105*	.896	.000
	Govt. aided college	4.000*	.896	.000

From the table no 8 it was found that in Pull up no significant difference between university department and Govt. aided college was found, and the difference between university department and self finance college was found significant, and difference between Govt. aided college and self finance college was also significant. So, Muscular strength of arm of university department was better than the self finance college and, Govt. aided college was also better

than self finance college. But the difference between university department and Govt. aided college was not statistically established.

Comparing the mean value of Sit up among three groups a F value was found 9.360 which was significant at .05 level. To observe the difference between groups post hock test was conducted.

Table 9

Dependent variable	(I)Group (J) Group	Mean Difference (I-J)	Std. Error	Sig.
Sit up	University department	.632	1.321	.634
	Self finance college	-4.605*	1.321	.001
	Govt. aided college	-5.237*	1.321	.000

From the table no 9 it was found that in Sit up no significant difference between university department and Govt. aided college was found, and the difference between university department and self finance college was found significant, and difference between Govt. aided college and self finance college was also significant. So, Abdominal muscular strength of university department was better than the self finance college and, Govt. aided college was also better than self finance college. But the difference between university department and Govt. aided college was not statistically established.

college students though a higher mean value was observed.

3. Explosive strength of university students was better than the self finance college student. Govt. aided college students were also better than self finance college students. But there were no significant difference between university department and Govt. aided college students.
4. Agility of university students was better than Govt. aided college and self finance college students, and Govt. aided college students also better than self finance college students.
5. Muscular strength of arm of university students was better than the self finance college student. Govt. aided college students were also better than self finance college students. But there were no significant difference between university department and Govt. aided college students.
6. Abdominal muscular strength of university students was better than the self finance college student. Govt. aided college students were also better than self finance college students. But there were no significant difference between university department and Govt. aided college students.

So in fitness it was observed that university department students were better than Govt. aided college students as

well as self finance college students. The Govt. aided college students also better in physical fitness than self finance college students.

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