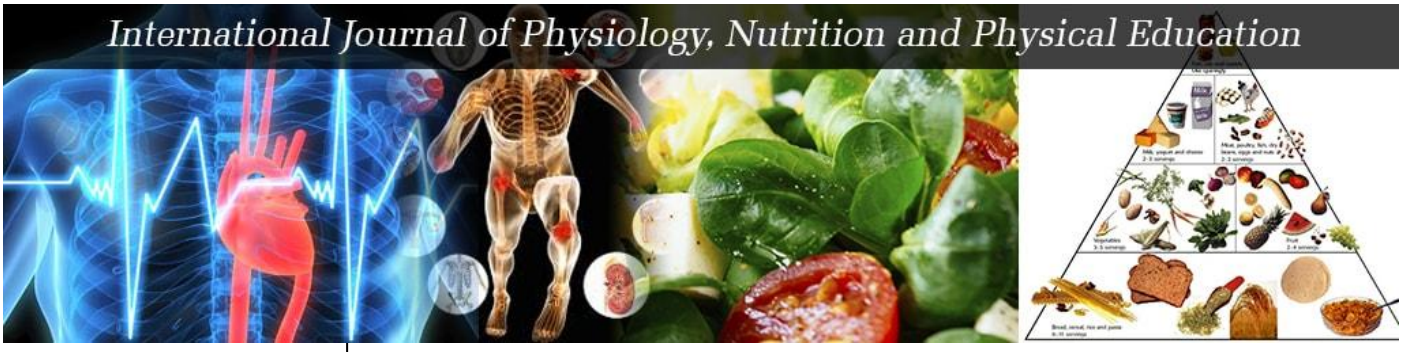

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Study of motor fitness components of rural and urban school going students

Parveen Dhayal and Dr. Ashok Kumar

Abstract
The main aim of this study is to know the motor fitness level of rural and urban school going students of Haryana state. 50 Rural and 50 Urban boys students of the class 8th to 12th studying in different schools district Rohtak and Sonipat of Haryana were selected as subject for this study. The Barrow Motor ability test battery was selected for testing the motor ability of students which included agility, explosive power, hand-eye coordination, arm and shoulder co-ordination, strength and speed. The data collected was analyzed statistically to find out the mean differences scores of the rural and urban subjects. The mean, Standard deviation and t-test were used for analyze the data. This different test was at the 0.05 level of significance. The results of study showed that there is no significance difference between rural and urban boys students in Zig-Zag run, Wall pass, 60 Yards Dash, Softball throw, and Medicine Ball put and significance difference between rural and urban boys students of Rohtak and Sonipat district of Haryana in Standing Broad Jump.

Keywords: physical activity, rural students, urban students

Introduction
Interest in sports participation has increased tremendously during recent decades. There is great concern among people in general to improve their health and body composition. In addition, fitness and exercise have been claimed to decrease mortality. Sports activities have, therefore, been described as beneficial for society as a whole as well as for the individual. A certain amount of physical activity is considered to be an important element in Health Promotion. Fitness means many things to many people. The physician may view fitness as the absence of disease. The bodybuilder may consider it well-developed muscles, while the young women may think its curvaceous figure. The coach defines fitness as the factors related to success in sports and the physical educator Looks for strength endurance flexibility speed and agility.

In more meaningful person's personal terms, fitness is a reflection of your ability to work with vigor and pleasure, without undue fatigue, with energy left for enjoying hobbies and recreational activities and for meeting emergencies. It relates to how you look and how you feel and because the body is not compartment separate from the mind, it relates to how you feel mentally as well as physically.

The urbanization process takes place in various countries under different circumstances in recent times. Due to globalization and growing economic growth, many countries are rapidly undergoing important demographic, epidemiological and nutrition transitions. Urbanization and increasing income have a great impact on health and well being due in part to change in dietary and physical activity patterns. The transition from rural agricultural societies to urban societies, which come with major changes, have forced to a large extent the social and biological transformation of populations throughout the world. The differences in growth, body dimensions, body composition and fitness levels of students due to urban and rural environmental disparities have come into the center of attention during the last few years.

The surroundings factor escort to modify in the motor fitness level between students. The impact of socioeconomic status, ethnicity and area of residence (urban or rural) has been reported on the level of motor fitness among students, with no consistent patterns emerging observed that greater motor fitness of students had a significant relationship with larger living

space and residing in rural areas (Dollman J, 2002) [4]. The rural area is generally linked to a more strenuous, physically dynamic way of life that is advantageous to motor fitness.

On the other hand, changes in lifestyle due to living in urban settings may also affect motor fitness. Environmental and social changes related to living in urban areas such as crowding, changing the neighborhood, safety worries and inadequate grounds for play may possibly contribute to the lower level of motor fitness among students (Pena *et al*., 2003) [1]. Similar studies also reported which showing the significance of the living area as a determinant of motor fitness in students. Differences in motor fitness levels of students from different socio-economic groups and rural and urban areas reported in developed and developing countries. Contradictory studies have been published on motor fitness components of urban and rural students. In some cases, there were no significant differences in motor fitness between urban and rural students. While some studies reported that the urban students have superior motor fitness compared to students from rural areas other studies reported contradictory findings Reports suggested that the motor fitness of students across rural and urban environments should be studied in different climatic, economic and cultural perspectives.

It is now widely accepted that urbanization is as much a social process where societal and biological alterations of populations occur. Urban and rural environmental differences in growth of children have come into focus of interest in the last few years. Contradictory evidence in growth has been reported from several studies from various countries and cultures and with various age ranges. Many studies showed significant differences in growth and maturity status. Data from other studies also revealed that urban-rural contrasts are evident in the growth and body size status. Body size is related to the performance of many physical fitness components. Hence, the size advantage commonly observed in urban children might also be reflected in better levels of physical fitness Malina *et al*. (2004) [3].

Changes in lifestyle with residence in urban centers may also influence physical fitness. Environmental and societal alteration connected with an urban dwelling, e.g., changing neighborhoods, crowding, concern for protection, lack of sufficient space for play and physical activity, and others, may contribute to reduced levels of physical activity and physical fitness. In contrast, the rural residence is commonly associated with a more dynamic, physically active lifestyle, which is beneficial to physical fitness.

Growth and fitness requirements to be studied in a different climate, economic and cultural circumstance and investigation of the growth and fitness of children resident in rapidly expanding urban areas and in rural communities in the same general region in different countries are potential of interest. The athletic traits and characteristics of an individual can be explored depending upon physical fitness having different components and various factors like race, ethnicity, habitual physical activity and environment may have a reflection on these parameters (Chatterjee *et al*., 1993) [2]. The present study has been taken to make an urban-rural comparison of motor fitness of rural and urban school going students. India as well as in sedentary boys and to elucidate what extent the effect of training can influence motor fitness of boys living in the urban and rural environment.

Review of literature

James (1992) [6] conducted a survey of physical fitness of higher secondary school boys age between sixteen and nineteen years at low, medium and high altitudes in Tamil Nadu. For the purpose of this study he has selected 315 school boys studying XI to XII standard from nine schools at low, medium and high altitudes for this survey, the scores made by these subjects at each level of altitudes was compared with other level of altitude. Physical fitness, emotional, social, spiritual and mental fitness tests were conducted. The data collected at different altitutes analysed by using one way analysis of variance (ANOVA). 1. The medium altitutde students of the age 16 to 19 years performance better in pull ups and 50 yards run than low and high altitude students of same age group. 2. The same subjects at high altitude performed well in standing broad jump, 600 yards run walk than the low and medium altitude students. 3. They have done well at low altitude in shuttle run than the other two level of altitude.

Sirijaruwong and Kosa (2006) [7] conducted a study to construct healthrelated physical fitness norms for students of Rajamangala University of Technology Thanyaburi. The population used in this research was 410 boys and 460 girls students who were studying in the first semester of academic year 2006 at Rajamangala University of Technology Thanyaburi. AAHPERD Health-Related Physical Fitness Test was used and conducted the following tests. Sit and Reach One minute sit-up, 1.5 mile Run/Walk, and body mass index. The data were analyzed by mean, standard deviation, percentile norms was constructed based on percentile scores, the qualitative grading was used and prepared into five levels, namely excellent, good, moderate, low and poor. It was found that the health-related physical fitness norms for boys and girls students of Rajamangala University of Technology Thanyaburi by using physical fitness tests: body mass index, sit and reach, one minute sit-up and 1.5 mile run/walk were at moderate level. The researcher constructed health-related physical fitness norms for students of Rajamangala University of Technology Thanyaburi according to the objectives.

Objectives: To compare the motor fitness between rural and urban school going boys students of district Rohtak and Sonipat of Haryana.

Hypothesis: There will no significant difference on Motor fitness between rural and urban school going boys students of district Rohtak and Sonipat of Haryana.

Methodology

There were 100 boys students of the class 8th to 12th studying in different schools in Urban and rural area of district Rohtak and Sonipat of Haryana state was selected as subject for this study. The class of the subjects was confirmed through their school records. The investigator asked all the students to assemble at their own school ground and the necessary instructions were given to the subjects regarding the different test items of barrow motor ability test. It was emphasized that all the students should give their best performance so that accurate results could be obtained. The subjects of the study were not fully mature to understand the purpose of the study; even then the efforts were made to make them understand the purpose of the study and the task to be performed by them. Requesting their physical education teachers who addressed and advised them to cooperate fully during the collection of data to ensure the motivational technique used for seeking their maximum cooperation.

The data collected was analyzed statistically to find out the mean differences scores of the subjects. The mean, Standard

deviation and t-test were used for analyze the data. This different test is at the .05 level of significance.

Results of the Study

Table 1: Comparison of Zig-Zag Run of rural and urban school going boys students of district Rohtak and Sonipat

Test Items	Rural (N=50)		Urban (N=50)		SED	t value
	Mean	SD	Mean	SD		
Zig Zag Run	25.10	1.89	25.33	1.48	0.33	0.67

Significance at level of 0.05, df=98

According to the table-1, the means of rural school going students and urban school going students 25.10 and 25.33 respectively and standard deviation of rural school going students and urban school going students 1.89 and 1.48 respectively. Whereas the t-value 0.67 was found, so we can say that the difference was not significant at the level of .05.

Table 2: Comparison of Wall Pass of rural and urban school going boys students of district Rohtak and Sonipat

Test Items	Rural (N=50)		Urban (N=50)		SED	t value
	Mean	SD	Mean	SD		
Wall Pass	9.84	1.26	9.74	1.15	0.24	0.41

Significance at level of 0.05, df=98

According to the table-2, the means of rural school going students and urban school going students 9.84 and 9.74 respectively and standard deviation of rural school going students and urban school going students 1.26 and 1.15 respectively. Whereas the t-value 0.41 was found, so we can say that the difference was not significant at the level of .05.

Table 3: Comparison of 60 Yard Dash of rural and urban school going boys students of district Rohtak and Sonipat

Test Items	Rural (N=50)		Urban (N=50)		SED	t value
	Mean	SD	Mean	SD		
60 Yard Dash	8.29	0.91	8.10	0.52	0.14	1.28

Significance at level of 0.05, df=98

According to the table-3, the means of rural school going students and urban school going students 8.29 and 8.10 respectively and standard deviation of rural school going students and urban school going students 0.91 and 0.52 respectively. Whereas the t-value 1.28 was found, so we can say that the difference was not significant at the level of .05.

Table 4: Comparison of Standing Broad Jump of rural and urban school going boys students of district Rohtak and Sonipat

Test Items	Rural (N=50)		Urban (N=50)		SED	t value
	Mean	SD	Mean	SD		
Standing Broad Jump	5.87	0.79	5.45	0.70	0.14	2.81

Significance at level of 0.05, df=98

According to the table-4, the means of rural school going students and urban school going students 5.87 and 5.45 respectively and standard deviation of rural school going students and urban school going students 0.79 and 0.70 respectively. Whereas the t-value 2.81 was found, so we can say that the difference was significant at the level of .05.

Table 5: Comparison of Softball Throw of rural and urban school going boys students of district Rohtak and Sonipat

Test Items	Rural (N=50)		Urban (N=50)		SED	t value
	Mean	SD	Mean	SD		
Softball Throw	134.39	37.54	131.48	33.34	7.10	0.40

Significance at level of 0.05, df=98

According to the table-5, the means of rural school going students and urban school going students 134.39 and 131.48 respectively and standard deviation of rural school going students and urban school going students 37.54 and 33.34 respectively. Whereas the t-value 0.40 was found, so we can say that the difference was not significant at the level of .05.

Table 6: Comparison of Medicine Ball Put of rural and urban school going boys students of district Rohtak and Sonipat

Test Items	Rural (N=50)		Urban (N=50)		SED	t value
	Mean	SD	Mean	SD		
Medicine Ball Put	15.66	2.45	15.46	2.58	0.50	0.39

Significance at level of 0.05, df=98

According to the table-6, the means of rural school going students and urban school going students 15.66 and 15.46 respectively and standard deviation of rural school going students and urban school going students 2.45 and 2.58 respectively. Whereas the t-value 0.39 was found, so we can say that the difference was not significant at the level of .05.

Results

On the basis of analysis and interpretation of the data of agility, explosive power, hand-eye coordination, arm and shoulder co-ordination, strength and speed. We can say that rural and urban school going students are not significance different in agility, hand-eye coordination, arm and shoulder co-ordination, strength and speed. Whereas Rural boys students are significance difference between rural and urban school going boys students of district Rohtak and Sonipat of Haryana in explosive leg strength.

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