



P-ISSN: 2394-1685  
E-ISSN: 2394-1693  
Impact Factor (ISRA): 4.69  
IJPESH 2015; 2(1): 137-139  
© 2015 IJPESH  
www.kheljournal.com  
Received: 06-07-2015  
Accepted: 07-08-2015

**Seema Rani**  
Research scholar, Department of  
Physical Education, Punjabi  
University, Patiala, Punjab,  
India.

**Dr. Nishan Singh Deol**  
Professor and Head Department  
of Physical Education, Punjabi  
University, Patiala, Punjab,  
India.

#### Correspondence

**Seema Rani**  
Research scholar, Department of  
Physical Education, Punjabi  
University, Patiala, Punjab,  
India.

## Comparison of Health Status between Active and Non Active Girls Student of Punjabi University Patiala

**Seema Rani, Nishan Singh Deol**

### Abstract

The purpose of this study was to compare the health status between active and non-active girls student of Punjabi university Patiala. Total 200 girl students were recruited 100 each from active and non-active and further 70 girls were selected randomly from two different categories (35 each from active and non-active). The data was obtained from the Punjabi university Patiala. The age ranges between 21 to 23 years. Health status of girl's student were measured with the help of HBF-361 bio electrical impedance machine of body composition. The 't' test was applied to compare the mean scores of the two groups. The analysis of data revealed that the 'no significant difference has found in all the body composition variables (Visceral fat level %, Trunk subcutaneous fat %, Body fat %, Body mass index (BMI), Basal Metabolic rate(BMR), Skeletal Muscle%).

**Keywords:** Active, Non active, Body composition visceral fat level %, Body mass index (BMI), Basal Metabolic rate (BMR), Skeletal Muscle %

### Introduction

Physical fitness refers to a set of attributes that people have or achieve that relate to the ability to perform physical activity. These attributes include components of fitness that may or may not relate to health-related physical fitness. Health-related fitness relates to those components of fitness that are affected by habitual physical activity and relate to health status. As mentioned above, they include aerobic functioning, body composition, and musculo skeletal functioning. The BPFT includes test items that measure the extent to which these attributes are achieved. Physical activity consists of bodily movement produced by skeletal muscle. The primary role of physical activity is the conditioning benefit it provides in developing health-related physical fitness. Types of activities include exercise, sport, training, dance, and play.

In the recent decade, a decline in physical activity and beginning of a sedentary lifestyle among college students has been observed. Sedentary lifestyle and overweight issues are major public health, clinical, and economical problems in modern societies. (Sukanta Saha 2013) [14]. in the present age of science and technology people are very alert their health and physical fitness. Each nation is encouraging games and sports to get apex performance at international level. The standard of games and sports has gained new heights in every country. Our country is also trying to get the good results to improve the health status of each citizen that is why physical education has been introduced at grass root level as a part of school curriculum, which will help the students to keep them healthy and physically fit. (Deol N.S. and Kang G.S. 2010) [4]. Sukanta Saha (2013) [14] conducted the study, "Somatic, body composition and anthropometric characteristics of college level men students". The independent sample t-test revealed that there were significant differences between physical education and nonphysical education students and physical education students were showed better somatotype and body composition variables than the non-physical education students. Singh M. H. and Singh K. (2009) [11] conducted study on "The Analytical Study of Health Related Fitness of Different Types of Schools in Punjab "Keeping in mind that the Health related fitness is an important antecedent to good performance, the present study was undertaken to find out the Health related fitness between Boys and Girls of Governments and Non-Governments Schools in Punjab states., he finds, there is no significant difference between boys/girls student of govt and non-govt. schools in Punjab in relation to their health related fitness. Barkha (2004) [2] conducted the study "The comparative study of health related fitness among Physical Education students and non-physical education students" in this study investigator find significant difference among them.

**Explanation of Terms**

**Active student:** Active students are those who are associated and involves in physical activities. **Non-Active Student:** Non-active students are those who does not involve actively in physical activities but carry out their work in routine basis.

**Material and Methods**

The purpose of the study was to find out the difference of selected body composition variables between active and non-active girls student of Punjabi University Patiala. Total 70 girl students was selected as sample further these were divided into 35 active and 35 non active girl students which were selected from the Punjabi university Patiala. The age ranges between 21 to 23 years old.

**Variables and criterion measures**

Body composition Variables: Trunk subcutaneous fat %, Body fat %, visceral fat level, Body mass index (BMI), Basal Metabolic rate (BMR), Skeletal Muscle %  
It was measured with the help of HBF-361 bio electrical impedance machine.

**Statistical Consideration:** The 't' test was applied to compare the mean scores of the two groups.

**Results**

The t-test was applied to the selected Body composition variables and the results pertaining to it are presented below in tables.

**Table 1:** Visceral Fat Level % Body Composition of Active and Non Active Girl Students of Punjabi University Patiala.

Group	Mean	S.D.	't' Value
Active Students	3.186	1.702	0.5928
Non Active students	2.971	1.294	

Level of significance is 0.05  
Tabulated Value = 1.667 (df =68)

The table 1 reveals that the Visceral fat of active students Mean is 3.186, S.D. 1.702 and non-active students Mean 2.971, S.D. 1.294 and 't' value is 0.5928. There was no significant difference found between active and non-active girl students.

**Table 2:** Trunk Subcutaneous Fat % Body Composition of Active and Non-Active Girl Students of Punjabi University Patiala.

Group	Mean	S.D.	't' Value
Active Students	20.4	4.24	0.435
Non Active students	20.79	3.34	

Level of significance is 0.05  
Tabulated Value =1.667 (df =68)

The table 2 show that the Trunk subcutaneous fat of active and non-active students Mean is 20.4, 20.79 and S.D. 4.24, 3.34 and 't' value is 0.435. There was no significant difference found between active and non-active girl students.

**Table 3:** Body Fat % Body Composition of Active and Non-Active Girl Students of Punjabi University Patiala.

Group	Mean	S.D.	't' Value
Active Students	28.11	4.20	1.3522
Non Active students	29.37	3.56	

Level of significance is 0.05  
Tabulated Value =1.667 (df =68)

The table 3 show that the Body fat % of active and non-active students Mean is 28.11, 29.37 and S.D. 4.20, 3.56 and 't' value is 1.3522. There was no significant difference found between active and non-active girl students.

**Table 4:** Body Mass Index (BMI) Body Composition of Active and Non Active Girl Students of Punjabi University Patiala.

Group	Mean	S.D.	't' Value
Active Students	21.84	3.21	0.407
Non Active students	21.56	2.48	

Level of significance is 0.05  
Tabulated Value =1.667 (df =68)

The table 4 show that the BMI of active and non-active students Mean is 21.84, 21.56 and S.D. 3.21, 2.48 and 't' value is 0.407. There was no significant difference found between active and non-active girl students.

**Table 5:** Basal Metabolic Rate BMR Body Composition of Active and Non-Active Girl Students of Punjabi University Patiala.

Group	Mean	S.D.	't' Value
Active Students	1182.74	128.22	0.4413
Non Active students	1194.66	95.21	

Level of significance is 0.05  
Tabulated Value =1.667 (df =68)

The table 5 show that the BMR of active and non-active students Mean is 1182.74, 1194.66 and S.D. 128.22, 95.21 and 't' value is 0.4413. There was no significant difference found between active and non-active girl students.

**Table 6:** Skeletal Muscle %Body Composition of Active and Non Active Girl Students of Punjabi University Patiala.

Group	Mean	S.D.	't' Value
Active Students	26.514	1.62	0.829
Non Active students	26.20	1.54	

Level of significance is 0.05  
Tabulated Value =1.667 (df =68)

The table 6 show that the Skeletal muscle % of active and non-active students Mean is 26.514, 26.20 and S.D. 1.62, 1.54 and 't' value is 0.829. There was no significant difference found between active and non-active girl students.

**Discussion of Findings**

The analysis of data revealed that there was no significant difference was found in all the body composition variables (Visceral fat level %, Trunk subcutaneous fat %, Body fat %, Body mass index (BMI), Basal Metabolic rate (BMR), Skeletal Muscle %). The reason of the insignificant difference in above mention variables may be the non-active girls are not directly involved in physical activities but they are indirectly involved in physical activities in their daily routine work such as playing in peer group, walking, cycling and doing domestic work. The result of the present study is partially accepted by "Jaspreet Kaur and Promila Mehta (2012)<sup>[8]</sup> Kesavachandran, C. N., Bihari, V. & Mathur, N. (2012)<sup>[9]</sup> Badaruddoza, Kaur, R. & Barna, B. (2010)<sup>[1]</sup> Swapan K. Dey, Nabanita Kar and Parthasarathi Debray (2010)<sup>[15]</sup> Jelcic M, Sekulic D, Marinovice M. (2002)<sup>[6]</sup> Humayun, A. & Shah, A. S. (2010)<sup>[5]</sup> Brain A. Irving; Christopher K. Davis; Davis W. brock (2008)<sup>[3]</sup>.

**References**

1. Badaruddoza Kaur, R & Barna B. Estimation of familial association of blood pressure with BMI and WHR among

- type 2 diabetic and non- diabetic Punjabi, imed pub journals. 2010, 1.3.
2. Barkha. The comparative study of health related fitness among Physical Education students and non-physical education students Dissertation, Amravati, 2004.
  3. Brain A, Irving Christopher K, Davis Davis W. Brock Effect of Exercise Training Intensity on Abdominal Visceral Fat and Body Composition. *Medicine and Science in Sports and Exercise* 2008; 40(11):1863-1872.
  4. Deol NS, Kang GS. Health and physical Education Published by twenty first century, 2010.
  5. Humayun A, Shah AS. Comparison of body mass index and waist circumference in predicting incident diabetes. *Pak J Physiol.* 2010, 6(1).
  6. Jelacic M, Sekulic D, Marinovica M. Anthropometric characteristics of high level European junior basketball players. *Pub med* 2002; 26:69-76.
  7. Jonathan CK, Wells Akanksha A. Marphatia Tim J Cole, David McCoy. Associations of economic and gender inequality with global obesity prevalence Understanding the female excess 2012; 75:482-490.
  8. Kaur J, Mehta P. A study of prevalence of overweight and underweight among girls from different socioeconomic status in Ludhiana Punjab International peer reviewed *Journal of Biological Anthropology.* 2012; 1(2):2277-4424.
  9. Kesavachandran CN, Bihari V, Mathur N. The normal range of body mass index with high body fat percentage among male residents of Lucknow city in north India. *Indian Journal of Med Res.* 2012; 135, 72-77.
  10. Kevin Norton and Tim Olds Body measurement for sports and health education Published by S.K. Jain, 1996.
  11. Manhas Hardeep Singh, Singh Kuldeep. The Analytical Study of Health Related Fitness of Different Types of Schools in Punjab National Conference on Physical Education in the 21st Century at Arya College, Ludhiana. *Population in Punjab, India Journals.* 2009, 1:3.
  12. Prentice AM. Beyond Body mass index, *Journal of international association for the study of obesity.* 2001; 2(3):141-147.
  13. Singh S.P, Mehta P. Human body measurements: concepts and applications Published by Asoke K. Ghosh, 2009.
  14. Sukanta Saha Somatic. Body composition and anthropometric characteristics of college level men students *Journal of Annals of Biological Research.* 2013; 4(3):95-100.
  15. Swapan K, Dey, Nabanita Kar, Parthasarathi Debray. Anthropometric, motor ability and physiological profiles of Indian national club footballers: A comparative study. *South African Journal for research in sport, physical Education and Recreation.* 2010; 32(1):45-56.