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Comparative study of selected physical fitness components between intercollegiate and interuniversity basketball players

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Abstract

The purpose of the study was to compare the physical fitness components between Intercollege and Interuniversity basketball male players. Total 24 players selected 12 intercollegiate basketball and 12 interuniversity basketball players from Jammu University their age ranged from 18-25 years, only selected physical fitness components i.e. the speed, agility, endurance and muscular strength were measured by using respective techniques and equipment. The between-group differences were assessed by using Independent 't' test. The level of $p \leq 0.05$ was considered significant.

Keywords: Physical fitness, basketball

Introduction

Physical education is related with skills learning and development of fitness through physical activities as most of the "education through physical" takes place by means of particular skills of games and sports, athlete, gymnastics, dance etc. These particular skills may be defined as those physical activities making each sport that are unique to that sport like motor capacity (inborn ability) motor educability (ability to acquire new skills), motor capacity (acquired or inborn ability to perform motor activity) (Kansal 2012) [3]. Life of human being is depending upon the body he keeps. All the activities of human being are done with the help of body. Nature has made humans to execute various activities effectively. Today technology has made human life easier, as most of the work is performed by the gadgets. The inactive life style of man has weakened the efficiency of humans. The less working capacity of humans has caused many dilemmas like weakness, illness, chronic diseases, etc. The environment in past was less polluted. All these factors have reduced the efficiency of humans. Today, we desperately require physical fitness not only to improve our capacities but also to enhance our health and wellness. By developing physical fitness programs, we can improve our fitness, wellness and health (Kundra, 2009) [1]. The classified two groups of senior high school volleyball players according to their team's success in regional and state tournaments. The two groups (successful and unsuccessful) were compared on five motor ability items: leg power, arm and shoulder power, agility, total body response and grip strength. The only significant difference between the groups was found in the agility test, in favor of the successful players [6]. Physical fitness is a required component for all the activities in our society. Physical fitness of an individual is mainly dependent on lifestyle related factors such as daily physical activity levels. Physical fitness is also considered as the degree of capacity to do a physical task under various ambient conditions (Basak & Dutta., 2016) [2]. People during those times were confronted with hostile environment and only fit and strong individuals could survive. Hence survival of the fittest was the dictum. Even the civilization of Sparta, Athens and Rome in the history of the world has stressed physical fitness or physical programme as an imperative aim of the educational programme (Nixon *et al.*, 1969) [4]. Understanding of physical characteristics and the dynamics of motor fitness are becoming increasingly important to the physical educators and coaches with an increased scientific knowledge of sports. The trial and error methods, and application of guessing, become less than adequate in preparing sports persons for top-level competitions.

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So, with the expertise knowledge of scientists, coaches, and physical educators etc. the playing ability of the players can be predicted [7].

Materials and Methods

24 male subjects were selected from Jammu University, Jammu and Kashmir, the age group ranged between 20 to 25 years.

All the subjects gave an informed consent after detailed protocol of the non-invasive technique was explained to them. Physical test includes 50 yard dash for speed, shuttle run for agility, 12min. Run/Walk Test for cardiovascular fitness, sit-up for muscular endurance.

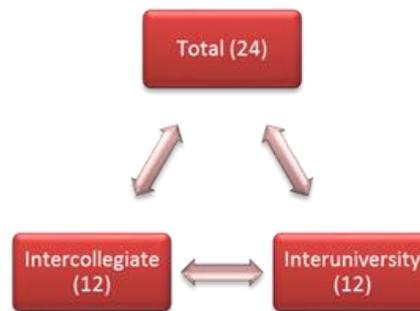


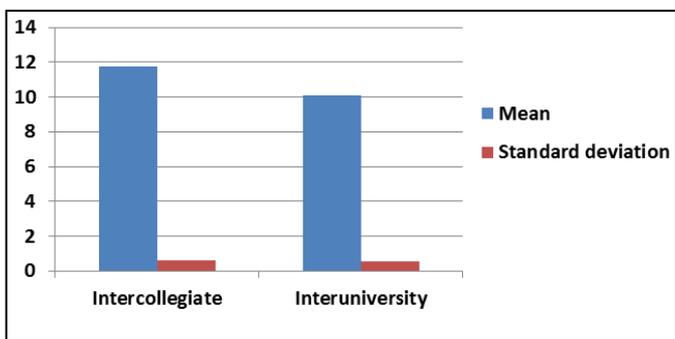
Fig 1: Flow Chart of Sampling

Results

Table 1: Descriptive Statistics of Selected Variables for Intercollegiate and Interuniversity Basketball Players

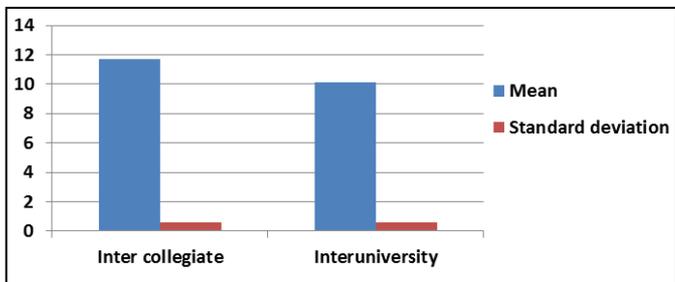
Variable	Mean		Standard Deviation		T value
	Intercollegiate	Interuniversity	Intercollegiate	Interuniversity	
Speed in sec.	7.53	6.70	0.39	.33	8.84*
Agility in sec.	11.73	10.1	.58	.56	2.05*
cardiovascular	2037.9	1670.9	72.82	89.67	17.47*
muscular strength	33.4	38.5	3.18	3.01	6.38*

*significant at .05 level of confidence



Graph 1: Speed

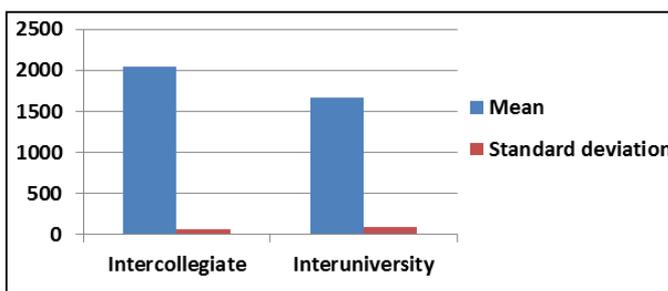
Graph- 1 shows that the mean of the speed of intercollegiate and interuniversity basketball players is 7.53 and 6.70 respectively. Whereas standard deviation of the speed of intercollegiate and interuniversity basketball players is 0.39 and 0.33 respectively, ‘t’ value is 8.84. The result reveals a statistically significant difference in speed between intercollegiate and interuniversity basketball players interuniversity players were found better in speed as compare to intercollegiate players.



Graph 2: Agility

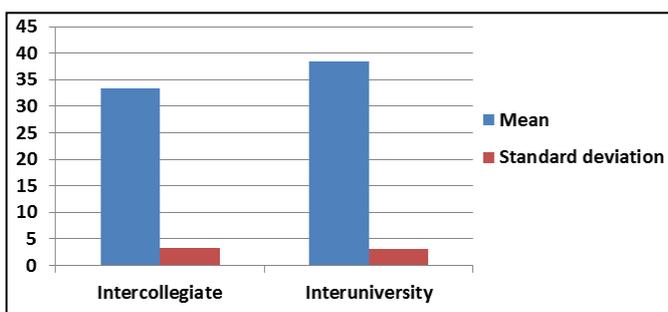
Graph- 2 shows that the mean of the agility of intercollegiate and interuniversity basketball players is 11.73 and 10.1 respectively. Whereas standard deviation of the speed of intercollegiate and interuniversity basketball players is 0.58 and 0.56 respectively, ‘t’ value is 2.05. The result reveals a statistically significant difference in agility between

intercollegiate and interuniversity basketball players interuniversity players were found better in agility as compare to intercollegiate players.



Graph 3: Cardiovascular Endurance

Graph-3 shows that the mean of the cardio-vascular endurance of intercollegiate and interuniversity basketball players is 17.86 and 20.63 respectively. Whereas standard deviation of the cardio-vascular endurance of intercollegiate and interuniversity basketball players is 3.41 and 1.88 respectively, ‘t’ value is 3.89. The result reveals a statistically significant difference in cardio-vascular endurance between intercollegiate and interuniversity basketball players interuniversity players were found better in cardio-vascular endurance as compare to intercollegiate players.



Graph 4: Muscular Strength

Graph-4 shows that the mean of the muscular strength of intercollegiate and interuniversity basketball players is 33.4

and 38.5 respectively. Whereas standard deviation of the intercollegiate and interuniversity basketball players is 3.18 and 3.01 respectively, 't' value is 6.38. The result reveals a statistically significant difference in muscular strength between intercollegiate and interuniversity basketball players interuniversity players were found better in muscular strength as compare to intercollegiate players.

Conclusion

The investigator analyzed the collected data as per the purpose of study. The statistical analysis of physical fitness components of intercollegiate and interuniversity basketball male players shows that Interuniversity basketball players found better in the components such as Speed, agility, cardiovascular endurance, and muscular strength These differences may be due to level of game and interuniversity players were more physically fit as well as skillful. Moreover different level of game demand different level of physical fitness.

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