



## COMPARATIVE STUDY OF PHYSICAL FITNESS BETWEEN UNDER GRADUATE AND POST GRADUATE PHYSICAL EDUCATION STUDENTS

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### ABSTRACT

The Purpose of the study was to compare the physical fitness between undergraduate and post graduate students of physical education. The study was delimited to the forty students (twenty students in each discipline) who had study appearing in physical efficiency test conducted by C.S.J.M. University, Kanpur were purposely includes as the subjects for the study. The age of the participants were ranging from 20–25 years. It was hypothesized that there would be no significant difference between the undergraduate & post graduate students on the physical fitness. For the purpose of analysis of data 't' test was employed to compare the physical fitness variables of undergraduate and postgraduate physical education students. There was a significant difference between the mean scores of undergraduate and postgraduate physical education students. Significant difference was between the undergraduate and post graduate students in all physical fitness components.

**Keywords:** Physical fitness, Under Graduate, Post Graduate and Physical Education.

### INTRODUCTION

Physical fitness is a required element for all the activities in our society. Health related physical fitness of an individual is mainly dependent on lifestyle related factors such as daily physical activity levels. It was believed that the low physical fitness level of an individual is associated with higher mortality rate (Takken et al., 2003). Physical fitness is considered as the degree of ability to execute a physical task under various ambient conditions. Fitness is generally considered to have five components: aerobic capacity, muscle strength, muscular endurance, flexibility, and body composition. Physical fitness is presently considered one of the most important health markers, as well as a predictor of morbidity and mortality for cardiovascular disease [CVD] and for all causes. (Jourkesh Morteza et al., 2011) The performance of a sportsman in any game or event also depends on physical fitness. The physical fitness or condition is the sum total of five motor abilities namely muscular strength, agility, power, speed and cardiovascular endurance. Therefore, the sports performance in all sports depends to great extent on these abilities. Improvement and maintenance of physical fitness is the most important aim of sports training (Uppal, 1980). Nowadays, people from all parts of the world are becoming more and more health conscious. Physical activity offers a broad range of benefits including the prevention of obesity and increases the resistance power in the body which results in decreasing fat and finally gives the body a toned shape. The Purpose of the study was to compare the physical fitness between undergraduate and post graduate students of physical education.

### METHODOLOGY

The study was conducted in the department of Physical Education, Chhatrapati Shahu Ji Maharaj University, Kanpur (U.P.). The subjects were healthy young male under graduate and post graduate students of Physical Education, aged 18–25 years. The study included students appearing in B.P.Ed. and M.P.Ed Physical fitness test in the session 2015-16. Among all the students appearing in the physical fitness test, top 20 undergraduate and post graduate students were taken in to consideration on the basis of their performance in physical test. 40 subjects, who fulfilled inclusion criteria, were taken into consideration on the basis of their performance in physical fitness test. All the students were tested under similar conditions. A written consent was obtained from the subjects that their performance of physical fitness test used in this study. They were highly motivated to participate in this study. They were assigned into two groups: A (top twenty under graduate students on the basis of their performance in B.P.Ed.



physical efficiency test: N= 20) and B (top twenty post graduate students on the basis of their performance in M.P.Ed. physical efficiency test: N= 20)

Based on motor fitness components, researchers have developed numerous physical fitness test batteries such as AAHPER Youth Physical Fitness Test, AAHPER Health Related Fitness Test, Fleishman Physical Fitness Test, National Physical Efficiency Test, Indiana Motor Fitness Test etc. But for the purpose of this study AAHPER Youth Fitness Test was considered appropriate as the test items included, measured all the components of physical fitness. Variables included were Speed, Abdominal Muscular strength, Arm and Shoulder Strength, Leg Strength, Agility and Cardiovascular Endurance

For the purpose of analysis of data mean, standard deviation, independent 't' test was employed to compare the physical fitness between undergraduate and post graduate physical education students.

## FINDINGS

TABLE 1  
 COMPARATION OF PHYSICAL FITNESS BETWEEN UNDER GRADUATE AND POST GRADUATE  
 PHYSICAL EDUCATION STUDENTS

Variable	Groups	Mean	SD	DM	SEM	"t" ratio	Sig.
Speed	Undergraduate students	6.97	0.44	1.44	0.40	3.07*	0.088
	Post graduate students	8.42	1.77				
Abdominal Strength	Undergraduate students	49.65	6.36	17.15	2.53	2.22*	0.144
	Post graduate students	32.50	9.38				
Arm and Shoulder Strength	Undergraduate students	6.17	0.69	0.93	0.30	3.97*	.054
	Post graduate students	5.23	1.17				
Leg Strength	Undergraduate students	2.46	0.14	0.41	0.06	4.68*	0.037
	Post graduate students	2.05	0.24				
Agility	Undergraduate students	9.45	0.60	2.24	0.36	2.39*	0.130
	Post graduate students	11.70	1.51				
Cardiovascular Endurance	Undergraduate students	1.49	0.21	1.13	0.14	14.34*	0.001
	Post graduate students	2.62	0.59				

\*Significant at 0.05 level  $t_{(0.05)(38)} = 2.021$

Above table reveals that there is significant difference between the undergraduate and post graduate students in all physical fitness components as calculated valuables higher then tabulated value i.e, 2.021 at degree of freedom(38) with 0.05 level of significance.



## CONCLUSIONS

In regard to all physical fitness variables there were significant difference between the undergraduate and post graduate physical education students.

The physical fitness variables speed, agility and cardiovascular endurance of post graduate students were found to be higher than the undergraduate physical education students.

The physical fitness variables abdominal strength, arm and shoulder girdle strength and explosive power of undergraduate students were found to be higher than the post graduate physical education students.

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