

# Comparison of Physical Fitness Level Urban and Rural School Going Female Student

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**Abstract:** The aim of this study is to investigate the effects of environmental factors on physical fitness of rural and urban children. **Methods:** To reveal the differences between physical fitness of children living in urban and rural districts of North 24 parganas West Bengal population, 20 of 9-12 years old, female primary school children from Barasat schools of North 24 Pgs. Testing procedures were selected physical fitness tests. **Results:** The results showed that body mass index higher in the urban children ( $p < 0.05$ ). In speed, abdominal strength endurance and leg strength were significantly higher in the rural children. **Conclusion:** The significantly lower speed, abdominal strength endurance and explosive leg strength of urban children may indicate lower habitual physical activity level.

**Keywords:** Physical fitness, Female, Urban and Rural.

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## 1. INTRODUCTION

Physical activity is an essential component of a healthy lifestyle. In combination with healthy eating, it can help prevent a range of chronic diseases, including heart disease, cancer, and stroke, the three leading causes of death. Risk factors for these diseases can begin early in life and be mitigated early in life by adopting regular physical activity habits. Physical activity helps control weight, builds lean muscle, reduces fat, and contributes to a healthy functioning cardiovascular system, hormonal regulatory system, and immune system; promotes strong bone, muscle and joint development; and decreases the risk of obesity. Research has also found that physical activity is related to improvements in mental health, helping to relieve symptoms of depression and anxiety and increase self-esteem. In addition, some studies show that physical activity is correlated with improved academic achievement.

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. Differences in mean height, weight and physical fitness levels of children belonging to different socio-economic strata and/or towns or villages occur in almost all developed as well as in developing countries, and also in North 24 Pgs.

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<sup>6</sup>. The results from fitness assessments can serve a variety of purposes. For example some studies revealed that, results from fitness tests can be utilized by teachers to increase the effectiveness of fitness activities that have been incorporated into the physical education program over a period of time. These fitness test scores are often reported as group means and may even be compared with the scores of students from other school.

In literature it has been suggested that the distribution of children’s physical fitness across geographic boundaries, such as rural-urban districts needs to be studied in different climate, economic and cultural.

Therefore, the aim of this study was to evaluate physical fitness levels school going urban and rural female student of North 24 parganas.

### Objectives of the Study:

1. To analyse the relationship between physical fitness of urban and rural school going students.

### Methodology:

Total twenty (N=20) FEMALE subjects out of which TEN students from URBAN school and TEN from RURAL were randomly selected for the study of whom the Data were collected. The age of the subjects were ranged between 9 to 12 years. The variables selected under Physical fitness parameters were 50mt. Run taken in second to measure the SPEED, Standing Broad Jump taken in meters to measure the EXPLOSIVE LEG STRENGTH and 1 minute Bend Knee Sit Ups taken in number to measure the ABDOMINAL STRENGTH ENDURANCE.

### Statistical Techniques:

To compute mean difference between urban and rural in relation to selected physical fitness components mean, standard deviation and independent t-test was used (Statistical Package for the Social Sciences, version 17.0, SPSS Inc, Chicago, IL, USA). Significant level was set at 0.05 level.

## 2. RESULT

After converting the raw data into group data, statistical test were employed to find out necessary information. The result and findings of the same are given in the table and illustration bellow. Table -1

**Table1. Comparative analysis of various fitness test scores**

VARIABLES	GROUPS	MEAN	SD	SED	"t" Value
50m	Urban	11.07	1.11	0.27	<b>3.51</b>
	rural	10.12	0.46		
Sit-ups	Urban	24.6	3.06	0.88	<b>5.79</b>
	rural	29.9	2.71		
Standing broad jump	Urban	1.13	0.08	0.02	<b>3.50</b>
	rural	1.20	0.07		
Height	Urban	1.36	0.04	0.009	7.77
	rural	1.29	0.04		
Weight	Urban	37.35	2.28	0.84	8.14
	rural	30.51	3.01		

\*significant,  $t=0.05, df=18$

Table 1 shows the nature and characteristics of fitness score in urban and rural school going female student of north 24 parganas. Lower the scores of timing in the variable speed denotes better status of fitness as these are in respect to distance traveled in shortest possible time. In variables like abdominal strength endurance and explosive strength higher the score, better is the fitness status.

The perusal of Table 1 reveals that there lies a statistically significant difference between urban and rural school going female students belonging to north 24 parganas. The rural school going female students were significantly better than urban students in speed  $t$ -value = 3.51(>0.05), abdominal strength endurance  $t$ -value = 5.79(>0.05) and explosive leg strength  $t$ -value = 3.50(>0.05).

Using descriptive statistics in physical variables of urban and rural school going female students have been prepared and presented in fig.-1

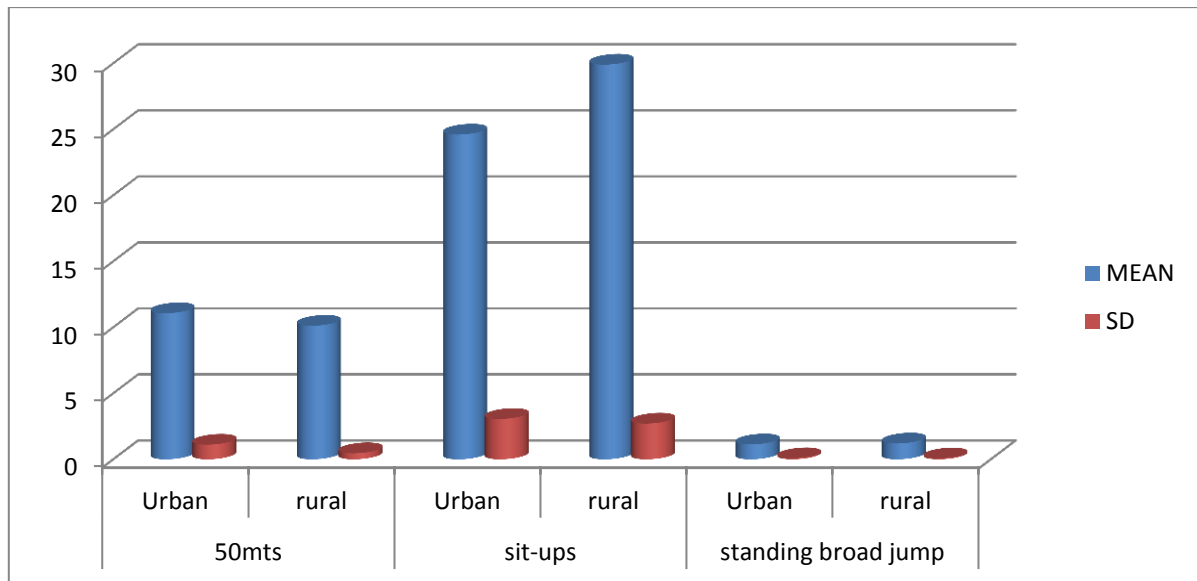


Fig.1

### 3. DISCUSSION

The findings that the 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. The fact that the easy livelihood condition or lack of physical activity in the urban students due to the facts of the findings.

### 4. CONCLUSION

The main aim of the study was to examine potential differences in physical fitness of school going female students in both urban and rural settings. This study gives reference values on height, body weight and some physical performance tests of north 24 parganas school going female students. Recent study stated that physical activity is correlated with a number of factors including demography, psychology, society and environment. In this study only the environmental factor was analyzed.

In conclusion and within the study's limitations, it is suggested that the place of residence has no clear impact on physical fitness of 9-12 year old north 24 parganas female school going students and also the significantly lower speed, abdominal strength endurance and explosive leg strength of urban student may indicate lower habitual physical activity level in urban students.

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