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Comparative study of selected physical fitness variables between government and private school students of urban and rural area

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Abstract

The aim of the study was to investigate the differences in selected physical fitness variables between government and private school students of urban and rural area. Total 80 male students (20 from rural area government school + 20 from rural area private school + 20 from urban area government school + 20 from urban area private school) from Patiala and Fatehgarh Sahib Districts of Punjab state (India) were selected for this study. The age of the subjects was ranged from 10-12. For the purpose of this study, descriptive statistics and one-way ANOVA was calculated by SPSS software. The results revealed that Rural Government School students have better speed timing (Mean=9.65) than Rural Private School (Mean=10.10), Urban government school (Mean=10.41) and Urban Private school (Mean=10.45) students. Rural Private School students have Better explosive leg strength (Mean=145.35) than Urban Government School (Mean=128.8), Urban Private School (Mean=139.6), Rural government school (Mean=144.15).

Keywords: Speed, explosive strength, 50m dash, standing broad jump

Introduction

I had the false notion that Physical education had nothing to do with education. Today I know that Physical training should have as much place in the curriculum as mental training. (MK Gandhi 1927) [6]. Physical fitness is generally considered to be "the ability to perform daily tasks without fatigue". It includes several components: cardio respiratory fitness, muscular endurance, muscular strength, flexibility, coordination, and speed. Physical fitness is a state of well-being that comprises skill and health-related components. Fitness is a condition in which an individual has sufficient energy to avoid fatigue and enjoy life. It is necessary for elderly people to maintain and improve their physical fitness in order to satisfy healthy, high quality of daily life (Tanaka *et al.*, 2004) [16]. Physical fitness is a state of health, wellbeing and more generally, the ability to perform daily activities, occupation and sports activities. The meaning of physical fitness varies person to person. Physical fitness includes common components speed, strength, endurance, flexibility, agility and coordination. Studies state that participation in physical activity during childhood can aid the development of motor abilities and lay the foundation for good health, especially cardiovascular health. Although some studies have shown that the physical fitness levels of children, in general, are not sufficient to promote optimal health, the health related benefits of physical activity are well known. For example, regular physical activity decreases the risk of health problems, such as coronary heart disease, hypertension, and obesity. Participation in physical activity and sport can also promote social well-being, as well as mental health, among children and adolescents. For doing every day by day tasks effortlessly, effectively and precisely, these all parts must be practiced up to the level and requirement of task which you will do. For games persons these segments must be created up to elite level to accomplish his peak performance. "Fitness is not end, it is beginning. A person must get fit to perform and will not necessarily get fit by performing. Alone, Fitness is not matter of physical capacity. Man is a unit; training can make a person physically fit. But one should be interested in total fitness (including the realms of mental, moral, social emotional as well as physical fitness) when aiming someone reach his potential." Since the days of early Greeks, physical fitness has been an important objective of sports.

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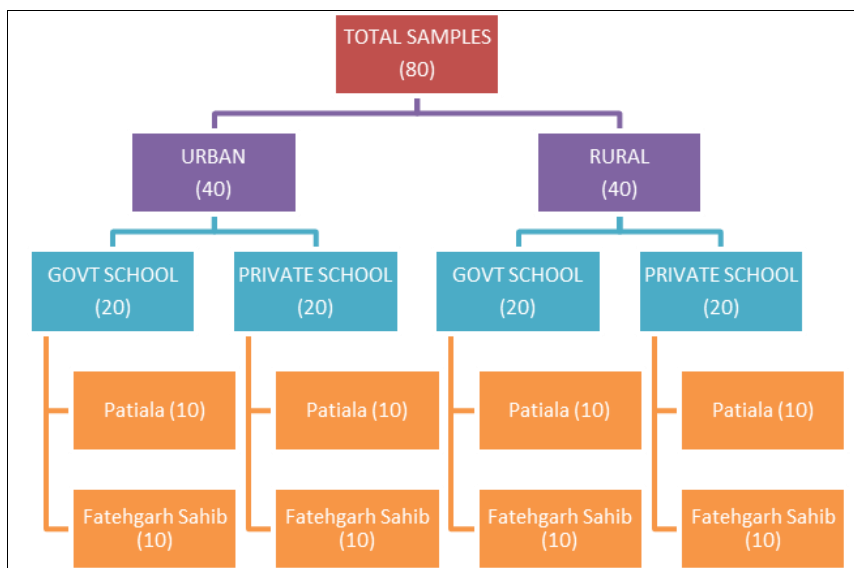
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In fact, the desire to establish a scientific approach to the development of physical fitness was the primary objective. Yet, despite the long-standing concern for physical fitness and the vast amount of research on the subject, there is evidently considerable difference of opinion within the profession as to which elements constitute physical fitness (John T. Powell 1972) [13].

Methodology

The purpose of this study was to find out the differences in selected physical fitness variables between government and private school students of rural and urban areas. For this purpose, Total 80 male students (20 from rural area

government school + 20 from rural area private school + 20 from urban area government school + 20 from urban area private school) from Patiala and Fatehgarh Sahib Districts of Punjab state (India). The age of subjects was ranged from 10-12 years. Explosive strength of the subjects was measured by standing broad jump test and speed ability was measured by 50 meter dash test. Before starting collection of data permission was taken from concerned school Head master/Principal. All the instructions were given to all the subjects very carefully. Before recording their final data demonstration was given to all subjects. It was assured to all the participants that their data will be used for study purpose only.



Categorization of Subjects

Table 1: List of Variables

Variable	Test	Unit
Speed	50M DASH	m/sec
Explosive Leg Strength	Standing Broad Jump	cm

Statistical Analysis

For the purpose of the study, descriptive statistics and one way ANOVA statistical technique was applied with the help of SPSS software. Further Post Hoc test (LSD) was used to find the significant difference between groups. The level of significance was set at 0.05 level.

Results and Findings

Different types of descriptive statistics such as mean and standard deviation was computed to describe each variable statistically. Its results have been depicted in the following tables.

Table 2: Descriptive statistics for the data of Speed Ability

	N	Mean	Std. Deviation
UGS	20	10.41	.89
UPS	20	10.45	.81
RGS	20	9.65	1.16
RPS	20	10.10	.91
Total	80	10.15	.99

(UGS- Urban Government School, UPS- Urban Private School, RGS- Rural Government School, RPS- Rural Private School)

Table no. 2 shows that the mean of the data of Urban Government School students is 10.41 and SD is .89, Mean of the data of Urban Private school students is 10.45 and SD .81, Mean of the data of Rural Government School students is 9.65 and SD is 1.16 and Mean of the data of Rural Private school students is 10.10 and SD is .91.

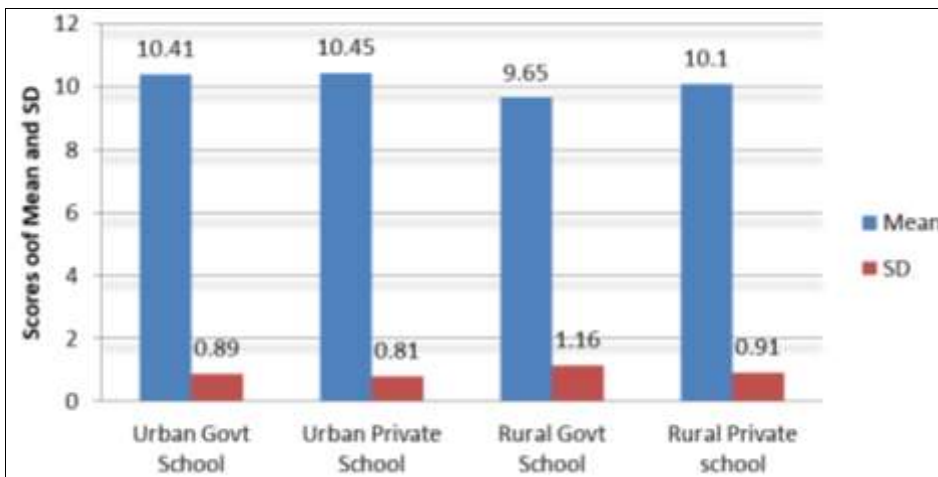


Fig 1: Graphical representation of Speed Ability

Table 3: ANOVA Table for Speed Ability

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.27	3	2.76	3.05	.034
Within Groups	68.63	76	.90		
Total	76.89	79			

Table 3 reveals that the F-value is significant at 0.05 level of significance which shows that there exists a statistical significant difference between UGS, UPS, RGS and RPS students in their speed ability.

Table 4: Pair wise comparison of Speed Ability between Groups

(I) group	(J) group	Mean Difference (I-J)	Std. Error	Sig.
RGS	RPS	-.45650	.30049	.133
	UGS	-.76750*	.30049	.013
	UPS	-.80000*	.30049	.009
RPS	RGS	.45650	.30049	.133
	UGS	-.31100	.30049	.304
	UPS	-.34350	.30049	.257
UGS	RGS	.76750*	.30049	.013
	RPS	.31100	.30049	.304
	UPS	-.03250	.30049	.914

(UGS- Urban Government School, UPS- Urban Private School, RGS- Rural Government School, RPS- Rural Private School)
 *- Highly Significant

It can be observed from table No. 4 that the difference between Rural Government School students and Rural Private school students is not significant at 5% level because the p value for this mean difference is .133 which is more than .05. Mean difference between Rural Government School students and Urban Government school students is significant at 5% level because the p value for this mean difference is .013 which is less than .05. Mean difference between rural Government School students and Urban Private school students is significant at 5% level as well as at 1% level because the p value for this mean difference is .009 which is less than .05 and .01. Mean difference between Rural Private School students and Urban Government school students is not significant at 5% level because the p value for this mean difference is .304 which is more than .05. Mean difference between Rural Private School students and Urban Private school students is not significant at 5% level because the p value for this mean difference is .257 which is more than .05. Mean difference between Urban Government School students and Urban Private school students is not significant at 5% level because the p value for this mean difference is .914

which is more than .05.

As table No. 4 depicts clear picture that Rural Government School students have better speed time (Mean=9.65) than Rural Private School (Mean=10.10), urban government school (Mean=10.41) and Rural Private school (Mean=10.45) students. Urban private school students have good speed time (Mean=10.10) than Urban Private School (Mean=10.45) and Rural Government School Students (Mean=10.41).

Standing Broad Jump

Table 5: Descriptive statistics for the data of Explosive Leg Strength

	N	Mean	Std. Deviation
UGS	20	128.80	18.33
UPS	20	139.60	15.83
RGS	20	144.15	17.40
RPS	20	145.35	20.85
Total	80	139.48	19.01

(UGS- Urban Government School, UPS- Urban Private School, RGS- Rural Government School, RPS- Rural Private School)

Table No. 5 shows that the mean of the data of Urban Government School students is 128.80 and SD is 18.33, Mean of the data of Urban Private school students is 139.60 and SD 15.83, Mean of the data of Rural Government School students is 144.15 and SD is 17.40 and Mean of the data of Rural Private school students is 145.35 and SD is 20.84.

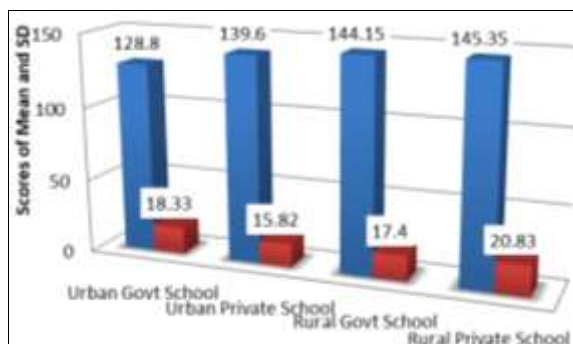


Fig 2: Graphical representation of Descriptive statistics

Table 6: ANOVA Table for Explosive leg Strength

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3406.85	3	1135.62	3.432	.021
Within Groups	25145.10	76	330.86		
Total	28551.95	79			

Table 5 reveals that the F-value is significant at 0.05 level of significance which shows that there exist a statistical significant difference between UGS, UPS, RGS and RPS students in their Explosive leg Strength.

Table 7: Pair wise comparison of Explosive Leg Strength between Groups

(I) group	(J) group	Mean Difference (I-J)	Std. Error	Sig.
UGS	UPS	-10.80000	5.75201	.064
	RGS	-15.35000*	5.75201	.009
	RPS	-16.55000*	5.75201	.005
UPS	UGS	10.80000	5.75201	.064
	RGS	-4.55000	5.75201	.431
	RPS	-5.75000	5.75201	.321
RGS	UGS	15.35000*	5.75201	.009
	UPS	4.55000	5.75201	.431
	RPS	-1.20000	5.75201	.835

(UGS- Urban Government School, UPS- Urban Private School, RGS- Rural Government School, RPS- Rural Private School)

*- Highly Significant

It can be observed from table NO. 4 that the difference between Urban Government School students and Urban Private school students is not significant at 5% level because the p value for this mean difference is .064 which is more than .05. Mean difference between Urban Government School students and Rural Government school students is significant at 5% level as well as at 1% level because the p value for this mean difference is .009 which is less than .05 and .01. Mean difference between Urban Government School students and Rural Private school students is significant at 5% level as well as at 1% level because the p value for this mean difference is .005 which is less than .05 and .01. Mean difference between Urban Private School students and Rural Government school students is not significant at 5% level because the p value for this mean difference is .431 which is more than .05. Mean difference between Urban Private School students and Rural Private school students is not significant at 5% level because the p value for this mean difference is .321 which is more than .05. Mean difference between Rural Government School students and Rural Private school students is not significant at 5% level because the p value for this mean difference is .835 which is more than .05.

Rural Private School students have Better Distance (Mean=145.35) than Urban Government School (Mean=128.80), Urban Private School (Mean=139.60), Rural government school (Mean=144.15). Rural government school students (Mean=144.15) have good distance than Urban Private School (Mean=139.60) and Urban Government School Students (Mean=128.80).

Discussion

The findings of the study showed that the Rural Government School going male students were significantly better in speed compared to urban Government school students, urban private school students and Rural Private school students. Anil kumar and Vikesh kumar (2019) concluded that rural school going female students was significantly better in speed, abdominal strength endurance and explosive leg strength compared to urban school going female students, may be due to the fact that the students belonging to rural area performs various extra activities walk to school, market, various type of play, regular physical activity whereas the lifestyle of urban students are more comfortable, better transportation and lack of physical activity.

The findings of the study showed that the Rural Private School going male students were significantly better in explosive strength compared to urban Government school

students, urban private school students and Rural Government school students. Gill Manmeet *et al.* (2017) also found that rural female students were more superior in strength, endurance, speed and agility than urban females.

Conclusion

The results of the study concludes that rural government school students have better speed ability and rural private school students have better explosive strength.

References

1. Adam C, Klissouras V, Ravazzolo M, Rensen R, Tuxworth W. Eurofit: European Test of Physical Fitness Council of Europe, Committee for the Development of Sport Rome, Italy 1988.
2. Bieng SF, Bendix T, Jorgensen K, Manniche C, Nielsen H. Physical activity, fitness, and back pain. In: Physical Activity, Fitness, and Health. Champaign, IL: Human Kinetics 1994.
3. Charles M. Difference in Health for Rural and Urban Canadians. Public Health News, Article Data 21 Sep. 2006-0:00 PST 2006.
4. Choudhary Anchal. Physical Fitness of Female Students Studying in High Schools in Rural and Urban Areas. M. Phil Thesis, Unpublished. Kurukshetra: Kurukshetra University 1998.
5. Ekblom O, Oddsson K, Ekblom B. Health-related fitness in Swedish adolescents between 1987 and 2001. Acta Paediatrica 2004;93:681-686.
6. Gandhi Mahatma. An Autobiography: the story of my experiments with truth. Boston: Beacon Press 1869-1948.
7. Gill M, Deol NS, Kaur R. Comparative study of physical fitness components of rural and urban female students of Punjabi University, Patiala. The Anthropologist 2010;12(1):17-21.
8. Gontarev S, Živković V, Kalac R. Differences between physical fitness profiles of macedonian adolescent in urban and rural areas in strumica, republic of macedonia. Research in Physical Education, Sport & Health 2014, 3(2).
9. Grant MH, Tracey AM. A Comparison of Peer and Teacher Assessment of Students' Physical Fitness Performance. The Physical Educator 1997;54:40-46.
10. Kumar AKV. Comparison of physical fitness components between urban and rural school going female students 2019.
11. Kumar S, Singh S. Comparative study of physical fitness components of rural and urban female students of Delhi University Delhi. Gyanodaya: The Journal of Progressive Education 2011;4(2).
12. Mehtap Ozdirenc, Nihal Gelecek. Physical fitness in rural children compared with urban children in Turkey. Pediatrics International 2005;47(1):26-31.
13. Powell JT. Pre-Training and Training. Physical Educator 1972;29(4):207.
14. Sandhu Surjit Singh. Physical Fitness of Rural and Urban Middle School Students of Amritsar District. M.P. Ed Thesis, Unpublished. Amritsar: G.N.D.U 1983.
15. Singh R. Comparative study of health related physical fitness components between government school and public school girls 2018.
16. Tanaka K, Nakamura Y, Sakai T. Role of exercise science in maintaining overall quality of life in humans. Japan J Phys. Educ. Hlth. Sport Sci 2004;49:209-229.
17. Uppal AK, Sareen Rajeev. Cardiovascular endurance of rural and urban school students. Research Bulletin, Research Division, L.N.L.P.E Gwalior 2000;15:11-13.