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A COMPARATIVE STUDY ON SELECTED PHYSICAL FITNESS VARIABLES BETWEEN RURAL AND URBAN HIGH SCHOOL STUDENTS

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ABSTRACT :

The purpose of the study was to compare the selected fitness variables between rural and urban high school students. For the purpose of the study total 60 subjects randomly selected in which 30 from urban area and 30 from rural area. Only high school going boys' students with the age of 14 -16 were selected. Speed, explosive power and cardio vascular endurance was selected as variables. 20-meter dash was employed to assess the speed, for explosive power standing broad jump test and for cardiovascular endurance six-minute run and walk test was conducted. To analyse the data mean, SD and 't' tests were employed. The result found that there was no significant difference found between rural and urban high school students related to speed and explosive power, whereas significant difference found on variable cardiovascular endurance.

KEYWORDS : *Physical Fitness, Speed, Endurance, Explosive Power, Rural, Urban.*

INTRODUCTION :

School physical education programs are designed to help children develop proficiency in fundamental motor skills, such as throwing and catching, as well as movement concepts like balance. These foundational skills form the basis for the later acquisition of specialized abilities in activities like sports, fitness, games, and dance. As students advance through their school years, their skill development is paired with a deeper understanding of physical activities and fitness concepts.

At the high school level, students are often given the opportunity to select from a variety of activities as part of their physical education curriculum. Some programs may extend into the community, allowing for a broader range of activities and encouraging students to utilize local facilities during their leisure time (Deborah A. Wuest and Charles, 2006).

Physical fitness is a crucial aspect of overall health and plays a vital role in the development and well-being of individuals, especially during adolescence. High school students represent a critical age group where physical activity patterns and fitness levels are shaped, influencing their lifelong health behaviours. Factors such as lifestyle, environment, and access to resources significantly affect the physical fitness of students, making it essential to explore the differences between various populations.

Rural and urban settings often present contrasting opportunities and challenges when it comes to physical fitness. Rural students may engage in more physical labor and outdoor activities, while urban students might have greater access to sports facilities and structured physical education

programs. These differences can influence various fitness components, such as strength, endurance, flexibility, and coordination.

Comparing the physical fitness levels of rural and urban high school students can provide valuable insights into the impact of environmental and socio-economic factors on fitness development. Such studies are essential for designing targeted interventions and policies to ensure equitable opportunities for physical activity and fitness improvement, regardless of geographic location. This research aims to examine and compare selected physical fitness variables among high school students from rural and urban areas, contributing to a better understanding of the disparities and potential solutions for promoting physical fitness in both settings.

OBJECTIVE OF THE STUDY:

The main objective of the study was to compare the selected physical fitness components between urban and rural high school students

METHODOLOGY:

Selection of Subjects:

For the purpose of the study total 60 subjects randomly selected in which 30 from urban area and 30 from rural area. Only high school going boys' students with the age of 14 -16 were selected.

Selection of Variables and Tests:

1. Speed
2. Explosive Power
3. Cardiovascular endurance

Administrative of tests:

20-meter dash was administered to assess the speed and the best time was recorded as a score. **Standing Broad Jump** was conducted to measure explosive strength, and scoring was recorded in meters. **Six-minute Run and Walk** test was used to assess the endurance of the selected subjects:

RESULTS AND DISCUSSIONS:

For the analysis of the collected data the descriptive statistics and 't' test was used. The statistical comparison in speed, Explosive Power and Endurance between urban and Rural school students has been presented in table 1.

Table 1: Shows statistical comparison in speed, Explosive Power and Endurance between urban and Rural school students

	Groups	N	Mean	Std. Deviation	t	df	p value
Speed	Rural	30	4.79	.35	-.377	58	0.678
	Urban	30	4.83	.40			
Explosive Power	Rural	30	1.42	.08	1.354	58	0.059
	Urban	30	1.38	.15			
Endurance	Rural	30	1079.80	86.42	2.176	58	0.02
	Urban	30	1015.40	137.14			

*Significance level 0.05

The table 1 depicts that the mean and SD of Speed variable of Rural and Urban students was 4.79 ±0.35 and 4.83 ±0.40 respectively. The found 't' value shows that the -.377 which was not significant at 0.05 level as the p value was 0.678. hence there was no significant difference found between rural and urban high school students related to speed variable. The mean and SD of Explosive power variable of Rural and Urban students was 1.42 ±0.08 and 1.38 ±0.15 respectively. The found 't'

value shows that the 1.354 which was not significant at 0.05 level as the p value was 0.059 hence there was no significant difference found between rural and urban high school students related to Explosive power variable. The mean and SD of Endurance variable of Rural and Urban students was 1079.80 ±86.42 and 1015.40 ±137.14 respectively. The found 't' value shows that the 2.176 which was significant at 0.05 level as the p value was 0.02. hence there was a significant difference found between rural and urban high school students related to endurance variable.

The descriptive statistics of selected variables were presented in figure 1.

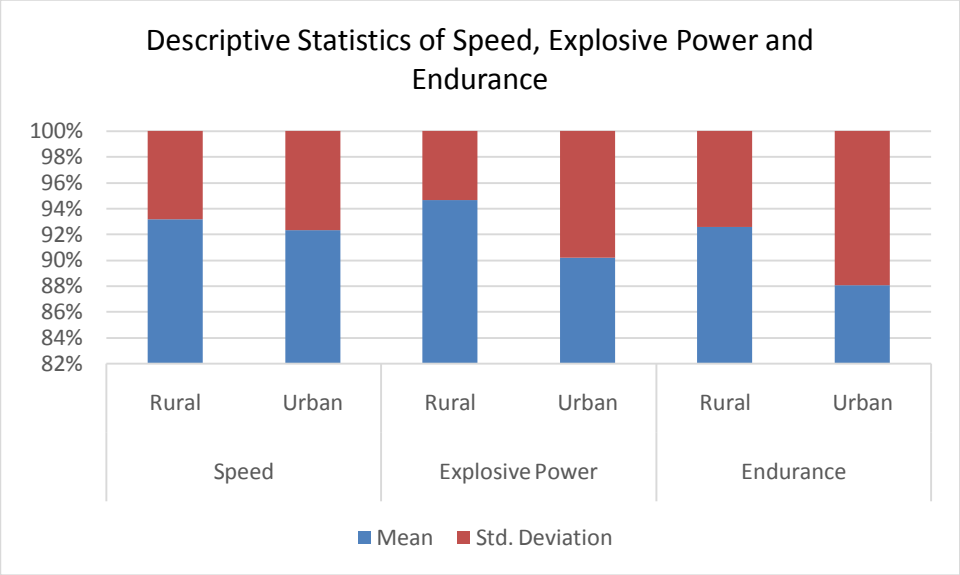

Figure 1: The descriptive statistics of Speed, Explosive Power and Endurance of Rural and Urban students.

DISCUSSION:

The findings of this study reveal that there was no significant difference between rural and urban high school students concerning the speed and explosive power variables. However, a significant difference was observed in the endurance variable. The absence of a significant difference in speed between rural and urban students suggests that both groups may have similar levels of neuromuscular efficiency, reaction time, and sprinting mechanics. Similarly, explosive power, which is largely dependent on muscle strength, neuromuscular coordination, and anaerobic capacity, did not show a significant difference between rural and urban students. This could be attributed to equal participation in school-based sports, playground activities, and other physical education programs that contribute to developing lower-body strength and power. Unlike speed and explosive power, endurance levels showed a significant difference between rural and urban students, which may be explained by variations in lifestyle, daily physical activity, and habitual movement patterns. Rural students typically engage in more physically demanding daily routines, including walking or cycling long distances, agricultural work, and other labour-intensive activities. Such consistent low-to-moderate-intensity physical activity could contribute to better cardiovascular efficiency, muscular endurance, and aerobic capacity.

CONCLUSIONS:

On the basis of findings of the study the following conclusions were drawn;

1. There was no significant difference found between rural and urban high school students related to speed variable.
2. There was no significant difference found between rural and urban high school students related to Explosive power variable.

3. There was a significant difference found between rural and urban high school students related to endurance variable.

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