



COMPARISON OF SELECTED ANTHROPOMETRIC VARIABLES AMONG DIFFERENT PLAYERS OF TEAM GAMES

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ABSTRACT

The purpose of the study was to analyze the significant difference among players of selected team games on anthropometric variables. This study was conducting on 30 football and 30 hockey players who represented the Lucknow University. Each player was tested on selected anthropometric measurements among football and hockey players. T-test was used to analyze the difference between two groups of football and hockey players. Significant difference has been found on leg length among hockey and football players. None other selected anthropometric variables showed significant difference among football and hockey players.

KEY WORDS: Anthropometry, Team Game .

INTRODUCTION

The area of anthropology that deals with measuring the human body is called anthropometry. The definition has been limited to the types of metrics that are frequently used to link body build and physical performance. The measurement of external body parts, such as body diameters, body circumferences, and somatotypes, is known as anthropometry. To succeed in several sports, one needs to have particular anthropometric traits. It's also critical to recognize that athletes who participate in team sports and individual sports have somewhat different body compositions and structures. Certain events, like shot put and high jump, have very particular and distinct objectives, and the successful bodies reflect this. "Morphological optimization" is the process by which the physical demands of a sport determine which body types are most appropriate for that sport. (Saha, 2012)

It is commonly recognized that worldwide, especially in Western Balkan nations, there is an increasing interest in enhancing athletes' performance as well as in evaluating potential, strengths, and weaknesses, allocating player roles, and assisting in the creation of the best training plans. Nonetheless, in many regions, a lot more time is devoted to helping athletes become more physically active without considering the evaluation of their body composition and nutritional state. Modern sport science aims to pinpoint skills as accurately as possible and enhance the performance of top athletes. This process is quite taxing, though, because different sports demand different body types in order to perform at their best. (Popovic et al., 2013)

Given that kinanthropometry is a third physical attribute frequently linked to athletic performance, anthropometric determinants such as body composition, anthropometric measurements, and athlete characteristics play a vital role in performance among these performance markers. In

particular, anthropometric characteristics including body type, limb length, and skinfold thickness have been linked to performance in elite basketball or other sports. Accordingly, since the 1970s, descriptive research on the anthropometric and body composition traits of the majority of elite team sports has been carried out. Kinanthropometry is a scientific field that deals with issues that are very important to athletes. According to Cabañas, it is "the area of application of the study of the size, shape, proportion, composition, maturation and major functions of the human being." The International Society for the Advancement Kinanthropometry (ISAK) has approved this type of data as the most accurate technique to utilise in athletics and gives us information on an athlete's body composition. The assessment of anthropometric traits (e.g., body mass, height, and body mass index), body composition (e.g., body fat percentage, lean mass index), and performance more especially, power-strength-speed performances in jumping, sprinting, or throwing can also be used to extend this relationship to talent-identification procedures. By objectifying different aspects of the human body, this anthropometric evaluation makes it easier to track and manage its distribution, which in turn helps coaches and physical trainers in their work. In this regard, it is interesting to learn about an athlete's physical state at a particular point in their training and how to reach peak performance at a particular point throughout the competitive season. When thinking about nutritional strategies or customised training plans that seek to achieve morphological changes to enhance competitive performance by non-invasive solutions, this data can be compared to standardized data from comparable populations and serve as a crucial resource. As previously stated, this kind of evaluation is used in elite sports, and while it makes sense to assume that an athlete's anthropometric and body composition data will improve with increased skill, there is a wealth of scientific evidence demonstrating that athletes differ in both their physical characteristics and performance within the same sport as well as between sports. (Miguel-Ortega et al., 2023)

Anthropometric parameters are an essential part of the evaluation and selection of sports persons for diverse fields of sports. The present study was therefore aimed at evaluating the anthropometric measurements of male hockey and football players. By keeping in view it was hypothesized that there would be no significant difference among selected anthropometric variables of male hockey and football players.

METHODOLOGY

For the present study 30 football and 30 hockey players were selected as a subject, who represented Lucknow university, Uttar Pradesh in inter university competition. All selected subjects were 18-25years old and being included on the basis of random sampling. Each player was tested on weight, height, Total Arm Length, Leg Length, Upper Leg Length, Lower Leg Length measurements. To test the significance of mean difference between the football and hockey players on selected anthropometric measurements 't' test was employed as an statistical technique.

RESULTS AND DISCUSSION

Since the purpose of the study was to analyze the selected linear measurement of halfback players of football and hockey, these are explained with the help of different tables.

Table 1: Comparison selected anthropometric variables among Football And Hockey players

Variable	Football		Hockey		't'
	MEAN	S.D	MEAN	S.D	
Height	168.35	5.35	166.65	6.59	1.16
Body Weight	57.41	5.35	60.87	6.22	1.62
Total Arm Length	73.35	3.46	72.74	4.68	.57
Leg Length	101.05	4.30	98.01	4.68	2.90*
Upper Leg Length	53.65	2.52	52.36	3.71	0.37
Lower Leg Length	48.40	2.78	46.65	4.08	3.68

*Significant at .05 level

Table 1 shows the mean and standard deviation of selected anthropometric variables i.e. height, body weight, total arm length, leg length, upper leg length, and lower leg length of football and hockey players. The t-value for determining the significance of the mean difference between two game participants was 2.90, which was for df 58. Therefore, it was claimed that the legs of hockey players were noticeably shorter than those of football players. Furthermore, compared to halfbacks in hockey games, football players have shown somewhat greater mean values for length of upper leg, foot width, and total arm. However, none of these mean differences were deemed to be statistically significant. Football players, according to the study, have longer feet than hockey players because they utilise them more often for a variety of tasks, including kicking, dribbling, cutting, sliding, and tackling, to mention a few. Football training is heavily reliant on footwork.

CONCLUSIONS

Halfback players of football game possess significantly greater value for leg length, than halfbacks of hockey game. However they do not differ significantly in on other slected anthropometric variables with each other. Hence, the Hypothesis is partially accepted only in case of leg length and partially rejected among other selected anthropometric variables.

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