

ANTHROPOMETRIC VARIABLES OF ALL INDIA INTER UNIVERSITY HOCKEY PLAYERS

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INTRODUCTION

Field Hockey is outdoor stick and ball game. Field hockey, like many sports, is of obscure origins, but traces in one form or another to the ancient Egyptians and Persians, making it one of the world's oldest known sports. London's Wimbledon Hockey Club (organized 1883) standardized the game after many centuries of informal play in England, and it thereafter spread to other countries, particularly those in Europe and the British Empire. Men have played field hockey in the United States since 1890, but the Field Hockey Association of America, which regulates men's play, was not formed until 1930, and the sport continues to appeal very little to American males. In Olympic competition, where men's field hockey first appeared in 1908, India, Great Britain, and Pakistan have dominated. Although the sport has been very popular among high school and collegiate women in the United States since 1901, particularly in the East, it has been a women's Olympic event only since 1980. On the one hand it can be an emotion packed intensely human activity where a second can be seen like a life time and one point worth million, while on the other it can be tranquil hike through an autumns wads, a relaxed swim in the surf, or a lazy cruise in a spinnakered sail boat (Barrow 1977) Ultimately, the meaning of sport is inherent in the purposes for which it is used. It can be used for the purposes of education, entertainment- or self-expression, depending on the individual goals of the people participating. Sports might be used for all these purposes, some change or modification generally occurs in those who participate, all such outcomes are having positive

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values on the human behavior for continuum. So sports serve many purposes, such as desire or need for esteem, status, recognition, preferential treatment, ego enhancement, self-concept, health fitness and even education itself. Rules for men and women are essentially the same. The game is played on a level field, measuring 50 to 60 yd by 90 to 100 yd (46 to 55 m by 82 to 91 m), by two teams of 11 players each (five forwards, three halfbacks, two fullbacks, and a goalkeeper). A face-off in the center of the field starts the game. Teams direct their play toward advancing the ball—made of white leather over a cork and twine center and about 9 in. (23 cm) in circumference—down the field with their sticks (wooden, with a flat head on only one side of the striking surface). A point is scored by putting the ball through goal posts, which are 7 ft (2.13 m) high, 12 ft (3.66 m) apart, and joined by a net. Play can be physically punishing and fouls result in penalty strokes and free hits. Anthropometry is the science that deals with measurements of size, weight and proportions of human body. It provides scientific methods and observations on the living humans. Anthropometric techniques (skin fold, fat, circumference and diameter measurements) are popular for predicting body composition because they are not much expensive, require little space and can be performed easily (Behenke and Willmore, 1974 and Pollock and Willmore, 1990). Anthropometry is of tenure in physical Education, sports science, physical activity and biomedical sciences. Anthropometric measurements can be divided into height, weight and lengths, breadth or width, circumferences or girths, depths and skin folds. All measurements of individual are external dimensions of the body. Anthropometric measurements, body composition, body size and proportions are playing an important role in physical performance and fitness of the sportsman. Height and weight both are the indicators of overall body size and have been used for the grouping of children and youth in various kinds of activity according to their age and sex. Anthropometry is the systematized measurements that express the dimensions of human body. There search on anthropometric measurements may be useful in selecting the suitable game or sport for any individual. The idea behind the choice of a game or event by an individual of his interest is to give out the best possible abilities. For this purpose, the role of anthropometric measurements in any game or event is most important. Technique tactics and physical abilities play an important role to achieve the top level performance in national and international competitions. But one cannot achieve the top performance if the anthropometric measurements of an athlete do not correspond to the concerned game. So

many scientists studied that champions in different games and sports differ in their body measurements and physical fitness characteristics.

METHODOLOGY

For fulfilling the purpose for the study the male hockey players who participated in All India Inter University Hockey Tournament 2015-16 was selected as the subjects for the present study. The subjects were studied according to their playing position such as forwards, half backs and full backs Players. In consultation with the experts of the field, minutely going through the literature available and considering the feasibility criteria in mind, especially the availability of equipment, the following Anthropometric measurements were taken on right side of all the subjects by using the standard technique.

Anthropometric variables

ANTHROPOMETRIC MEASUREMENT	
1) STANDING HEIGHT	2) HIP WIDTH
3) WEIGHT	4) SHOULDER WIDTH
5) SITTING HEIGHT	6) CHEST WIDTH
7) UPPER LEG LENGTH	8) CALF GIRTH
9) LOWER LEG HEIGHT	10) THIGH GIRTH
11) ARM LENGTH	12) CHEST GIRTH
13) UPPER ARM LENGTH	14) UPPER ARM GIRTH
15) LOWER ARM LENGTH	16) LOWER ARM GIRTH

To examine combined effect, investigator has divided some sample from each team of all India University hockey men's. The grouping was made after examine their performance level given on prescribe performs and which was duly verified from record of All India Inter-university

men. Collection of data for the present study the hockey players of different playing positions have to go through selected anthropometric measurement. The subjects and the coaches were described in advance about the study and its importance in the field of hockey. Each test was properly explained and demonstrated to the hockey players. All the anthropometric measurements were taken in morning in minimum clothing. All the measurements where the side was involved were taken on the right side of the individual. An assistant was trained for recording the data who was well versed with the chosen anthropometric and physical fitness measurements. He accompanied the investigator to all places in connection with the collection of data. Dribbling playing ability have been measured in the present of the expert. During the match where the team was competed each other in All India inter university hockey tournament held at New Delhi.

DISCUSSION OF FINDINGS

The data obtained on both, an independent and a dependent variable where correlated in order to find out the relationship between them. Performance of forward hockey playing ability has significant and positive correlation in weight, upper leg length, lower leg length, arm length, upper arm length, shoulder width chest width thigh girth upper arm girth at Significant level at 0.01, respectively with the performance of Hockey playing ability. In standing height, lower arm length, calf girth, chest girth, lower arm girth has no significant correlation with the performance in Hockey playing ability. Leg length, hip width has positive and significant correlation at 0.05 level respectively with the performance of Hockey playing ability. Performance of half back hockey playing ability has significant and positive correlation Arm Length, Upper Arm Length, Lower Arm Length, Shoulder Width and Chest Width at 0.01 level, whereas standing height and hip width have negative correlation with Playing ability and weight leg length upper leg length lower leg length hip width calf girth thigh girth chest girth upper arm girth lower arm girth has no significant correlation with the performance in Hockey playing ability. Full back performance in weight, upper leg length, lower leg length, arm length, upper arm length, lower arm length, shoulder width and chest width has significant and positive correlation, respectively with the performance of Hockey playing ability at 0.01 level, whereas Standing height, leg length, leg length, hip width, and chest girth has no significant correlation with performance of playing

ability and arm length has significant at 0.05 level and positive correlation, respectively with the performance of Hockey playing ability

CONCLUSIONS

Within the limits and limitations of the present study, the following conclusions were drawn:

1. Forward hockey playing ability has significant and positive correlation in weight, upper leg length, lower leg length, arm length, upper arm length, shoulder width chest width thigh girth upper arm girth at Significant level at 0.01, respectively with the performance of Hockey playing ability. In standing height, lower arm length, calf girth, chest girth, lower arm girth has no significant correlation with the performance in Hockey playing ability. Leg length, hip width has positive and significant correlation at 0.05 level respectively with the performance of Hockey playing ability.
2. Thigh girth and upper arm girth of forward players has positive and significant correlations at 0.01 level, whereas calf girth, chest girth and lower arm girth has no significant correlation with performance of playing ability.
3. Half back hockey playing ability has significant and positive correlation Arm Length, Upper Arm Length, Lower Arm Length, Shoulder Width and Chest Width at 0.01 level, whereas standing height and hip width have negative correlation with Playing ability and weight leg length upper leg length lower leg length hip width calf girth thigh girth chest girth upper arm girth lower arm girth has no significant correlation with the performance in Hockey playing ability
4. Calf girth, thigh girth, chest girth, upper arm girth and lower arm girth of half back players has no significant correlation with performance of playing ability.
5. Full back performance in weight, upper leg length, lower leg length, arm length, upper arm length, lower arm length, shoulder width and chest width has significant and positive correlation, respectively with the performance of Hockey playing ability at 0.01 level, whereas Standing height, leg length, leg length, hip width, and chest girth has no significant correlation with performance of playing ability and arm length has significant at 0.05 level and positive correlation, respectively with the performance of Hockey playing ability

6. Thigh girth and upper arm girth of full back players has significant at 0.01 and positive correlation with performance of playing ability. Whereas calf girth, chest girth and lower arm girth has no significant correlation with performance of playing ability.

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