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Comparative study of physical and physiological variables among govt. and private school going boys

Mehraj Ud Din Ganaie and Dr. Mohammad Muzamil Shah

Abstract

In the daily life of mankind. Physical fitness is the process that enables a person to perform any activity with vigour, alertness without fatigue and preserving energy also to meet future demands. The various components of physical fitness like speed, strength, agility, balance, flexibility has played a key role in the daily living of a mankind very from the ancient times. The objectives of the study were to study and compare the physical and Physiological variables between the Govt. and private school going boys. The study was delimited to the 70 students .35 from each govt. and private school boys further, delimited to physical variables speed, agility, explosive leg strength and to physiological variable vital capacity Before setting the hypothesis the research scholar undergone the related studies in the area of particular subject and consulted experts in this regards. On the basis of their advice & suggestions and the experience of the research scholar it was hypothesized that: There will be no significant difference in physical and physiological variables between the govt. and private school going boys To compare the physical and physiological variables among govt. and private school going boys the 't-test' was applied.

Keywords: Physiological variables and physical education students

Introduction

Physical Fitness has it's roots deep very from the beginning of mankind. It has played a vital role in the daily life of mankind. Physical fitness is the process that enables a person to perform any activity with vigour, alertness without fatigue and preserving energy also to meet future demands. The various components of physical fitness like speed, strength, agility, balance, flexibility has played a key role in the daily living of a mankind very from the ancient times. Over the past four decades, there has been an increase in the prevalence of overweight and physical fitness deterioration in adult across all genders, ages and racial/ethnic groups (AR Cooper, *et al.* 2003) ^[1]. Though knowing the benefits of physical fitness components, still a tremendous percentage of people especially living in developed countries are not indulging much in physical activities as they relies more on machines and as a result they are living sedentary life style. This results the various ill effects on their health. Physical fitness includes not only components of sports but those of health as well. Performing physical activities daily shines the health of a person. Improves the physical, mental, spiritual, social, intellectual, organic, neuromuscular etc aspects of health of an individual. Sports performance and physical fitness has also a strong relation, as the performance in any sport relies on any aspect of physical fitness like speed, agility, balance, reaction time, body composition etc. As we know that the aerobic activities mostly relies on the endurance component of physical fitness, similarly sprinting events relies on speed. The relationship between activity and the risk of morbidity and mortality has in recent decades become subject of intense research especially in gerontology (e. g. Patterson & Carpenter, 1994; Physical inactivity has contributed a lot in destroying the health conditions of an individual. It results in coronary heart diseases, stress, obesity, lung diseases, fatty liver etc. Today in modern times the governments of every country across the world are contributing much more to keep their citizens away from sedentary lifestyle and are taking many initiatives to keep them indulged in physical activities. Like the physical variables, psychological, physiological variables are also important for the overall wellbeing of a person. Physiological variables include vital capacity, heart rate, respiratory rate etc. while as psychological variables include confidence, concentration, mental fitness etc.

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Besides the quality education, Physical fitness guidelines should be also provided to the childrens very from the beginning in schools so to ensure their better health and wellbeing during the rest phases of life. sports infrastructure, physical activity classes must be the part of curriculum to make students physically, mentally, socially, spiritually, emotionally fit. Physical inactivity in youth continues to be an international epidemic and a potential contributor to chronic disease in adulthood. (Janssen L LeBlanc 2010) [6] Active commuting to school (defined as the use of active means, mainly walking and bicycling, to and/or from school) can provide a significant source of physical activity for children (Faulkner GE 2009) [8] and has also been associated with improved cardio-vascular health. Larouche R saunders (2014) [9] Moreover, active commuting to school has been associated with a higher cognitive performance in adolescent girls, reduced stress in children during school day and a reduced greenhouse gas emissions in neighbourhood schools. (Wilson EJ Wilson. 2007) [14].

1. In modern times, although there is no such difference in the sports infrastructure b/w the Govt. schools and Private schools, However mode of communication plays an important role in differentiating the health status or physical fitness level of their students, creating the difference in the physical and physiological variables among govt. and private school going students like speed, agiliry, vital capacity, body composition. Walking, cycling (active communication) to school may provide a significant source of physical activity in youth. Previous school-based intervention studies have shown a positive effect on increasing the frequency of active commuting to school in the short-term. However, how the observed effects are after the intervention remains to be investigated. The objective of the present study was to investigate the effects of a physical activity on the physical and physiological variables in school going boys. The researcher has taken 70 male subjects (boys) of age 14-17 years. Out of the selected subjects one group was of government (n=35) and other was of private (n=35). Studies has shown that.
 - a. There was a significance difference in speed among government and private school going boys. Hence it is concluded that government school going boys have better speed than private school going boys.
 2. There was a significance difference in agility among government and private school going boys. Hence it is concluded that government school going boys have better agility than private school going boys.
 3. There was a significance difference in explosive leg strength among government and private school going boys. Hence it is concluded that government school going boys have better explosive leg strength than private school going boys.
 4. There was a significance difference in vital capacity among government and private school going boys. Hence it is concluded that government school going boys have better vital capacity than private school going boys.

Hypothesis of the study

It was hypothesized that "There would be no significant difference in selected variables among private and government

school going boys".

Methodology and Procedure

As every research demands a systematic method and procedure likewise this chapter adopts the following procedures including information regarding research design, source of data, sampling method, selection of subjects, collection of data, criterion measures etc. A research become successful accompanied and supported by some reliable and authentic data. The statistical analysis of the gathered data provides a well-knit picture of a complete and successful hypothesis as preselected by the researcher.

Source of Data

For the present study the data has been collected from some government and private schools. The selected government schools were:

1. Govt. hr. sec. Goshabugh
2. Govt. hr. sec. Pattan
3. Govt. hr. sec. Palhallan.

The selected Private schools were

1. Liyaqat Educational Institute Goshabugh
2. Spring Dales Public school palhallan
3. Model Hr. sec kreeri
4. Little Buds public School Palpora

Sampling Method

The subjects were selected by simple random sampling method.

Selection of Subject: The researcher has taken 70 male subjects (boys) of age 14-17 years. Out of the selected subjects one group was of government (n=35) and other was of private (n=35).

Criterion Measures: The researcher administered the following tests:

Vertical Jump: to measure the leg muscle power
The best of three attempts is recorded: 4×10m

Shuttle Run

Purpose: This is a test of speed, body control and the ability to change direction (agility).
A total of 40m is covered. Two trials are performed: 50 m DASH RUN purpose: The aim of this test is to determine acceleration and speed.

Spirometer

Purpose: To measure vital capacity

Statistical Procedure Employed: To analyze the results of the study descriptive (Mean, SD) and Independent t test was employed.

Analysis of Data

The present comparative study is on physical and physiological variables among government and private school going boys was carried out to assess the speed, agility, explosive leg strength and vital capacity in the government and private school going boys.

Table 1: Descriptive statistics of speed of government and private school going boys with mode of transport

Variable	Groups	N	Mean	Std. deviation	St. Error mean	T	Df	Sig.(2tailed)
Speed	Government	35	7.35	.36	.06	-4.33	68	.001
	Private	35	7.81	.51	.08	-4.33	61.44	.001

The result indicates that there was a significance difference in speed among government and private school going boys with mode of transport, $t(68) = -1.01, p = .001$, which is less than 0.05, that is the average score of government students ($M = 7.35$,

$SD = .36$) was statistically different from that of private students ($M = 7.81, SD = .51$). Thus, it could be concluded that there was a significance difference in speed among government and private school going boys.

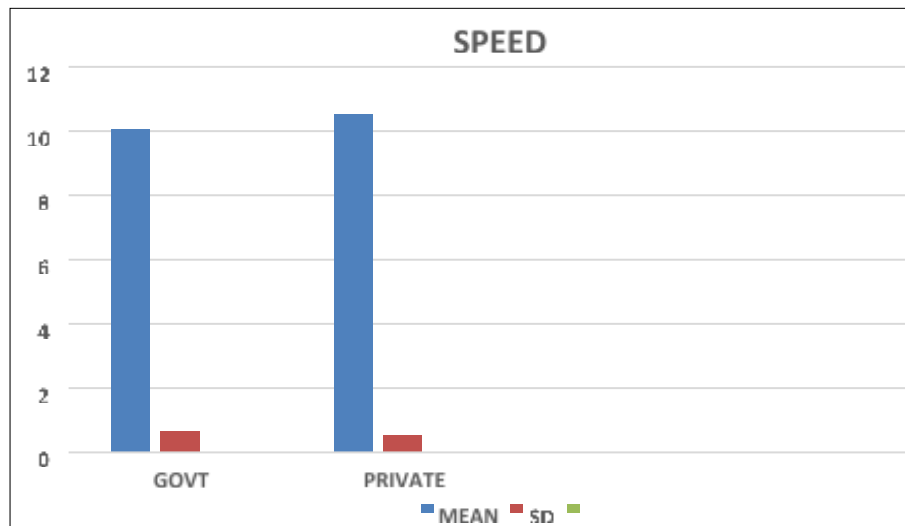


Fig 1: Graphical representation of mean and standard deviation of speed

Table 2: Descriptive statistics of agility of government and private school going boys with mode of transport.

Variable	Groups	N	Mean	Std. deviation	Std. Error mean	T	df	Sig. (2-tailed)
Agility	Government	35	10.05	.66	.11	-3.43	68	.001
	Private	35	10.54	.52	.08	3.43	64.833	.001

The result indicates that there was a difference in agility among government and private school going boys with mode of transport significance difference, $t(68) = 1.01, p = .001$, which is less than 0.05. That is the average score of government students ($M = 10.05, SD = .66$) was not statistically different from that of private students ($M = 10.54, SD = .52$). Thus, it could be concluded that there was a significance difference in agility among government and private school going boys.

transport, $t(68) = -1.01, p = .001$, which is less than 0.05, that is the average score of government students ($M = 7.35, SD = .36$) was statistically different from that of private students ($M = 7.81, SD = .51$).

The result indicates that there was a difference government and private school going boys with mode of transport significance difference, $t(68) = 1.01, p = .001$, which is less than 0.05. That is the average score of government students ($M = 10.05, SD = .66$) was not statistically different from that of private students ($M = 10.54, SD = .52$).

The result indicates that there was a difference government and private school going boys with mode of transport significance difference, $t(68) = 1.01, p = .001$, which is less than 0.05, that is the average score of government students ($M = 20.28, SD = 2.85$) was statistically different from that of private students ($M = 18.48, SD = 1.66$).

The result indicates that there was a difference government and private school going boys with mode of transport significance difference, $t(68) = 1.01, p = .001$, which is less than 0.05, that is the average score of government students ($M = 3.69, SD = .47$) was statistically different from that of private students ($M = 3.31, SD = .41$).

Studies using accelerometer have shown that active commuting to school may be associated with higher levels of PA and that after school hours are the main period when differences between active and passive travelers are seen (Cooper *et al.*, 2005) [4]. Other studies also have found that frequency of walking to school is dependent on child's independent mobility

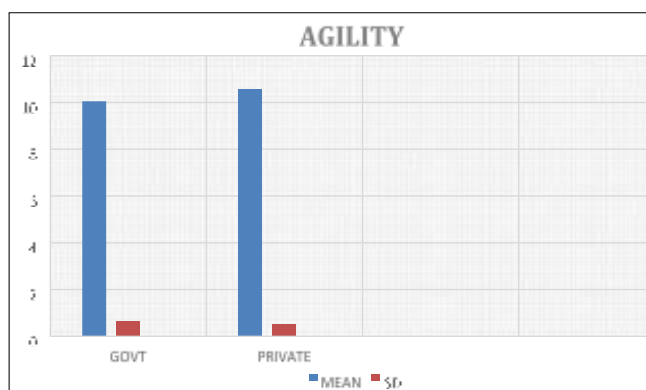


Fig 2: Graphical representation of mean and standard deviation of agility

Discussion of Findings

The result indicates that there was a significance difference government and private school going boys with mode of

(Merom *et al.*, 2006) ^[12]. This, on the other hand, is significantly associated with time spent playing outdoors after school. Similarly, accelerometer studies have shown that obese children are less active than non-obese, and once again, these differences occur mainly after school. Thus, these data suggest that the period after the end of the school day may be critical to enhance physical activity. These studies have reported differences in objectively measured and self-reported physical activity after school between groups of young people. However, differences regarding the type of physical activity have not yet been well described. The aim of this study was therefore to assess the relationship between participation in different types of PA and sports (organized vs. non-organized) outside school and travel behavior and BMI in a sample of adolescents.

Conclusion

The following conclusions are drawn from the current study: There was a significance difference in speed among government and private school going boys. Hence it is concluded that government school going boys have better speed than private school going boys.

1. There was a significance difference in agility among government and private school going boys. Hence it is concluded that government school going boys have better agility than private school going boys.
2. There was a significance difference in explosive leg strength among government and private school going boys. Hence it is concluded that government school going boys have better explosive leg strength than private school going boys.
3. There was a significance difference in vital capacity among government and private school going boys. Hence it is concluded that government school going boys have better vital capacity than private school going boys.

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