

## COMPARATIVE STUDY OF PHYSICAL FITNESS BETWEEN PHYSICAL EDUCATION AND NON- PHYSICAL EDUCATION STUDENTS

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### ABSTRACT

The objective of this study was to investigate the physical fitness between the physical education and non-physical education students. Another purpose of the study was to evaluate the physical fitness components between male students of physical education and non-physical education. The subjects of the study were 80 students (40 subjects for physical education and while another 40 subjects is other department of the university) in Swami Vivekanand Subharti University, Meerut. Age ranged the student between 18-22 years. Criterion measures for this study were different test items such as: Chin-Ups, Bent Knee Sit-Ups, Shuttle Runs (4X10 Mtr.), Standing Broad Jump, 50 Mtr. Dash and 600 Mtr. Run/Walk, administered to measure their level of fitness. To find out significant difference between two groups i.e. physical education and non-physical education students, t-test was employed. The result of the data reveals the significant difference found was found Chin-Ups, Bent Knee Sit-Ups, Shuttle Runs (4X10 Mtr.), Standing Broad Jump, 50 Mtr. Dash and 600 Mtr. Run/walk between physical education and non-physical education students

**Keywords:** Chin-Ups, Bent Knee Sit-Ups, Shuttle Runs , Standing Broad Jump, Run/Walk.

## 1. INTRODUCTION

Physical education is a part of general education program that contributes, primarily through movement experience to the total growth and development of all children, physical education is defined as education of the through movement, and must be conducted in a manner that merit this meaning. Physical education should teach children principles of human wellness. The necessitates cooperation with classroom teachers and an understanding of the overall school curriculum. The concept of human wellness is broader than the concept of good health and related to developing a total life style that promotes well being.

Several concept-based fitness education curriculum models exist for both the middle school and senior high school levels. They include Fitness for Life: Middle School (Corbin et al., 2007); Personal Fitness for You (Stokes and Schultz, 2002); Get Active! Get Fit! (Stokes and Schultz, 2009); Personal Fitness: Looking Good, Feeling Good (Williams, 2005); and Foundations of Fitness (Rainey and Murray, 2005). Activities in the curriculum are designed for health benefits, and the ultimate goal for the student is to develop a commitment to regular exercise and physical activity. It is assumed that all children can achieve a health-enhancing level of fitness through regular engagement in vigorous- or moderate-intensity physical activity.

physical fitness is responsible by the each biological system of the human body or vice-versa. In this the all systems of the human body work together with coordinative movements that allow us to perform daily activities. Physical fitness is affected by numerous factors in individual like- heredity, environment, age, sex, daily routine lifestyle and much more countless factors. Physical fitness can also be termed as 'physical efficiency' because the physical fitness mean the capability of the person regarding physical aspects and the similar thing to the term 'physical efficiency', it is also related to the body capability regarding to the physical aspects. **(Pate Russell R., 1988)**

Physical fitness refers to a physiologic state of well-being that allows one to meet the demands of daily living or that provides the basis for sport performance, or both. Health-related physical fitness involves the components of physical fitness related to health status, including cardiovascular fitness, musculoskeletal fitness, body composition and metabolism. In large epidemiologic investigations, physical activity and physical fitness are often used interchangeably, with fitness commonly being treated as a more accurate (albeit indirect) measure of physical activity than self-report.<sup>100</sup> Physical fitness appears to be similar to physical activity in its relation to morbidity and mortality<sup>2,34</sup> but is more strongly predictive of health outcomes than physical activity.<sup>6,29,100</sup> Most analyses have shown a reduction of at least 50% in mortality among highly fit people compared with low fit people. **(Warburton, Darren ER, Crystal Whitney Nicol & at al., 2006)**

## 2. METHODOLOGY

### 2.1 Selection of Subjects

The subjects of the study were randomly 80 students (40 subjects for physical education and while another 40 subjects from other department of the university.. Age ranged the student between 18-22 years.

### 2.2 Selection of Variables

Necessary data were collected for arm and shoulder girdle strength, abdominal strength, agility, explosive strength, speed and cardiovascular endurance with the help of different test items such as: chin-ups, bent knee sit-ups, shuttle runs (4x10 mtr.), standing broad jump, 50 mtr. dash and 600 mtr. run/walk, administered to measure their level of fitness.

### 2.3 Statistical Analysis

Comparison of the physical fitness component between the physical education and non-physical education students, t-test was computed. To find out the significant difference between physical education and non-physical education students, the level of significant was set at .05 level.

### 3. RESULTS

To find out chin-ups between the means of physical education and non-physical education students, t-ratio statistics was used and presented in table -1.

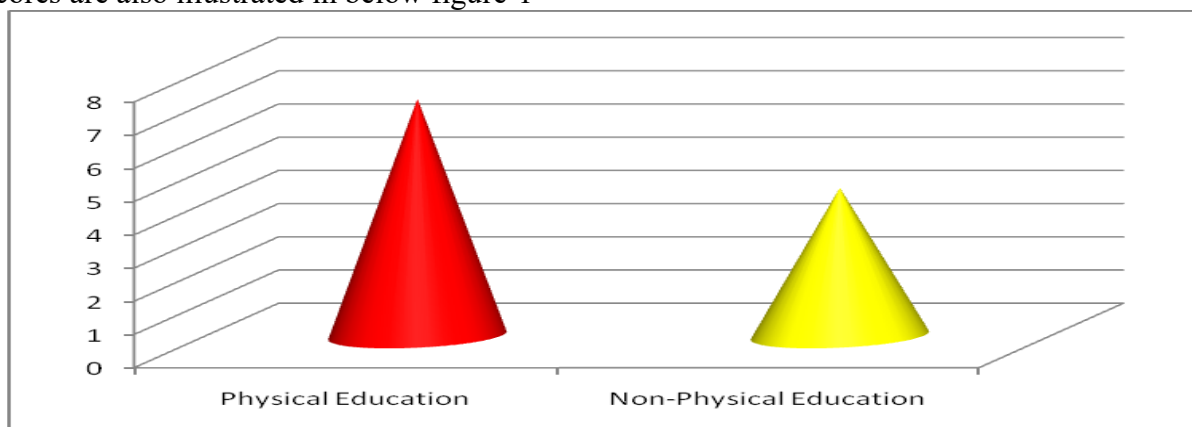
**TABLE 1**  
**COMPARISION OF MEANS OF CHIN-UPS BETWEEN PHYSICAL EDUCATION AND NON-PHYSICAL EDUCATION STUDENTS**

Subjects	M	MD	$\sigma$ DM	t-ratio
Physical Education Students	7.13	2.68	0.808	3.317*
Non-Physical Education Students	4.45			

\*Significant at .05 level

$t_{.05(79)} = 1.66$

It is evident from Table1 that, significant difference was found between the mean scores of physical education and non-physical education students in relation to chin-ups as the t-value was found 3.317 which was higher value than the required value at .05 level of significance. The scores are also illustrated in below figure-1



**Figure -1:** Mean scores of physical education and non-physical education students in chin-ups

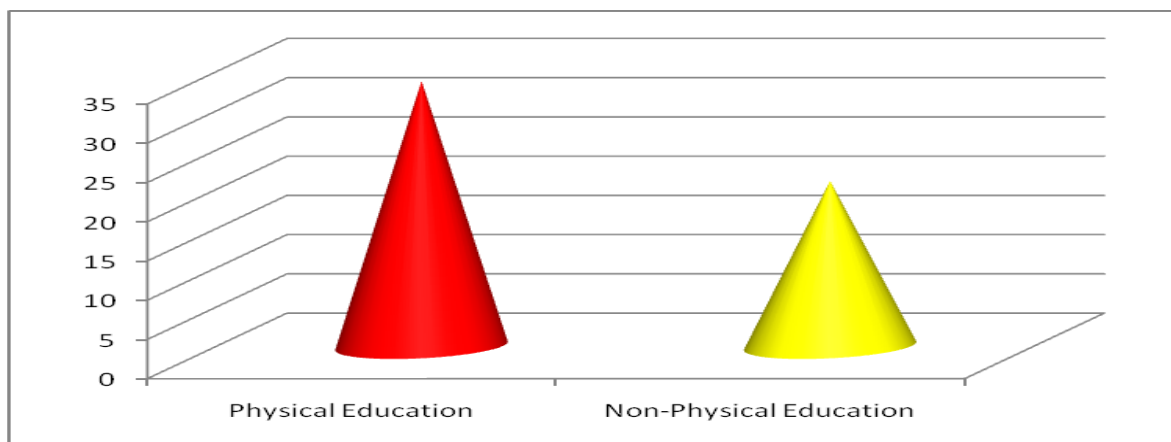
**TABLE 2**  
**COMPARISION OF MEANS OF MEANS OF BENT KNEE SIT-UPS BETWEEN PHYSICAL EDUCATION AND NON-PHYSICAL EDUCATION STUDENTS**

Subjects	M	MD	$\sigma$ DM	t-ratio
Physical Education Students	33.75	12.70	1.96	6.465*
Non-Physical Education Students	21.05			

\*Significant at .05 level

$t_{.05(79)} = 1.66$

It is evident from Table2 that, significant difference was found between the mean scores of physical education and non-physical education students in relation to bent knee sit-ups as the t-value was found 6.465 which was higher value than the required value at .05 level of significance. The scores are also illustrated in below figure-2



**Figure -2:** Mean scores of physical education and non-physical education students in chin-ups

To find out shuttle run between the means of physical education and non-physical education students, t-ratio statistics was used and presented in table-03.

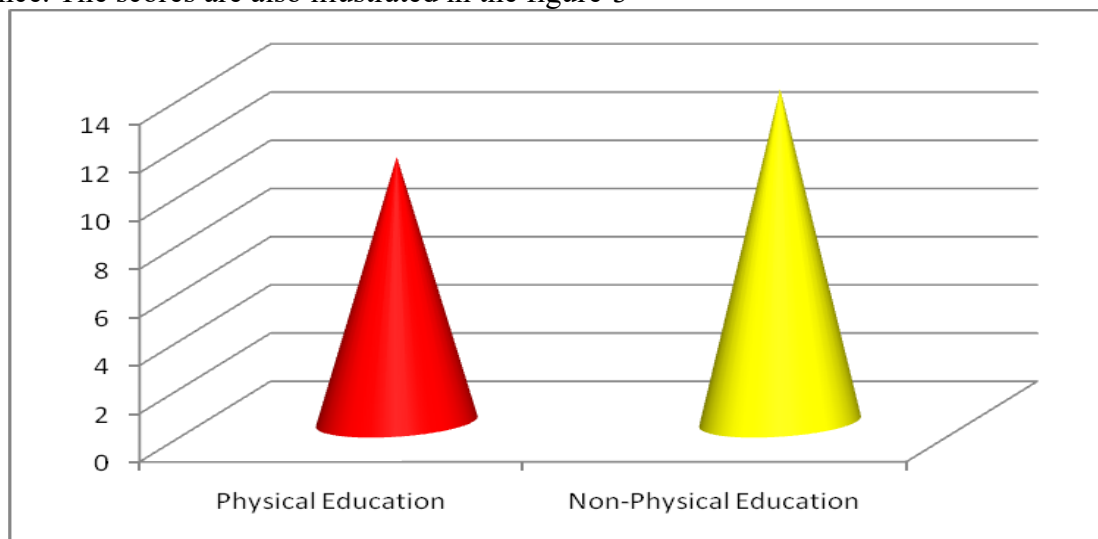
**TABLE 3**  
**T-RATIO OF THE MEANS OF SHUTTLE RUNS BETWEEN PHYSICAL EDUCATION AND NON-PHYSICAL EDUCATION STUDENTS**

	Students		t- ratio
	Physical Education	Non-Physical Education	
<b>Mean</b>	<b>10.99</b>	<b>13.81</b>	<b>-6.333*</b>
<b>S.D</b>	<b>.97</b>	<b>2.64</b>	

Significant at .05 level

t-value required to be significant at 79 df = 1.66

It is evident from table-3 that, significant difference was found between the mean scores of physical education and non-physical education students in relation to shuttle runs as the t-value was found -6.333 which was higher value than the required value at .05 level of significance. The scores are also illustrated in the figure-3



**Figure -1:** Mean scores of physical education and non-physical education students in Shuttle Run

To find out standing broad jump between the means of physical education and non-physical education students, t-ratio statistics was used and presented in table-04.

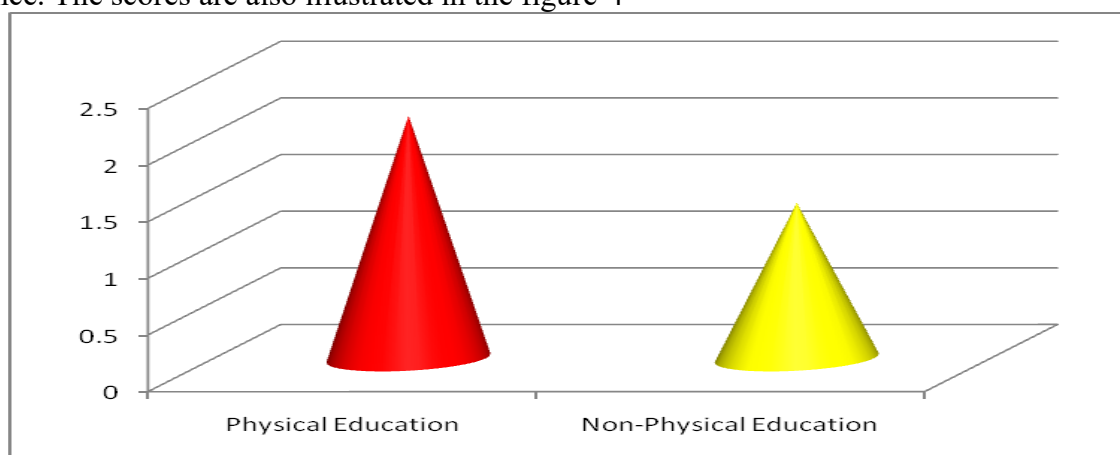
**TABLE-4**  
**T-RATIO OF THE MEANS OF STANDING BROAD JUMP BETWEEN PHYSICAL EDUCATION AND NON-PHYSICAL EDUCATION STUDENTS**

Students			t- ratio
	Physical Education	Non-Physical Education	
<b>Mean</b>	<b>2.14</b>	<b>1.37</b>	<b>15.801*</b>
<b>S.D</b>	<b>.217</b>	<b>.219</b>	

Significant at .05 level

t-value required to be significant at 79 df=1.66

It is evident from table-4 that, significant difference was found between the mean scores of physical education and non-physical education students in relation to standing broad jump as the t-value was found 15.801 which was higher value than the required value at .05 level of significance. The scores are also illustrated in the figure-4



**Figure -4:** Mean scores of physical education and non-physical education students in Standing Broad Jump

To find out 50mtr dash between the means of physical education and non-physical education students, t-ratio statistics was used and presented in table-05.

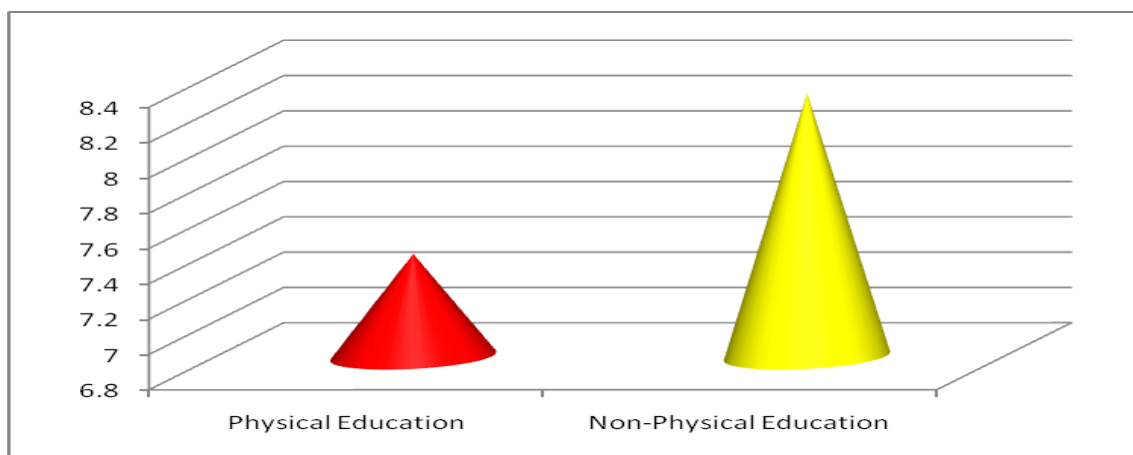
**TABLE 5**  
**T-RATIO OF THE MEANS OF 50MTR DASH BETWEEN PHYSICAL EDUCATION AND NON-PHYSICAL EDUCATION STUDENTS**

Students			t-ratio
	Physical Education	Non-Physical Education	
<b>Mean</b>	<b>7.38</b>	<b>8.29</b>	<b>-6.595*</b>
<b>S.D</b>	<b>.75</b>	<b>.45</b>	

Significant at .05 level

t-value required to be significant at 79 df=1.66

It is evident from table-5 that, significant difference was found between the mean scores of physical education and non-physical education students in relation to 50mtr dash as the t-value was found -6.595 which was higher value than the required value at .05 level of significance. The scores are also illustrated in the figure-5



**Figure -5:** Mean scores of physical education and non-physical education students in 50 Meter Dash

To find out 600mtr run/walk between the means of physical education and non-physical education students, t-ratio statistics was used and presented in table-06.

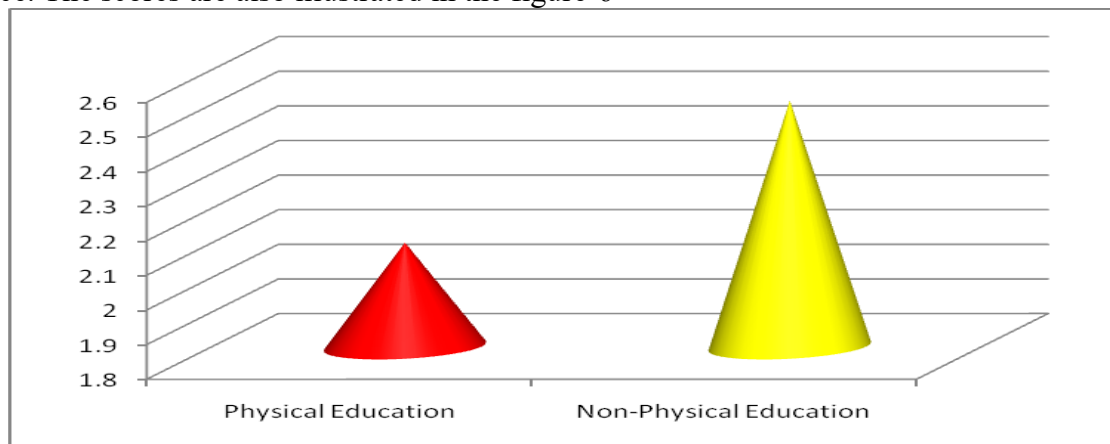
**TABLE 6**  
**T-RATIO OF THE MEANS OF 600MTR RUN/WALK BETWEEN PHYSICAL EDUCATION AND NON-PHYSICAL EDUCATION STUDENTS**

	Students		t. ratio
	Physical Education	Non-Physical Education	
<b>Mean</b>	<b>2.10</b>	<b>2.51</b>	<b>-5.313*</b>
<b>S.D</b>	<b>.38</b>	<b>.32</b>	

Significant at .05 level

t-value required to be significant at 79 df = 1.66

It is evident from table-6 that, significant difference was found between the mean scores of physical education and non-physical education students in relation to 600mtr run/walk as the t-value was found -5.313 which was higher value than the required value at .05 level of significance. The scores are also illustrated in the figure-6



**Figure -6:** Mean scores of physical education and non-physical education students in chin- ups

#### 4. DISCUSSION

The present investigation was designed to know the physical fitness between physical education and non-physical education students. The purpose of this study was many folds and

revealed some specific differences between the students. Though, the Master Student did not tend to explore personal life of students but, some of the facts could not be unattended hence, found necessary to know the physical fitness components between physical education and non-physical education students in Swami Vivekanand Subharti University, Meerut (U.P.). **AAPHER Youth Fitness Test (1976)** used for the purpose helped to know the significant difference in various physical fitness of the students.

## 5. CONCLUSIONS

The result of the study was to compare the physical fitness between physical education and non-physical education students. Though these exist significant difference between physical education and non-physical education students. Where the calculated mean difference found in pull ups, sit ups, standing broad jump, shuttle run, 50 yards dash and 600 yards run and walk. The result is in the direction of **Guta , 2017)** conducted a study on topic, “Comparative Study of Physical Fitness Components between Physical and Non-Physical Education Male Students in Nekemte College of Teacher Education” The findings of the present study reveals that there were significant difference found in pull ups, sit ups, standing broad jump, shuttle run, 50 yards dash and 600 yards run and walk for knowing the abdominal strength, explosive strength, arm and shoulder girdle strength, agility, speed & cardiovascular endurance respectively.

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