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COMPARATIVE STUDY OF PHYSICAL FITNESS COMPONENT OF URBAN AND RURAL COLLEGE GIRLS

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ABSTRACT:

This study was conducted to compare the physical fitness components—speed, strength, and endurance—and to find the correlation between fitness scores and body weight of rural and urban college girls in Sitapur district. For this study, 100 first-year graduation students were randomly selected, with 50 subjects from an urban college and 50 from a rural college. The results showed that rural college girls exhibited a weak positive correlation between body weight and fitness score, while urban college girls showed a weak negative correlation. Significant differences were found in incline pull-ups, standing broad jump, 600-meter run/walk, fitness scores, and body weight. However, the 50-meter dash showed no significant difference. Rural college girls performed best in the standing broad jump and had the highest overall fitness scores. In contrast, urban college girls performed better in the 50-meter dash, incline pull-ups, and 600-meter run/walk. Additionally, urban college girls had a higher average body weight compared to rural college girls.

KEYWORDS: *Physical Fitness, Body Weight, Urban Girls, Rural Girls.*

INTRODUCTION:

Physical fitness is a vital aspect of overall health and well-being for every individual, and this is equally true for girls. In today's world, where sedentary lifestyles and unhealthy eating habits are becoming more common, maintaining physical fitness has become more important than ever. Physical fitness is essential for everyone, as it helps individuals meet their daily needs and responsibilities effectively. It also forms the foundation of a healthy and successful life. Physical fitness refers to a person's ability to carry out daily tasks without undue fatigue and still have enough energy to enjoy leisure activities. It is not a single aspect but includes several components. Some of the main components are speed, endurance, strength, agility, and flexibility. Physical fitness helps girls to develop strength, flexibility, endurance, and coordination. Regular physical activity supports the healthy development of muscles and bones, improves cardiovascular health, and maintains a healthy body weight. It also helps prevent lifestyle-related diseases such as obesity, diabetes, and heart problems from an early age. Moreover, engaging in physical activities such as sports, running, yoga, and fitness exercises has a positive impact on mental health. It reduces stress, anxiety, and symptoms of depression, while increasing self-esteem and emotional resilience. For adolescent girls especially, regular exercise can help manage hormonal changes and promote a more positive body image.

Boone administered the AAPHER test on rural and urban boys and significant difference was found. However, Gross determined that there was no significant relationship between physical fitness and scholastic achievement. Ross found a significant improvement in girls' fitness levels after two

semesters of a physical education course among those who actively participated in the activities. Ray conducted a study and found no significant difference in the physical fitness of tribal and urban students of Tripura.

PURPOSE OF THE STUDY

The purpose of the study was to compare the physical fitness components—speed, strength, and endurance—between urban and rural college girls of Sitapur district, and to examine the correlation between their fitness scores and body weight.

SELECTION OF SUBJECTS

For this study, a total of 100 subjects were randomly selected from first-year graduation students. Among them, 50 subjects were selected from an urban college and 50 from a rural college in Sitapur district.

CRITERION MEASURES

Criterion Measure for this study was Speed, Strength, and Endurance.

i) Speed – 50 Mts dash
ii) Incline pull Ups – Shoulder Strength.
iii) Standing Broad Jump – Leg Strength
iv) 600 mts run or walk – Endurance.

COLLECTION OF DATA

1. 50 Mts Dash – Score was time to complete the run (time in second).
2. Incline Pull ups – Score was counting of incline pull (numbers).
3. Standing Broad Jump – Score was distance covered in jump (in meter).
4. 600 mts run or walk – Time (in Second) taken by the subject to complete the run.
5. Body Weight – Weight of individual in kg

ANALYSIS OF DATA

Collection of data were analyzed by using Product moment correlation, measure of central tendency and t-test at 0.05 level of significance. Analysis of data was presented in table 1, table 2 & table 3.

Table 1
T-test and Compression of Mean Value of Physical Fitness Test Items

S.no	Test item	Rural College Girls	Urban College Girls	Mean Difference	T-Test Value Tab T= 2.00
1	50 Mts dash	8.09	8.36	0.27	1.64
2	Incline pull Ups	41.46	37.66	3.8	2.29*
3	Standing Broad Jump	1.73	1.65	0.08	2.12*
4	600 mts run or walk	121.20	130.62	9.42	4.93*
5	Fitness Score	26.72	24.40	2.32	4.94*
6	Body Weight	38.20	40.60	2.4	4.53*

*Significant, $t_{0.05}$ (49). Tab T=2.00

Table 1 shows that there was a big difference between rural and urban college girls in incline pull-ups, standing broad jump, 600m run/walk, overall fitness score, and body weight. However, there was no difference in the 50m dash. The table also shows that rural college girls had better average scores in all fitness tests and overall fitness compared to urban college girls. Rural girls also had lower body weight than urban girls. The scores for the 50m race and the 600m run/walk were based on the

time taken to complete the events. A shorter time indicated better performance, while a longer time indicated poorer performance.

Fig1- Mean Value of Fitness Test Items, Fitness Score and Body Weight

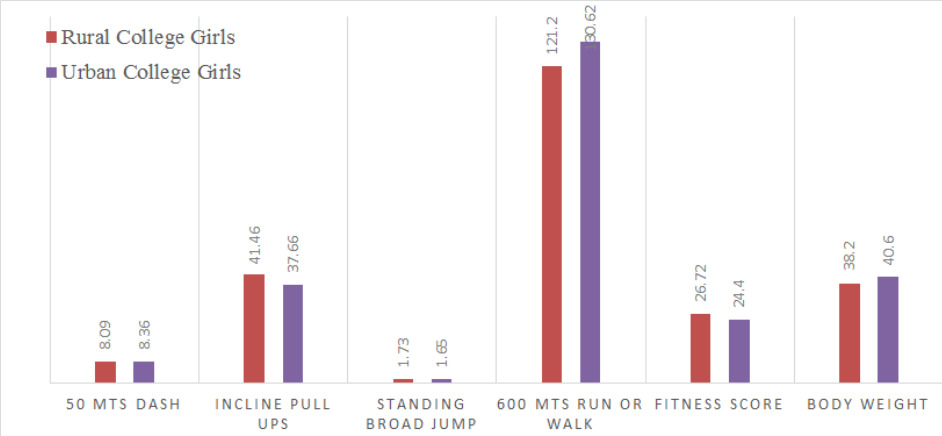


Table 2
Compression of Highest and Lowest Score of Physical Fitness Test Items

S.no	Test item	Rural College Girls			Urban College Girls		
		Lowest Score	Highest Score	Range	Lowest Score	Highest Score	Range
1	50 Mts dash	10.26	7.09	3.17	10.37	6.93	3.44
2	Incline pull Ups	28	59	31	24	65	41
3	Standing Broad Jump	1.41	2.06	0.65	1.32	2.02	0.7
4	600 mts run or walk	140	114	26	150	108	42
5	Fitness Score	23	32	9	19	30	11
6	Body Weight	33	45	8	37	49	12

Table 2 shows that the range (difference between highest and lowest scores) for all fitness test items, fitness scores, and body weight was higher among urban college girls. Rural college girls had lower body weight compared to urban girls. Urban girls got the lowest scores in most of the fitness tests. However, they performed better in the 50m dash, incline pull-ups, and 600m run/walk. In the standing broad jump, rural college girls scored higher than urban girls.

Fig 2- Compression of Lowest Score of all

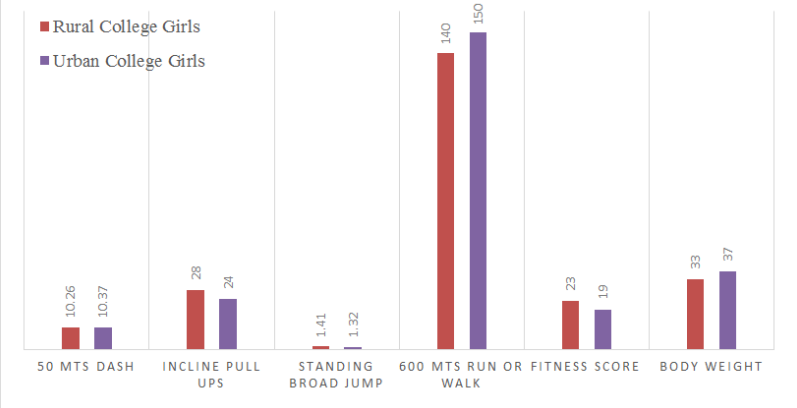


Fig 3- Compression of Highest Score of all

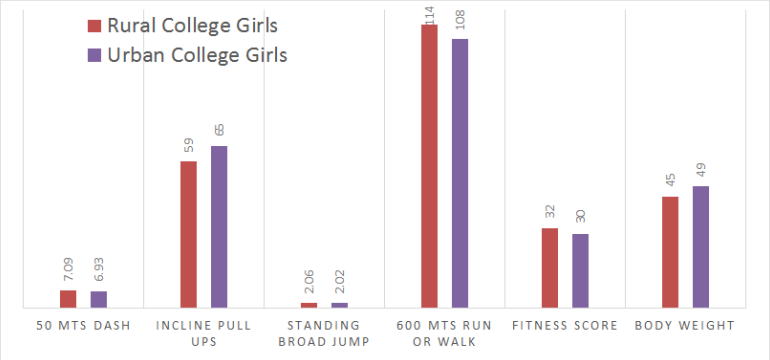
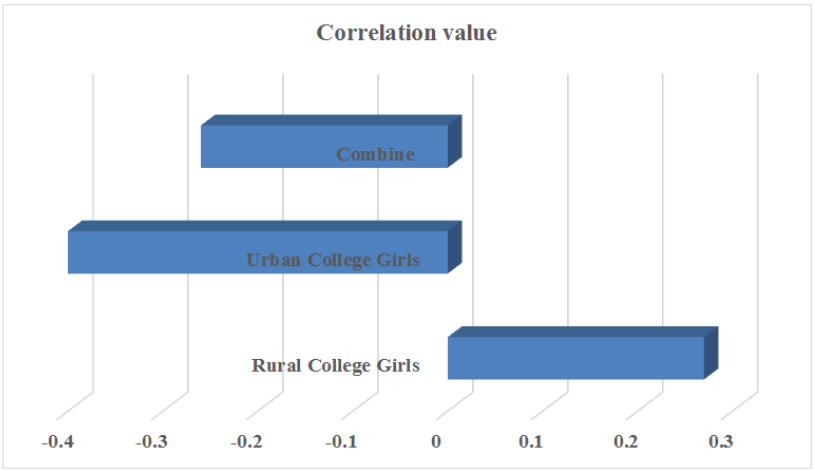


Table 3
Correlation value of fitness score and body weight

	Rural College Girls	Urban College Girls	Combine data
Correlation value	**0.27**	**- 0.40**	**- 0.26**

Fig 4- Correlation value of all



The table 3 and Fig 4 show that there is a weak correlation in rural college girls and in the combined data, while urban college girls show a moderate correlation. The correlation is negative for urban college girls and the combined data, which means that as weight increases, performance decreases. However, in rural college girls, the correlation is positive, meaning as weight increases, performance also increases.

DISCUSSION OF FINDINGS

The findings of the study reveal that incline pull-ups, standing broad jump, 600-meter run/walk, fitness score, and body weight show significant differences, while the 50-meter dash shows no significant difference. Urban college girls showed the lowest performance in all fitness test items and overall fitness score. Rural college girls performed best in the standing broad jump and had the highest fitness scores. However, urban college girls performed better in the 50-meter dash, incline pull-ups, and 600-meter run/walk. The performance range was wider among urban college girls, and their average body weight was also higher. Although a correlation was found between weight and performance, it was weak. On average, rural college girls had higher mean scores across all fitness items. A negative correlation was observed in urban college girls and in the overall data, while rural college girls showed a positive correlation. A negative correlation means that as weight increased, the physical fitness score

decreased. In contrast, the positive correlation in rural college girls indicates that as their weight increased, their fitness score also increased. Rural area girls were more involved in physically demanding activities, such as helping their parents or guardians with household chores, agricultural work, or other forms of manual labor. These daily physical tasks contributed to maintaining their physical strength and endurance. Additionally, rural girls were less exposed to fast food and processed diets, often consuming more traditional and homemade meals, which are generally healthier and more balanced. As a result of their active lifestyle and healthier eating habits, their body weight tended to be lower, which contributed to their better physical fitness levels compared to their urban counterparts.

CONCLUSIONS

The study concludes that rural college girls generally exhibited better physical fitness levels than their urban counterparts. Their active lifestyle, involvement in physical labor, and healthier dietary habits contributed to lower body weight and higher fitness scores.

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