

Comparison of Physical Fitness status of Rural and Urban Male Collegiate students in Kurukshetra

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Abstract

The main purpose of the study was to compare the physical fitness level of urban and rural male collegiate students in Kurukshetra. A battery of five tests i.e, Harvard Step Test, Zig Zag run, Sit and reach, Shot Put throw and 50 Meter Sprint- was used to collect the required data. The results indicated that in cardiorespiratory endurance, agility, flexibility, power and speed rural students were significantly different ($p > .05$) from urban students.

Key Words: Physical Fitness, Male collegiate students, Urban, Rural

Introduction

All-round fitness is a key to quality of life. To be able to carry out daily tasks without undue fatigue or to enjoy leisure-time pursuits requires a certain degree of fitness. A physically fit person looks better, feels better and thinks better and so lives better. Likewise, physical fitness is closely associated with good health. *Blair et al (1989)* showed that people with “good” fitness level have less heart disease risk than those with “low” fitness. Compared with inactive, people moderately or vigorously active people are less likely to suffer premature all-cause mortality; cardiovascular diseases (CVD) such as coronary heart disease (CHD), stroke, and high blood pressure; colon cancer; non-insulin dependent diabetes mellitus (NIDDM); and osteoarthritis (*USDHHS, 1996*). *Plowman (1992)* suggests that muscle fitness is necessary to prevent back-pain. A higher level of physical fitness is associated with a lower risk of developing hypertension, which is related to coronary heart disease (*Marti, 1991*). Furthermore, adequate flexibility and sufficient muscular strength and endurance may

reduce risks of low back pain as well as muscular and joint injuries (*Liemohn et al, 1988*). Recent research shows that physical activity is one of the most important factors related to maintaining good health (*Corbin & Pangrazi, 1993; USDHHS, 1996*). Physical activity can help ‘control body weight’ (*Epstein & Wing, 1980*) and ‘reduce risks of cardiovascular diseases’ (*Morris et al, 1980*). In July 1992, the American College of Sports Medicine and the Centers for Disease Prevention and Control (CDC), in cooperation with the Presidents Council on Physical Fitness and Sports recommended that a level of physical activity is sufficient for reducing the risk of morbidity and premature mortality from a range of diseases like CVD, NIDDM.

For developing a good level of physical fitness the U.S. Center for Disease Control & Prevention and American College of Sports Medicine (1992) recommends, a minimum of 30-minute of moderate intensity physical work out activities such as walking up stairs (instead of taking the elevator), gardening, raking leaves, dancing, and

walking all or part of the way to work over a course of days. Jogging, playing tennis, playing soccer, swimming and cycling are also found beneficial. Another example of lifestyle exercise that can be used to meet CDC/ACSM guidelines is a two-mile walk daily.

Several studies evaluated physical fitness profiles of people in different categories, including college students in United States and European countries. However, relatively little information is available about physical fitness profiles of the Indian collegiate students. Whatever little information that is available on physical fitness is on the Indian collegiate students documented outside Kurukshetra. This situation called for an investigation to determine physical fitness level of urban and rural male students in colleges in Kurukshetra, Haryana state.

Materials and Methods

A total of 100 male college going students of 18-21 years were randomly selected as sample. The sample consisted of 50 urban and 50 rural students drawn from University College Kurukshetra, Bhagwan Parshu Ram College, DAV College Pehowa and IG National College Ladwa. No consideration was shown to subjects’ participation or any other characteristics or attributes.

The data were collected with the assistance of coaches and lecturers in Physical Education of various colleges. The tests used for the purpose of study included:

1. Harvard Step Test to measure the Cardiorespiratory endurance
2. Zig Zag run to measure the agility
3. Sit and reach test to measure the flexibility of the lower back

4. Shot Put throw to measure the power, and
5. 50m Sprint to measure the speed

The tests and purpose of the study were explained to the students. They were given sufficient time for warming up and readying themselves for testing. Tests were administrated in proper sequence. Only standard equipments were used for the tests.

In this study descriptive and inferential statistics were used to analyse data. Means and standard deviations described physical fitness profiles of subjects. The value of t-test was tested for (N₁+N₂-2) d.f. at .05 level of significance. Student’s t-test for difference of mean was used to test whether significant difference existed between the mean of rural and urban male students in each of the five fitness components. The statistically treated scores were not compared to any established norms.

Results and Discussion

Table. Mean, S.D. and T-Ratio of Physical Fitness of Rural (n=50) and Urban (n=50) college Students

Test Item	Subject	Mean	SD	*n>M	**%age	t-cal
50m Sprint (sec)	Rural	6.89	.67	23	46	7.86
	Urban	7.86	.54	19	38	
Shot Put throw (m)	Rural	7.84	.55	20	40	11.51
	Urban	6.35	.73	25	50	
Zig Zag Run (Sec.)	Rural	9.90	.69	28	56	6.57
	Urban	10.65	.64	23	46	
Sit and reach (Cm.)	Rural	28.60	4.09	33	66	2.44
	Urban	26.74	4.92	29	58	
Harvard Step test	Rural	78.50	3.09	30	60	13.06
	Urban	71.25	2.57	35	70	

* Number of subjects scoring higher than group mean
 ** % of subjects scoring higher than group mean
 t-cal 0.05 level of significance at 98 df

Table shows that the rural students had a mean of 6.89 seconds in the 50 m sprint with more than two-fifths of the subjects' (46%) scoring higher than the group mean. In shot put, they recorded a mean of 7.84 meters, with more than one-third (40%) subjects' scoring higher than the group mean. A mean of 9.90 seconds was recorded by rural students' with more than half (56%) scoring higher than the group mean in zig-zag run. In sit-and-reach, they had a mean of 28.60 centimeters with about two-thirds (66%) scoring higher than the group mean. Results showed these rural students had a mean of 78.50 scores, with about three-fifths (60%) scoring higher than the group mean in the Harvard step test.

Table also indicates that the urban students had a mean of 7.86 seconds in 50m sprint; slightly more than one-thirds (38%) scoring above the group mean. In shot put, they showed a mean of 6.35m, with half (50%) scoring above the group mean. The urban students had a mean of 10.65 seconds with more than two-fifths (46%) scoring above the group mean in zig zag run. More than half (58%) scored above the group mean of 26.74 centimeters in sit-and-reach. A majority (70%) scored above the group mean of 71.25 score in the Harvard step test.

Table further shows that the differences in mean scores of these rural and urban college male students in 50m sprint, shot put throw, zig-zag run, sit-and-reach test and Harvard step test are significant at 5% level and results favored the rural students.

Conclusion

Within the limits and limitation of the study, it was concluded that rural students are significantly more fit than the urban students.

References

- American College of Sports Medicine 1992. The recommended quantity and quality of exercise for developing and maintaining fitness of healthy adults. *Medicine and Science in Sports and Exercise*, **22**: 265-274.
- Blair, S.N., Kohl, H.W., Paffenbarger, R.S., Clarke, D.G., Cooper, K.H., & Gibbons, L.W. 1989. *Journal of the American Medical Association*, **262**: 2395-2401.
- Corbin, C.B., & Pangrazi, B. 1993. The health benefits of physical activity. *Physical Activity and Fitness Research Digest*, **1(1)**: 1-7.
- Epstein, L.H., & Wing, R.R. 1980. Aerobic exercise and weight. *Addictive Behaviors*, **5**: 371-388.
- Liemohn, W., Snodgrass, L.B., & Sharpe, G.L. 1988. Unresolved controversies in back management: A review. *Journal of Orthopaedic and Sports Physical therapy*, **9**: 239-244.
- Marti, B. (1991). Health effects of recreational running in women: Some epidemiological and preventive aspects. *Sports medicine*, **11(1)**: 20-51.
- Morris, J.N., Pollard, R., Everitt, M.G., & Chave, S.P. 1980. Vigorous exercise on leisure-time: Protection against coronary heart disease. *The Lancet*, **2**: 1207-1210.
- Plowman, S. A. 1992. Physical activity, physical fitness, and low back pain. In: *Exercise and Sport Sciences Reviews*. Ed. Holloszy, J. O. Baltimore: Williams & Wilkins. 221-242.
- U.S. Centers for Disease Control & Prevention and American College of Sports Medicine. 1992. Summary statement: Workshop on physical activity and public health. *Sports Medicine Bulletin*, **28(4)**: 7.
- U.S. Department of Health and Human Services. 1996. Physical Activity and Health: A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for disease Control and Prevention, National Centre for Chronic Disease Prevention and Health Promotion.