

## A STUDY TO EXAMINE THE SELECTED PHYSICAL FITNESS COMPONENTS OF STUDENT STUDIES IN DIFFERENT SCHOOL SETTINGS



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### **Abstract:**

The purpose of this study was to examine the relationship between the physical fitness components of students studying in different school providing different opportunities for physical activities based on their foundation philosophies, i.e. Regular school, school providing for after school physical education and sports program, and Residential school providing morning and evening physical activity. Survey method was used for the present study. Three schools from different setting viz. Regular School, School providing for after school PE and Sports program, and Residential schools providing morning and evening physical activity from Jammu city were selected purposively. The students aged group 13-15 years of schools will be the population of the study, 40 male students of eight and ninth standards were selected using simple random sampling technique from each school. Thus, 120 students will be the subjects under study. After selecting the sample, Push – ups, Sit – ups, 9 min. Run/Walk and Flexibility tests were administered to evaluate the selected physical components i.e. Muscular strength endurance, Cardio-vascular endurance and Flexibility respectively. Results showed that the calculated mean value of performance for Push – ups, Sit – ups, 9 min. Run/Walk and Flexibility tests of Regular school was (19.68, 22.25, 778.50 and 15.34), for School providing for after school PE and Sports program was (21.48, 24.30, 844.75 and 15.71 ) and for Regular school was (23.70, 25.83, 879.50 and 16.05 ). From the above results it can be concluded that there is difference in calculated mean value of performance of selected physical fitness components of students studying in different school settings.

**Keywords:** Physical Fitness components, Different school settings & students.

### **Introduction:**

Physical fitness is the body's ability to function efficiently and effectively in work and leisure activities, not only at a set point in time, but at various ages and stages within a person's life cycle. Physical fitness is a dynamic concept and is continuously growing in importance to everyday life and health. Although being an attribute that has a genetic basis, it is also sensitive to changes in type and amount depending upon physical activities conducted. It is important to measure fitness as an outcome of physical activity. Fitness concepts in school physical education center on children's understanding of fitness as good health, and a working

knowledge of activities that promote a healthy level of fitness. Physical fitness can be described as a condition that helps us look, feel and do our best. It is the ability of the human body to function with vigor and alertness, without undue fatigue, and with ample energy to engage in leisure activities. Physical fitness involves the performance of the heart and lungs, and the muscles of the body. In the most general terms, a fit person is able to perform tasks with more sustainable energy and for longer periods than an unfit person. Physical fitness is most easily understood by examining the four basic parts .i.e. Cardio respiratory Endurance, muscular strength, muscular endurance and flexibility.

**Cardio-Respiratory Endurance** measures the circulatory and respiratory systems ability to deliver oxygen and nutrients to and eliminate waste products from cells. Cells need oxygen and nutrients in order to fuel muscles during periods of physical activity. When cells work they produce wastes that need to be transported away. How efficiently body does these tasks is a measure of cardio-respiratory endurance. One can build your cardio-respiratory endurance through aerobic exercise, which is a type of exercise that uses oxygen to meet energy demands. The word aerobic means using oxygen, so aerobic exercise is literally exercises that use oxygen. This is the type of exercise that we might consider with activities performed over time at low to moderate intensity, such as taking a comfortable jog, riding bicycle or rowing a boat.

**Muscular strength** is the ability of the muscle to exert force for a brief time period while Muscular endurance is the ability of a muscle, or group of muscles to sustain repeated contractions or to continue to apply force against an inert object. Weight training provides the means to develop both the strength and size of skeletal muscles.

Endurance is all about how long a muscle can perform whereas muscular strength is how hard it can perform.

### **Students and Physical Activities**

School physical education programs offer students the opportunity to not only physically active but the opportunity to learn skills and behaviors conducive to maintaining physical activity for a lifetime. Students spend over half of their day in school. Physical education should teach them how to integrate physical activity into their day. "The American Academy of Pediatrics" published a Clinical Report in 2006 on the topic of play. The report offers guidelines on how to ensure that play is a part of the optimal development for young children. It points out that our hurried lifestyles, emphasis on academics, and changes in family structure have resulted in a reduction in child centered play. The report reminds that "play" plays an essential role in physical, social, academic and emotional development in young children's.

### **Material Method:**

As the researcher wants to study the physical fitness of the students studying in different school setting depending upon their foundation philosophies i.e. Regular school, School providing for after school PE and sports program, and Residential schools providing morning and evening physical activity. Survey method was used for the present study. Three schools from different setting viz. Regular School, School providing for after school PE and Sports program and Residential schools providing morning and evening physical activity from Jammu city were

selected purposively. The students aged group 13-15 years of schools will be the population of the study. 40 male students of eight and ninth standards were selected using simple random sampling technique from each school.

Day 1 - Push - ups and Sit - ups.

Day 2 - 9 min. Run/Walk and Flexibility.

#### Various health related physical fitness components and the tools of data collection

- Cardio-vascular endurance – 9 minute run/walk test(distance cover in mtr)
- Muscular strength endurance - 1 minute push-ups test(number of push-ups)
- Muscular strength endurance - 1 minute sit-ups test(number of sit-ups)
- Flexibility- sit and reach test (in cms).

For present study One-way ANOVA was used as statistical tools.

#### Results and Discussions:

One-way ANOVA was administered to examine the difference in selected physical fitness components of student studying in different school settings.

#### Descriptive Statistic of Performance on physical fitness of different school setting

		N	Mean
Cardio-vascular Endurance	Regular School	40	778.5000
	Day Boarding School	40	844.7500
	Boarding School	40	879.5000
	Total	120	834.2500
Muscular Strength	Regular School	40	22.2500
	Day Boarding School	40	24.3000
	Boarding School	40	25.8250
	Total	120	24.1250
Abdominal Strength	Regular School	40	19.6750
	Day Boarding School	40	21.4750
	Boarding School	40	23.7000
	Total	120	21.6167
Flexibility	Regular School	40	15.3375
	Day Boarding School	40	15.7125
	Boarding School	40	16.0500
	Total	120	15.7000

**ANOVA table of Performance on physical fitness of different school setting**

		Sum of Squares	df	Mean Square	F	Sig.
<b>Muscular Strength</b>	<b>Between Groups</b>	<b>257.450</b>	<b>2</b>	<b>128.725</b>	<b>4.257</b>	<b>.016</b>
	<b>Within Groups</b>	<b>3537.675</b>	<b>117</b>	<b>30.237</b>		
	<b>Total</b>	<b>3795.125</b>	<b>119</b>			
<b>Abdominal Strength</b>	<b>Between Groups</b>	<b>325.217</b>	<b>2</b>	<b>162.608</b>	<b>7.428</b>	<b>.001</b>
	<b>Within Groups</b>	<b>2561.150</b>	<b>117</b>	<b>21.890</b>		
	<b>Total</b>	<b>2886.367</b>	<b>119</b>			
<b>Flexibility</b>	<b>Between Groups</b>	<b>10.163</b>	<b>2</b>	<b>5.081</b>	<b>.451</b>	<b>.638</b>
	<b>Within Groups</b>	<b>1317.538</b>	<b>117</b>	<b>11.261</b>		
	<b>Total</b>	<b>1327.700</b>	<b>119</b>			
<b>Cardio-vascular Endurance</b>	<b>Between Groups</b>	<b>210635.000</b>	<b>2</b>	<b>105317.500</b>	<b>3.752</b>	<b>.026</b>
	<b>Within Groups</b>	<b>3284097.500</b>	<b>117</b>	<b>28069.209</b>		
	<b>Total</b>	<b>3494732.500</b>	<b>119</b>			

The calculated mean value of performance for Push – ups, Sit – ups, 9 min. Run/Walk and Flexibility tests of Regular school was (19.68, 22.25, 778.50 and 15.34), for School providing for after school PE and Sports program was (21.48, 24.30, 844.75 and 15.71 ) and for Regular school was (23.70, 25.83, 879.50 and 16.05 ). The F-value for Muscular strength, abdominal strength and cardiovascular endurance between and within groups for physical fitness of students studying in different school setting is less than 0.05 whereas the F-value of Flexibility is more than 0.05. Thus, the Null Hypothesis of no difference among the mean of the three group may be rejected at 5% level. This indicates that there is significant difference in the selected physical fitness variables of student studying in different school settings.

### Discussions on Findings:

From the above analysis and interpretation of data following findings may be drawn:-

- There is significant difference in the selected physical fitness variables of student studying in different school settings.

### Conclusion:

From the result of the study, it can be concluded that there is difference in calculated mean value of performance of selected physical fitness components of students studying in different school settings.

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