



ORIGINAL RESEARCH PAPER

Physical Education

A COMPARATIVE STUDY ON PHYSICAL FITNESS OF CBSE AND WBBSE SCHOOL STUDENTS

KEY WORDS: Cardiovascular Endurance, Speed, Agility, Explosive Leg Strength, Muscular Endurance.

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ABSTRACT

The aim of the study was to compare the physical fitness of CBSE AND WBBSE school students. For the purpose of the study 30 CBSE students and 30 WBBSE female students, total (60) female students were taken as the subjects. The age group of the subject was ranged from 14-16 years. They were selected randomly. To measure the physical fitness variables i.e. cardiovascular endurance (Harvard Step Test), Speed (50 yard dash), Agility (4x10 Yards shuttle run), Explosive leg strength (standing broad jump) and Muscular endurance (one minute bent knee sit up) was used. To compare the physical fitness variables 't' test was used to calculate the collected data. Mean, standard deviation and 't' test was used in the present study. The significant level was set at 0.05 level of confidence. Statistical calculation of the gathered data showed that there were significant difference between CBSE and WBBSE student in relation to Cardiovascular Endurance, speed, explosive leg strength, muscular endurance but in relation to shuttle run insignificance differences were found between the CBSE and WBBSE school students.

INTRODUCTION

Sport is a worldwide phenomenon today. The need and importance of performance in sports has increased rapidly in the last few decades. In no period of world history was sports so popular organized and important as it is today. It has a very prominent role in modern society. It is important to an individual, a group, a nation and indeed the world. There are more nations competing in the Olympic Games than participating in the United Nations. Throughout the world sports has a popular appeal among people of all ages and both sexes.

Physical fitness is now a common concept required for nation's development. Mechanical devices such as automatic washers, vacuum cleaners, gas furnaces etc. have reduced human labor for domestic affairs in daily life. Television, Radio, Type recorder Electronic media and such other amusing media indulge sedentary life style, similarly buses and vehicles have reduced normal activities such as walking and moving around for work maintenance of daily life. Human body cannot remain in normal condition without activity, regular physical exercise provides the opportunity to maintain physical fitness of the individual, physically fit people can serve best for the nation.

Fitness means being a good physical condition or being healthy. Fitness means having more energy and better sleeps Patterns. A person who is fit is also able to carry out tasks more easily. Fitness may help prevent certain diseases such as high blood pressure, diabetes, stroke, cancer and heart disease. If you already have one of these diseases, you may be able to better control it if you are fit. To be fit you may need to make some changes in your eating and exercise habits Physical fitness is generally of two types one is health related physical fitness and another is skill related fitness. Every type has different components. Health related components are body composition, cardiovascular fitness, muscular strength, muscular endurance and flexibility. On the other hand components of skill related fitness are agility, balance, coordination, power, speed, reaction time.

It is known that fitness and wellness make an individual physically fit, mentally stable and help becoming a good citizen .Fitness helps individual achieve satisfactory level of strength, endurance and flexibility. It further improves the confidence and energy level. One feels more energetic and fresh for the whole day. It also leads to sound sleep followed by more relaxed body leading to mental satisfaction and social stability. Body becomes more resistant to general ailments. Fitness improves efficiency of heart and lungs by improving cardio-respiratory fitness. It helps it maintaining normal blood pressure of the body. In nutshell, we can say fitness and wellness helps to achieve the aim of physical education i.e.-"All round development of personality of the individual.

OBJECTIVE OF THE STUDY

The objective of the study was to compare the physical fitness of CBSE and WBBSE board female school students.

METHODOLOGY

SELECTION OF THE SUBJECTS:

For the purpose of the study 30 CBSE students and 30 WBBSE female students, total (60) female students were taken as the subjects. The age group of the subject was ranged from 14-16 years. They were selected randomly.

SELECTION OF THE VARIABLES:

To conduct the study the investigator tested all the subjects on practical tests, namely physical fitness. The physical fitness variables for the study are:

- Cardiovascular endurance
- Speed
- Agility
- Explosive leg strength
- Muscular endurance

CRITERION MEASURES:

- To measure the cardiovascular endurance of a subject, Harvard Step Test will use record in seconds.
- To measure the speed of a subject, 50 yard dash will use record in nearest second.
- To measure the agility of a subject, 4x10 Yards shuttle run will use record in nearest seconds.
- To measure the explosive leg strength of a subject, standing broad jump will use and measure nearest centimeters.
- Muscular endurance was measured by one minute bent knee sit up and it was measure in maximum number of sit ups.

STATISTICAL PROCEDURE

To compare the physical fitness variables 't' test was used to calculated the collected data. Mean, standard deviation and 't' test was used in the present study. The significant level was set at 0.05 level of confidence.

RESULT OF THE STUDY

Table-1 Significant of Mean, Standard deviation and t-ratio of Harvard Step Test between CBSE and WBBSE school students.

variable	Source of variance	Mean	Standard Deviation	't' -Ratio
Harvard Step Test	CBSE	57.659	2.457	2.253*
	WBBSE	54.370	5.093	

*Significance at 0.05 level of confidence, t0.05 (58) =2.00

From the above Table – 1 it is clearly evidence that the calculated 't' value (2.253) is greater than tabulated 't' value (2.00), so we can say that significant difference is observed between CBSE and WBBSE students in respect of Harvard Step Test. Table-1 also shows that the CBSE students have higher level of cardiovascular endurance in compared to WBBSE students.



Figure-1: Mean and Standard Deviation of Harvard Step Test of CBSE and WBBSE school student.

Table-2 Significant of Mean, Standard deviation and t-ratio of 50 yard dash between CBSE and WBBSE school students.

variable	Source of variance	Mean	Standard Deviation	't' -Ratio
50 yard dash	CBSE	8.905	.873	2.25*
	WBBSE	8.419	.788	

*Significance at 0.05 level of confidence, $t_{0.05}(58)=2.00$

From the above Table – 2 it is clearly evidence that the calculated 't' value (2.25) is greater than tabulated 't' value (2.00), so we can say that significant difference is observed between CBSE and WBBSE students in respect of 50 yard dash. Table-2 also shows that the CBSE students have higher level of speed in compared to WBBSE students.



Figure-2 Mean and Standard Deviation of 50 yard dash of CBSE and WBBSE school student.

Table-3 Significant of Mean, Standard deviation and t-ratio of shuttle run between CBSE and WBBSE school students.

variable	Source of variance	Mean	Standard Deviation	't' -Ratio
Shuttle run	CBSE	11.658	.756	0.058
	WBBSE	11.669	.684	

*Significance at 0.05 level of confidence, $t_{0.05}(58)=2.00$

From the above Table – 3 it is clearly evidence that the calculated 't' value (.058) is less than tabulated 't' value (2.00), so we can say that no significant difference is observed between CBSE and WBBSE students in respect of shuttle run. Table-3 also shows that the CBSE and WBBSE school students scored almost equally.



Figure-3 Mean and Standard Deviation of Agility of CBSE and WBBSE school student.

Table-4 Comparison of Mean, Standard deviation and t-ratio of Standing Broad Jump between CBSE and WBBSE school students.

variable	Source of variance	Mean	Standard Deviation	't' -Ratio
Standing Broad Jump	CBSE	1.479	.235	2.5*
	WBBSE	1.344	.184	

*Significance at 0.05 level of confidence, $t_{0.05}(58)=2.00$

From the above Table – 4 it is clearly evidence that the calculated 't' value (2.5) is greater than tabulated 't' value (2.00), so we can say that significant difference is observed between CBSE and WBBSE students in respect of Standing Broad Jump. Table-4 also shows that the CBSE students have higher level of Standing Broad Jump in compared to WBBSE students.



Figure-4: Mean and Standard Deviation of Standing Broad Jump of CBSE and WBBSE school student

Table-5 Significant of Mean, Standard deviation and t-ratio of sit-ups between CBSE and WBBSE school students.

variable	Source of variance	Mean	Standard Deviation	't' -Ratio
Sit-ups	CBSE	24.133	7.098	2.579*
	WBBSE	18.933	8.278	

*Significance at 0.05 level of confidence, $t_{0.05}(58)=2.00$

From the above Table – 5 it is clearly evidence that the calculated 't' value (2.579) is greater than tabulated 't' value (2.00), so we can say that significant difference is observed between CBSE and WBBSE students in respect of sit-ups. Table-5 also shows that the CBSE students have higher level of sit-ups in compared to WBBSE students.



Figure-5: Mean and Standard Deviation of Sit Ups of CBSE and WBBSE school student.

DISCUSSION

Statistical calculation of the gathered data showed that there were significant difference between CBSE and WBBSE student in relation to Cardiovascular Endurance, speed, explosive leg strength, muscular endurance but in relation to shuttle run insignificance differences were found between the CBSE and WBBSE school students.

The CBSE Students Were Higher than WBBSE Due to CBSE students can enable coaches trainers strength and condition specialists to establish physical expectations, design, and science based training programme that will improve performance and address any weakness in physical fitness identified through testing. As per curriculum CBSE students has to participate in Daily the condition programme i.e. fitness training and various games and sports which may the great factor of improving the stated fitness variable. On the other hand there is less scope for WBBSE in the participation of such kind of fitness training.

CONCLUSIONS

It is concluded from the obtained results that:

1. Significant difference was observed between CBSE and WBBSE student in respect of Cardiovascular endurance.
2. Significant difference was observed between CBSE and WBBSE student in respect of speed.
3. No significant difference was found between CBSE and WBBSE student in respect of agility.
4. Significant difference was observed between CBSE and

WBBSE student in respect of explosive leg strength.

5. Significant difference was observed between CBSE and WBBSE student in respect of muscular endurance.

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