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Health related physical fitness among secondary school students

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Abstract
The study was intended to explore the level of physical fitness of rural and urban secondary school students. In context to same, 600 respondents were selected within the age groups of 18-21 years from both sampling sites (Rural and Urban). Initially the investigator framed the sampling list. Subsequently, whole data was selected by using Random Sampling Technique (RST). Sit and reach test, Harvard Step test and Push Up tests were used for collecting the required data. The data was subjected to statistical treatment by using Mean, Standard Deviations and 't' value. The results indicate that there exists a significant difference between of rural and urban secondary school student's on all the selected components of physical fitness, viz. Cardiovascular Endurance (CE), Muscular endurance and flexibility. Thus, impact of locality was reported insignificant on the level of physical fitness of the respondents.

Keywords: physical fitness, rural secondary school students (RSSS), urban secondary school students (USSS)

Introduction
Physical fitness directly influences the health of an individual. So to keep you healthy, fitness sessions should be incorporated in our daily routine. 'Physical fitness is a state of health and well-being. It develops your capacity to perform better in sports, your job and day-to-day routine work. This is achieved through moderate/vigorous physical activities, balanced diet and proper recovery.' Since the beginning of the human civilisation individual is trying to survive physical fitness. Fitness is the ability to stay with a full and composed life in day to day living. The totally fit person has a healthy and happy outlook towards life. Physical fitness of an individual breed's self-reliance and help an individual to retain mentally alert. Physical fitness is essential for human beings to adjust well with his environment as his mind and body are in complete harmony. It is generally agreed that physical fitness is an important part of the normal growth and development of a child. Physical fitness is to the human body what fine tuning is to an engine. It is basically an ability to perform daily tasks vigorously and alertly, with energy left over for enjoying leisure time activities and meeting emergency demands. It is generally agreed that physical fitness is an important part of the normal growth and development of a child, a generic definition regarding the precise nature of physical fitness has not been universally accepted. Through research and scholarly inquiry, it is clear that the multi-dimensional characteristics of physical fitness can be divided into two areas: health related physical fitness and skill related physical fitness. In connection to same, Clarke and Clarke (1989) found that physical fitness is not a static factor and it varies from individual to individual and in the same person from time to time depending on factors. Physical fitness is probably the most popular and frequently used term in physical education. The most important objective of physical educators is to develop physical fitness. Physical fitness of an individual is usually defined as an outcome measured with a fitness test, most commonly the fitness gram. Therefore, a physically individual is defined as one who meets criteria measured by one these two tests. There are below mentioned components of health related fitness. They are heart and lung endurance or cardiovascular endurance, muscular strength, muscular endurance, flexibility and body composition.

1) **Cardiovascular endurance:** Heart and lung endurance or cardiovascular endurance is the

ability to exercise the entire body for long periods of time. It requires a strong heart, healthy lungs, and clear blood vessels to supply the body with oxygen. Activities to improve fitness in this area include running, swimming and aerobic dance. A person must do the activity continuously for a minimum of 25 minutes within their target heart rate zone.

2) **Muscular strength:** It is the amount of force an individual can put forth with his muscles. It is often measured by how much weight you can lift. People with strength have fewer problems with backaches and can carry out their daily tasks efficiently. Examples of muscular strength include push-ups, weight lifting heavy weight with few repetitions, and pull-ups. Fitness testing will be measured by doing push-ups.
3) **Muscular endurance:** Muscular Endurance is the ability to use the muscles, which are attached to the bones, many times without getting tired. People with good muscular endurance are likely to have better posture, have fewer back problems, and be better able to resist fatigue than people who lack muscular endurance.
4) **Flexibility:** Is the ability to use joints fully. An individual is flexible when the muscles are long enough and the joints are free enough to allow movement. People with good flexibility have fewer sore and injured muscles. Stretching before and after activities will help to improve flexibility. The sit-and-reach and the trunk lift are two tests used to measure flexibility.
5) **Agility:** The ability to perform a series of explosive power movements in rapid succession in opposing directions.
6) **Body composition:** Is the percentage of body weight that is fat compared to other body tissue, such as bone and muscle. People who have a high percentage of fat are more likely to be ill and have a higher death rate than lean people. Exercise and eating the right foods in the proper amounts can improve body composition. Body composition can be measured using an instrument called Calipers, a specialized scale, or it can be calculated by using the body mass index (BMI) which uses height and weight to determine your BMI.

Identification of the research gap: Indeed, large number of research studies has been conducted on physical fitness. The results of previous studies regarding physical fitness have been revealed in contrary approach. Some studies report that impact of locality is significant and some studies argued insignificant like; Bhat. A. S. Tomik, R. (2008) [51], Kask, A. C. (2004), Mitra, A. K. (2010), Trudeau, F., and Shephard, R. J. (2008) [52], Haleema, A. T. (2002), Henning, B., Stark, T. (2001) [33] and Rahil, A. G. (2013) [43], Black, S. (1995) [11], Blaydes, J. (2000) [12], Brith, L. K. (2002), Thoker, A. A. (2018), Booth, M. L. (2000) [14], Bouchard, C. (1997) [15], Raja, A. L. (2002), Devinder, K. K., (1996) [27], Dutt, S. (2005) [28], Rahil A.G. (2013) [43], Wright, J. (1996) [53]. Accordingly, the investigator feels it pertinent to explore the level of physical fitness of the rural and urban respondent. The detailed statement of the problem is as under:

Statement of the problem: The statement of the research problem is as under:

"Health related physical fitness among secondary school students"

Objectives: The objectives of the present study are as under:

- **Objective-I:** To explore the level of physical fitness of rural and urban secondary school students.

Hypothesis: Following hypothesis has been framed for the present study:

- There exists no significant difference between rural and urban secondary school students on their level of health related physical fitness.

Operational definition of terms and variables: The operational definitions of terms and variables are as under:

1) **Physical fitness*:*** Physical fitness in the present study refers the set of achievement obtained by respondents on Run test (Cooper Test), Push ups and Sit and reach test.
2) **Urban secondary school students (USSS): Urban secondary school students (USSS)** in the present study refer those respondents who are reading in 11^{th} and 12^{th} standard in different secondary school students and are living in urban District (Srinagar) of Union territory of Jammu and Kashmir.
3) **Rural secondary school students (RSSS): Rural secondary school students (RSSS)** in the present study refer those respondents who are reading in 11^{th} and 12^{th} standard in different secondary school students and are living in Kulgam District of South Kashmir of Union Territory of Jammu and Kashmir.

Research limitations of the study: The present study will be confined to the following aspects:

A) The present study will be delimited two Districts of Union Territory of Jammu and Kashmir.
B) The study will be delimited to health related fitness of the respondents. Besides. it is imperative to mention here that only below mentioned three components of physical fitness were included in the study:

- Cardiovascular fitness
- Muscular Strength
- Flexibility

Rationale of the study: Keeping the feasibility and usability of the study under consideration, the researcher found it suitable to go through descriptive survey method. Accordingly, present study was carried with the help of descriptive method. The parameters involved in methodology and procedure are as under:

- **Sample:** 600 rural and urban respondents were selected with due representation of gender of school. The age groups of the subjects were ranged 18-21 years. Whole data was selected for the present study.
- **Sampling technique:** Whole data was selected by using Random Sampling Technique (RST). The below mentioned table indicates the precise explanation of sample:

Table 1: Showing the selection of sample with dichotomy representation

Category	MSSS	FSSS
RSSS	150	150
USSS	150	150
Total = 600		

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- RSSS=Rural Secondary School Students
- USSS=Urban Secondary School Students
- MSSS=Male Secondary School Students

- FSSS=Female Secondary School Students

- **Measuring instruments:** All the three components were assessed separately the detailed analyses of these instruments is reported as under:

A) Cardiovascular fitness: Cardiovascular fitness was analysed with Harvard Step Test developed by Brouha (19943).

B) Flexibility: Flexibility was measured with the help of Sit and reach test.

C) Muscular endurance: Muscular endurance was measured with the help of push up tests.

Statistical technique employed: The intention behind the study was the make a comparative analysis of the respondents. In connection to same, collected data was put to suitable statistical treatment by using Mean, S.D. and 't' value. The detailed procedure of statistical treatment is analysed as under:

Table 2: Showing the significance of mean difference between rural and urban of secondary school students on composite score physical fitness. (N=300 each)

Variable	RSSS		USSS		
Composite Score	Mean	SD	Mean	SD	't' value
	142.76	16.76	142.79	16.77	0.5###

Index:

- USSS= Urban Secondary School Students.
- RSSS= Rural Secondary School Students.
- ###= Insignificant at 0.01 level of confidence.

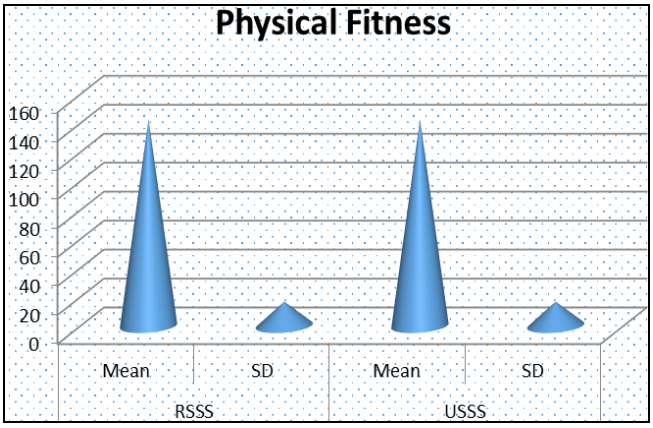

Fig 1: Showing the graphical representation of male and female of secondary school students on composite score of physical fitness

Index:

- USSS= Urban Secondary School Students.
- RSSS= Rural Secondary School Students.

Discussion related to Table: 1

The results empirically analysed in 1.1 (Please Refer Table 1, Fig. 1) gives the comparative analysis of respondents on the basis of their gender. In the said table, mean significant difference between rural and urban adolescents has been explored on their level of composite obtained on selected dimensions of physical fitness. The acquired results designate that the mean value of rural respondents was reported to 142.76 and the mean value of urban secondary school students was found M=142.79. When the both groups were relatively analysed the calculated 't' value came out to be 0.5, which is lesser than table value at 0.1 level of confidence. Therefore, the perusal of the results indicate that the level of confidence designate there is insignificant difference between rural and urban secondary school students. Thus, the statistical analysis indicates that impact of locality was reported insignificant on the level of muscular strength of secondary school students. Identical level of muscular strength, flexibility and cardiovascular endurance was reported between male and female secondary school students. Consequently, from the overhead reported results it has been originate that there exists insignificant difference between rural and urban adolescents on their level of physical fitness. Identical level of physical fitness was reported among rural and urban secondary school on their level of cardiovascular endurance, flexibility and muscular strength. Hence the status of hypothesis is reports as under:

Hypothesis-I: "There exists no significant difference between rural and urban secondary school students (R&USSS) on their level of physical fitness

……Status: Accepted

"Accepted: Indeed insignificant difference has been reported between rural and urban secondary school students on delimited components of physical fitness. So the hypothesis stands accepted". The results are carried in consonance of the host of the researchers notable among them are:

"Sahil. K. (2002) [44], Berlin, A. K. (2003) [8], Loope, A. K. (2012) [39], Mujeet, A. T. (2002) [41], Bhat, A. K. (2002) [9], Sakib, A. K. (2002) [45], Yawer, A. G. (2010) [54]

"Sahil. K. (2002) [44] found impact of locality insignificant on the level of physical fitness of the respondents. Berlin, A. K. (2003) [8] reported that impact of locality is not significant on the level of phy7sical fitness of the respondents. Loope, A. K. (2012) [39], found high level of muscular strength among male adolescents as compared to their counterparts. However, impact of locality and socio-economic status was reported insignificant. Mujeet, A.T. (2002) [41] there was insignificant differences in selected health related physical fitness variables between the Government and private school male and female secondary school students. Bhat, A.K. (2002) [9], found that there exists significant difference between male and female secondary school students on their level of agility. However impact of locality was reported insignificant on the level of physical fitness of the respondents. Sakib, A.K. (2002) [45] found that exists insignificant impact of rural urban dichotomy on the level of physical fitness of respondents. Yawer, A.G. (2010) [54] revealed that impact of residential background is insignificant on the level of physical fitness of cricket and volley ball players.

Conclusions of the study

The study was intended to explore the level of physical fitness of secondary school students in relation to their rural urban dichotomy. In connection to same, it was found that there exists insignificant impact of locality on the health related physical fitness of the respondents. The impact of locality was thus reported no any influence on the composite score of physical fitness of the respondents.

Suggestions

The impact of locality of the subject's respondents was observed insignificant on the health related physical fitness of the respondents. Accordingly, the researcher considers it pertinent to suggest that physical education should be made an integral part of our general education system. So that

students may receive ample opportunities to explore their maximum heath related physical fitness. Besides, health related programmes and seminars should be organised at state level. Moreover, hygienic environment should be provided by the school administration in schools so that level of physical fitness may be enhanced. Efforts should be made by curriculum designer to adopt "activity centred curriculum". Further, endurance/cardiovascular activity should be done a minimum of 3 days per week. Every other day is preferable. The mile or the pacer will measure fitness testing in this area.

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