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Assessment of body fat percentage between under-19 school level and inter college level female basketball players

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Abstract

The aim of the study was to find out the significant difference of Body Fat% between Under-19 School level and Inter College female Basketball Players. For present study total 150 (75= Under-19 and 75= Inter College female) female Basketball Players selected and the age of subjects. For this study of Body Fat% variables are selected. After collecting the relevant data descriptive statistic and t test was applied. The level of significance was set at 0.05. The outcome of the study shows that insignificant differences of Body Fat% variables between Under-19 School level and Inter College female Basketball Players. For present study total

Keywords: Body fat%, basketball and inter college

Introduction

Body fat exists in two depots or storage sites. The first store, termed necessary fat, is the fat accumulated in the bone marrow and in heart, muscles, liver, spleen, kidneys, intestines, lungs, and lipid-rich tissues of the nervous system. This fat is compulsory for customary physiological implementation. In the heart, for example, the quantity of dissectible fat determined from cadaver studies represents about 18.4g, or 5.3%, for an average heart weight of 349g in males, and 22.7g, or 8.6%, for an average heart weight of 256g in females (Sparling, 1998) [4]. Standard body weight scales present adetermine of total weight, but don't determine the lean-to-fat ratio of that weight. Standing on most scales can tell you only if you weigh more than the average person, but not if that weight is fat or muscle. Based only on scale weight, a 250-pound athlete with 8% body fat may be considered "overweight" by a typical weight chart. Such charts are not a good sign of ideal body weight for general health or for athletic performance. The ideal weight and fat-lean ratio varies considerably for men and women and by age, but the lowest percent of body fat considered safe for good health is 5 percent for males and 12% for females. The average adult body fat is closer to 15 to 18% for male and 22 to 25% for female. Sportsmen tend to be at low end of this scale due to their improved lean weight (muscle mass). While low levels of body fat seem to be related to improved sports performance, body composition alone is not a great predictor of sports success. A linebacker needs to have enough body mass (lean and fat weight) to generate greater forces and avoid injury. Body fat among elite athletes varies largely by sport. There is little proof of any benefit when men drop under 8% and women drop under 14 % body fat. Body composition, purposely body fat% is of immense interest to athletes and is regularly negatively related with athletic performance (Gomez, 2004; Malina, 2007; Sigurbjorn, Evans, Saunders, Ogburn, Lewis and Cureton 2000). In each sport every athlete has a different kind of physique. For instance, throwers at different levels of competitions are heavier and taller with long muscular arm and wider shoulders. In shot-put, discus and hammer throwing, larger body weight is beneficial because during throwing the object forward and upward, an equal and opposite reactive force is exerted on the throws, pushing him/her backward and downward. In different events of athletics and different games, specific body type is determined, for eg. In basketball and volleyball the average height of players are more as compared to hockey and soccer players For the purpose of the study total 150 female basketball.

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players were chosen as subjects ($N_1=75$ inter college female players and $N_2=75$ under-19 school female basketball players). The subjects were systematically acquainted with the testing course of action as well as the purpose and implication of the study. A painstaking orientation of requirements during the testing actions and presentation test were made for thriving completion of study. They were asked by the scholar to cooperate and to contribute with utmost genuineness. Everything concerning the tests was made clear and finally requested to take part whole heartedly in the present study.

Table 1: Comparison of Body Fat% between under-19 school Level and inter college Female basketball Players

Group	Sample	Mean	Standard Deviation	t-value
Under-19 School level female Basketball Players	75	17.380	3.518	
Inter College female Basketball Players	75	17.639	3.807	0.432

Table 't'-value at .05 (148) = 1.97

Table & figure 1 shows that the Mean and Standard Deviation values of Body Fat% with regard to Under-19 School level female Basketball Players is 17.380 and 3.518 whereas in the case of Inter College female Basketball Players was 17.639 and 3.807 respectively. The calculated t-value (0.432) which is less than the tabulated t-value (1.97) at .05 level. So, it depicts that there is insignificant difference between Under-19 School and Inter College female Basketball Players.

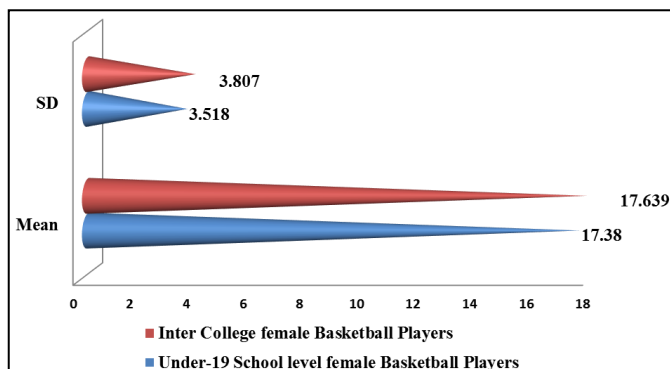


Fig 1: Mean and standard deviation of Body FAT% of under-19 school and inter college Female basketball players

Discussion of the Findings

Body composition is an essential aspect of fitness for basketball players. An excess body fat acts as dead mass in activities when body mass is lifted repeatedly against gravity in running and jumping during play (Jayalakshmi, 2013) [3].

The outcome of the study represent that there were insignificant differences between all the three levels for their body fat %. The present results were supported with the previous study of Amit (2016) [1] a comparative study of body composition between Male and Female Basketball players. Results of the study represent that Fat %, Lean Body Mass and Body Mass Index variables shows insignificant differences between male and female Basketball players of Kurukshetra University Kurukshetra.

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3. Jayalakshmi MK, Ajay KT, Johncy S, Kumar DG, Bondade SY. A Comparative Study of Fat Parameters in

Criteria of measurement

Body Fat%: It was examined with the help of Body Composition Monitor with scale HBF-361.

Statistical Analysis

For statistical analysis 't' test was applied and the level of significance set at 0.05.

Results

Sedentary and Non-Sedentary Subjects. International Journal of Pharmacy and Biological Sciences. 2013; 03(03):365-370.

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