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A comparison of high and low performer Basketballers with regard to their body composition

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Abstract

The purpose of present study was to access Body Composition of low and high performer in Basketball. In the present study, the subjects for data collection were collected from senior secondary schools of district Ropar (Punjab) of junior level. The sample consist of 70 junior level basketball players. To measure the Body Composition of juniour Basketball players, tools were used i.e. skinfold caliper, weighing machine and measuring tape. The result of bone mass is in favour of high performers. The difference, however, is not statistically significant. The average of muscle mass is in favour of high performance but not significant. The average body fats are in favour of low performers but not significant.

Keywords: Body Composition, Low and High Performer and Basketball Players

Introduction

Sports in 21st century have gained much popularity and prominence than in any other period of human history. Now, it has become an absolute necessity that right talents are identified for the right game. Sports is now no more a hobby, it has become a full time profession.

The sports scientists and coaches are demanding full time involvement and round the year dedicated practice of sportsmen to reach the pinnacle of their performance. The international community of sports lovers is also curiously looking for better and superb performance of sports men and women in their respective fields. Aspirations and expectations of the people pertaining to the performance of sports man all over the world are going higher and higher. The high level of performance by sportsmen and women require a highly scientific approach and it should be done right from the level of identifying talents.

Body Composition

The body composition generally refers to the type and amount of tissue, which make up the body. The most widely accepted model in the two component scales, lean body mass and fat weight. The lean body mass consists of skeleton organs and other tissues which are approximately 40-45 percent muscle mass and is used to represent the active energy fat (Behnke 1963) ^[1] fat weight on the other hand is the inactive storage tissue that, which searing as a long from energy pool is considered excess fat weight for most activities.

Dey, A.N. (1991) ^[2] conducted a study of Anthropometric measurements and body composition of high and low cardio-respiratory fitness of body and observed that in secondary school boys belonging to high cardio-respiratory fitness group posses significant small abdominal girth measurement, lower percentage of body fat less weight, higher lean body mass as compared to the subjects belonging to low cardio-respiratory fitness group multiple correlation of absolute variables from both high and low cardio-respiratory fitness groups reveal that both the groups possess a peculiar physique and absolute anthropometric variables among themselves maintain certain amount of proportions which is quite unique in itself.

Basketball

Basketball the game was borne in December 1891 at Springfield College, USA, is playing with skill, fitness, teamwork and strategy making it fast and thrilling sport. Player's body is found to be better fundamentalists. All-rounder players with ability and skill in all phases of the game passing dribbling, shooting and rebounding.

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Basketball game in modern days is observed as fast moving game. Modern day Basketball players are required to possess speed in various forms such as Sprinting speed, Reaction speed, Movement speed, Speed in thinking, Speed in decision making and Speed endurance to perform all movements without losing the speed throughout forty minutes duration of the game. The speed endurance required to be possessed by the players is found to be specific to the game. In order to know the specificity of the speed endurance required to be possessed by a modern day Basketball players, the movements performed by the players during the game with and without Basketball are to be identified.

Objective of Study

To compare the low and high performers of Basketball game with regard to Body Composition

Methodology

The Basketball players from senior secondary schools of district Ropar (Punjab) of junior level constituted the subject of the present study. The Measurements were taken of 70 senior secondary school boys. Out of 70 schoolboys, 35 were selected for high performance group and lowest 35 were selected for low performance group on the basis of field goal speed test performance.

S.N.	Measurements	Low Performer Mean	Low Performer S.D.	High Performer Mean	High Performer S.D.	T. Value
1.	Bone Mass (Kg)	10.66	1.10	10.81	.96	.61
2.	Muscle Mass (Kg)	28.77	3.19	29.74	2.75	1.38
3.	Percentage Body Fats	15.74	3.58	14.45	3.48	1.55

*Significant level of 0.05

1. Bone Mass

The table shows the average of bone mass in the favour of high performers. The difference however is not statistically significant.

Sidhu and Sahota (1990) ^[5] have reported that ball game players have more bone mass than non-sportsmen.

2. Muscle Mass

The table shows the average of muscle mass in the favour of high performers but not significant.

Sidhu and Sahota (1990) ^[5] conducted a study on top ranking sportsmen and reported they are better in muscle mass than non-sportsmen.

3. Percentage Body Fats

The table shows the average body fats in favour of low performers but not significant. Earlier study conducted by Malhotra and Sodhi (1982) concluded that more fat may be reason of low performance. The same findings is to be seen here.

Conclusion

It has been seen that the difference between the winning teams and losing teams is always of a degree. The average of bone mass is in favour of high performers. The difference, however, is not statistically significant. The average of muscle mass is in favour of high performance but not significant. The average body fats are in favour of low performers but not significant.

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Tools Used

- **Skinfold Caliper:** Skinfold caliper was used to measure skinfold thickness.
- **Weighing Machine:** The weight of the subject was measured with the help of portable weighing machine.
- **Measuring Tape:** The measurements was done with the help of measuring tape.

Limitation and Delimitation

1. The study delimited to 70 Secondary School Junior male basketball players of district ROPAR (PUNJAB) and selected the 35 from high and 35 from low performance of male junior basketball players.
2. Body composition will be calculated by Metiecka's Method (1921)
3. The life diet, daily lifestyle, habits etc. that will the effect could not be controlled.
4. All the data for the study will be taken at evening and morning session.

Results

Comparison of Body Composition of Low (N=35) And High (N=35) Performers in Basketball

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