

A COMPARATIVE STUDY ON SELECTED PHYSICAL FITNESS COMPONENTS BETWEEN RURAL AND URBAN AREA COLLEGE STUDENTS

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ABSTRACT

The purpose of the present study was to compare physical fitness components namely power, agility and strength in between Rural and Urban Area College Students. For this study 30 college students (15 male and 15 female) were randomly selected from Sanjay Gandhi Post Graduate (SGPG) College, Sarurpur Khurd, Meerut which is purely situated in rural area of Meerut District and other 30 college students (15 male and 15 female) from Meerut College, Meerut which is purely situated in Urban Area of Meerut District. Age range of the subjects for this study was between 18-23 years. Selected Physical Fitness Components (Power, Agility and Strength) through standing broad jump (for power measurement), zigzag run (for agility measurement) and medicine ball put (for shoulder strength measurement). Fitness component test were designed according to Barrow Motor Ability Test and 't' test was used to test the hypothesis. On the basis of statistical analysis it was concluded that there was a significant difference in power, agility and strength between Rural and Urban Area College students.

Keywords: Physical fitness, power, agility, strength.

1. INTRODUCTION

Physical fitness provides us with a basis for optimal physiological health and capacity to enjoy the life. As we regularly need food, rest and sleep so do we need daily exercise for the maintenance of our physical capabilities (**Boudard C., Shepherd R.J., 1994**). It is very difficult to define precisely that we generally relate it to the accomplishment of a particular task assigned to a person. If he is able to do job, we declare him fit for the job, otherwise not. The task may be easy or difficult. If the task is easy, it can be performed with a little effort but if the task is tough, then great amount of effort is needed to accomplish it. Therefore a person may be fit to do an easy task, but unfit to do a heavy task (**Johnson B.L., 1982**).

“A measure of the body’s ability to function efficiently and effectively in work and leisure activities resist hypo-kinetic diseases (diseases from sedentary life style) and to meet emergency situations”. It depend on ten major factors namely Body Composition, Muscular Strength, Muscular Endurance, Cardiovascular Endurance and Flexibility (these five factors are health related and can be developed through proper training methods) Agility, Balance, Power, Speed and Co-ordination ability. The last five factors are skill related and can be improved through regular practice and motor skill, but two factors namely Power and Speed require in both (**Kumar Gulshan, 2013**).

Physical fitness is different in different environment. Personal and environmental factors to consider when aiming to improve participation in physical activity in children with Spina Bifida : a qualitative study. The motor ability has been defined as the present acquired and innate ability to perform motor skill and a general and functional nature, exclusive of highly specialised sports techniques. The motor fitness is the limited phase of physical fitness. We can measure the motor ability of individual put the measure of fitness element. Considering it as a single innate ability, the early researchers defined motor ability as a general physical efficiency, the immediate capacity of individual to perform various students (**Kaur Ramanjit, 2010**).

2. MATERIAL AND METHODS

2.1 Subjects:

To achieve the purpose of the study 30 college students (15 male and 15 female) were randomly selected from Sanjay Gandhi Post Graduate (SGPG) College, Sarurpur Khurd, Meerut which is purely situated in rural area of Meerut District and other 30 college students (15 male and 15 female) from Meerut College, Meerut which is purely situated in Urban Area of Meerut District. Random sample technique was applied to select the subjects. Age Group of the subjects ranged from 18-23 years. The study was conducted in the month of October, 2021.

2.2 Selection of Variables and Test:

Three selected components of physical fitness namely Power, Agility and Shoulder Strength were tested in this study through Standing Broad Jump, Zigzag Run and Medicine Ball Put designed according to Barrow Motor Ability Test:

	VARIABLES	TEST
A.	Power	Standing Broad Jump
B.	Agility	Zigzag Run
C.	Shoulder Strenght	Medicine Ball Put

2.3 Testing Procedure:

2.3.1 Standing Broad Jump – with the feet parallel to each other and behind the starting line, the subject hands the knees and swings the arms and jumps as forward as possible within three trial highest score were recorded in feet & inches.

2.3.1 Zigzag Run – the subjects performed the test in drawing field as prescribed for Zigzag run test in Barrow Motor Ability Test and time were recorded in seconds.

2.3.3 Medicine Ball Put – the subject stands between two restraining lines which are 15 feet apart, subject attempts to propel the sixteen pound (for male) and eight pound (for female) medicine ball put as far as possible without over stepping on the restraining line. But subject hold the ball at the junction of his neck and shoulder and try to put the ball at the body approximately 45 degree. Within three trials highest were recorded in feet and inches.

2.4 Statistical Techniques

For statistical analysis of the collected data mean and standard deviation were first calculated and then ‘t’ test was used to find the significant difference. The level of significance was set at 0.05 level.

3. RESULT

The calculated data on standing Broad Jump, Zigzag Run and Medicine Ball Put of both college students have been statistically analyzed and presented in tabular form:

**TABLE 1
COMPARISON OF THE SCORES OF ALL THREE COMPONENTS OF RURAL AND URBAN MALE SUBJECTS.**

Variables	Rural Area		Urban Area		‘t’ value
	Mean	S.D.	Mean	S.D.	
Power	7.21	0.46	6.32	0.87	3.52
Agility	23.24	0.81	24.87	2.45	3.95
Strength	25.53	2.36	20.07	1.79	7.15

*Significant at 0.05 level ‘t’ 0.05 (28) = 2.04

It is observed from Table – 1 that the calculated ‘t’ value of Power (3.52) is more than the tabulated ‘t’ (2.04), the calculated ‘t’ value of Agility (3.95) is more than the tabulated ‘t’ (2.04) and the calculated ‘t’ value of Strength (7.15) is also more than the tabulated ‘t’ (2.04). hence it may be considered that there was significant difference found between the Rural Area Male College Student’s and Urban Area Male College Student’s physical fitness.

. FIGURE – 1

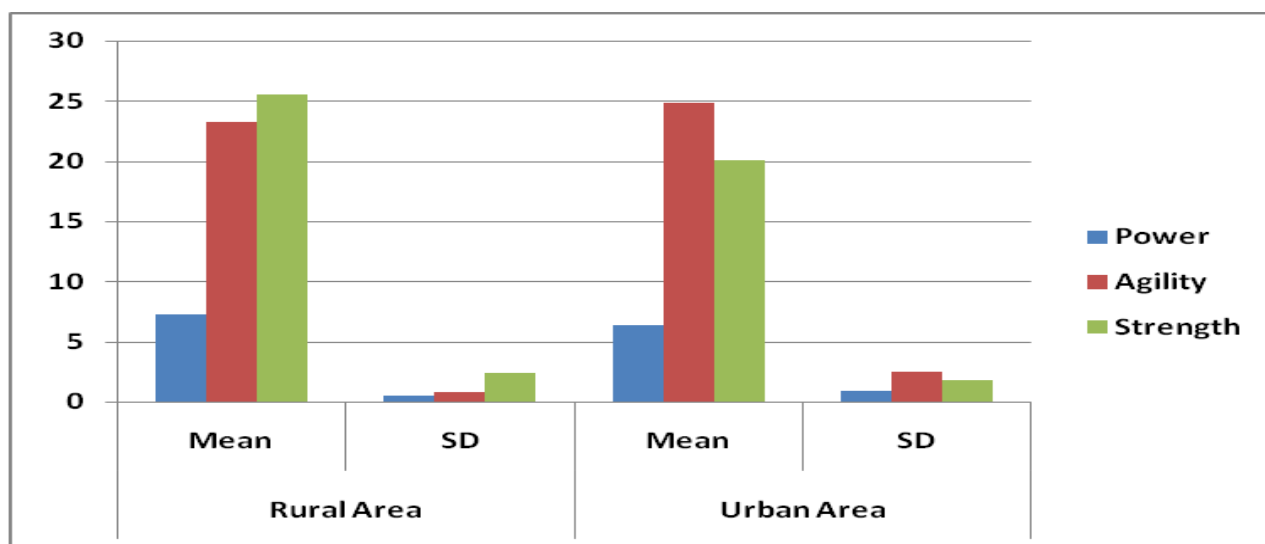


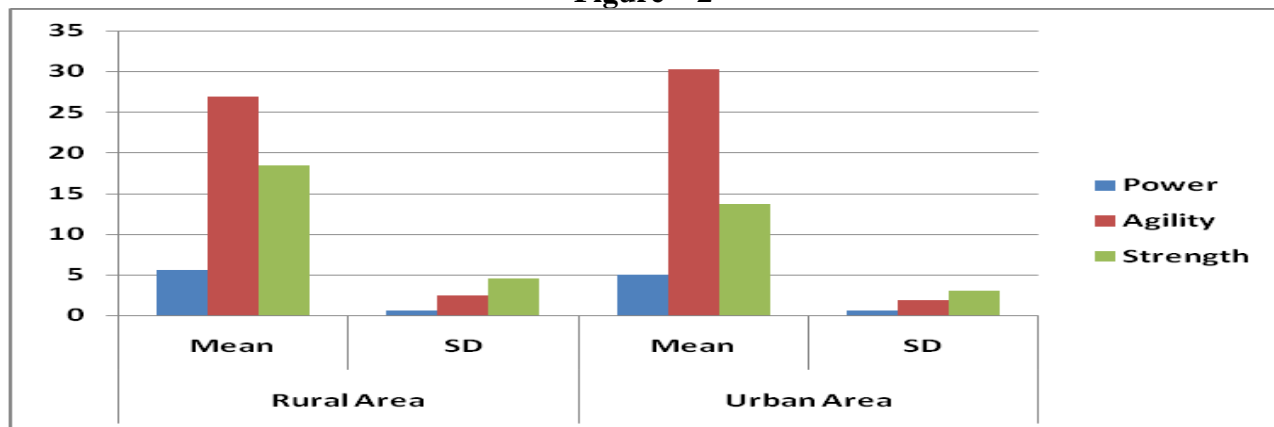
TABLE 2
COMPARISON OF THE SCORES OF ALL THREE COMPONENTS OF RURAL AND URBAN FEMALE SUBJECTS.

Variables	Rural Area		Urban Area		't' value
	Mean	S.D.	Mean	S.D.	
Power	5.55	0.56	4.95	0.60	2.81
Agility	26.83	2.38	30.21	1.90	4.31
Strength	18.40	4.54	13.63	2.96	3.41

*Significant at 0.05 level 't' 0.05 (28) = 2.04

It is observed from Table – 2 that the calculated 't' value of Power (2.81) is more than the tabulated 't' 2.04), the calculated 't' value of Agility (4.31) is more than the tabulated 't' (2.04) and the calculated 't' value of Strength (3.41) is also more than tabulated 't' (2.04). Hence it may be considered that there was a significant difference found between the Rural Area Female College Student's and Urban Area Female College Student's physical fitness.

Figure – 2



4. DISCUSSION

According to health and exercise science in order to keep healthy, a person must sweat out at least 30 minutes in a day for 5 days in a week. A healthy and fit person has an influence on the risks of morbidity and mortality, and therefore can reduce these risk. Disease prevention and health promotion should be implemented as early as possible both in childhood and adolescence. Previous studies have focused on specific health behaviour. Regular physical activity prevents or limits weight gain, and gain in body mass index (BMI). The above mention tables shown that there have significant on selected students. Rural Area's both Male and Female College Students have better fitness level than Urban Area's Students.

Sajay Gandhi Post Graduate (SGPG) College, Sarurpur Khurd, Meerut is situated in Rural Area of Meerut district and Meerut College, Meerut is in the mid of city. This result is consistent with the findings of similar study conducted by **Mehtap and Nihal (2005)** who conducted a study on physical fitness in Rural children compared with Urban children in turkey and found that children living in the Urban Area were more inactive and obese than Rural children. **Manmeet Gill, Nishan Singh Deol and Ramanjit Kaur (2010)** were conducted a study on selected fitness component of Rural and Urban Female Student's of Punjab University and found the Female's of Rural Area are comparatively better than Urban's.

5. CONCLUSION

On the basis of 't' test the present study it was conclude that there is a significant difference in Power, Agility and Strength. It also conclude that Rural Area both Male and Female College Student's have better fitness than Urban Area's College Students.

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