



COMPARISON OF ANTHROPOMETRIC VARIABLES BETWEEN FOOTBALL AND HOCKEY PLAYER

S. SHANTHI

Physical Director, Sakthi Polytechnic College, Sakthi Nagar, Erode, Tamilnadu, India.

ABSTRACT

The purpose of the study was to compare the anthropometric variables between football and hockey players. To achieve the purpose of the present study, totally 30 players in which 15 each from football and hockey players were selected as subjects at random from Erode, Tamilnadu and their ages ranged from 15 to 18 years. Comparative design was used in this study. Stadiometer, weighing machine and Lufkin Anthropometric Tape are used for these test are considered reliable as they were procured from reputed firms, and were being used for research purpose. Further, these instruments were calibrated in standard units. To determine the reliability of the instruments, for each test measurements on each of the variables were recorded two times under strict conditions using the same instrument. The scores obtained were also compared with other scores recorded by an instrument from another reputed firm. Hence, they were accepted and precise for the purpose of this study. The data collected on selected criterion variables namely height, weight and arm length between football and hockey players. The data were collected and analysed using appropriate statistical techniques. The following statistical procedure was adopted to compare the anthropometrical differences between football and hockey players. The data collected were statistically analysed through independent 't' test. The result of the study showed that there was insignificant difference in selected anthropometrical variables namely standing height between football and hockey players.

KEYWORDS: Body Weight, Height, Arm Length.

INTRODUCTION

"Football" redirects here. For other uses, see Football (disambiguation). A player (wearing the red kit) has penetrated the defense (in the white kit) and is taking a shot at goal. The goalkeeper will attempt to stop the ball from crossing the goal line. Sports and games in the modern era occupy a very prominent and important place in the life of people and also in every sphere of life. Sport consists of physical activity carried out with a purpose for competition, for self-enjoyment, to attain excellence, for the development of a skill, or more often, some combination of these. The history of hockey traced to ancient and modern was presented here. In addition to this to have its development and its present status, the worldwide-standardized tournament with its structure such as world cup, asia cup and champions trophy (Groger, 2001).

METHODOLOGY

To achieve the purpose of the present study, totally 30 players in which 15 each from football and hockey players were selected as subjects at random from Erode, Tamilnadu and their ages ranged from 15 to 18 years. Comparative design was used in this study.

Stadiometer, weighing machine and Lufkin Anthropometric Tape are used for these test are considered reliable as they were procured from reputed firms, and were being used for research purpose. Further, these instruments were calibrated in standard units. To determine the reliability of the instruments, for each test measurements on each of the variables were recorded two times under strict conditions using the same instrument. The scores obtained were also compared with other scores recorded by an instrument from another reputed firm. Hence, they were accepted and precise for the purpose of this study. The data collected on selected criterion variables namely height, weight and arm length between football and hockey players. The data were collected and analysed using appropriate statistical techniques. The following statistical procedure was adopted to compare the anthropometrical differences between football and hockey players. The data collected were statistically analysed through independent 't' test.

RESULTS

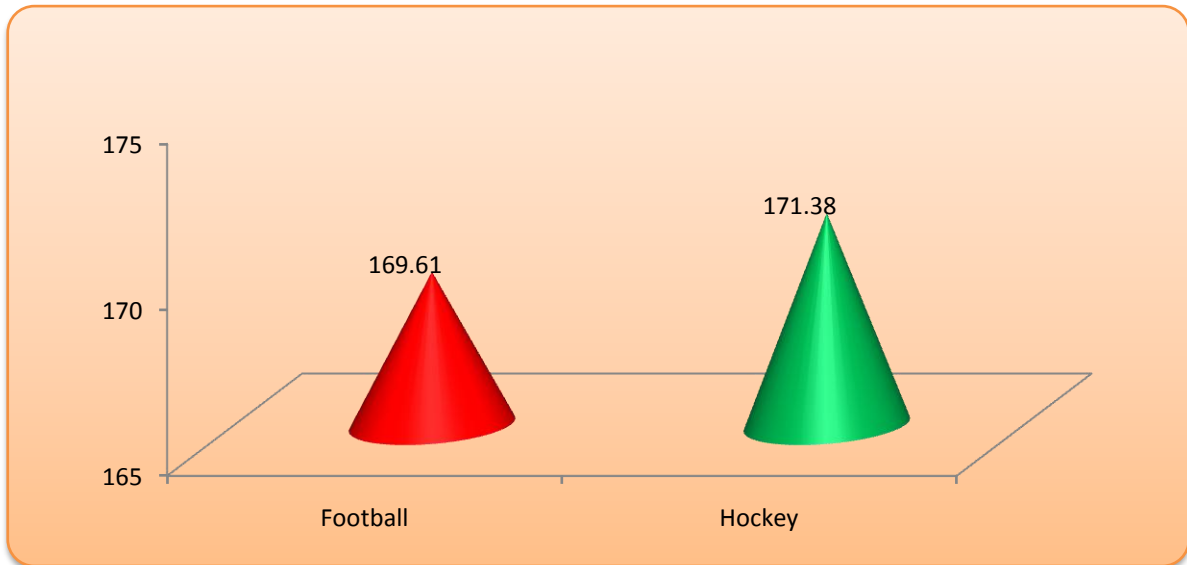
**TABLE-I
COMPUTATION OF T-RATIO BETWEEN FOOTBALL AND HOCKEY PLAYERS ON STANDING HEIGHT**

GROUP	M	SD	Σ DM	MD	T-Ratio
Football	169.61	5.43	2.43	1.77	0.72
Hockey	171.38	7.70			

It was observed that the mean value for football was 169.61 and hockey was 171.38. The standard deviation for the football was 5.43 and hockey was 7.70. The standard error of the different between the means was found out and the value is 2.43. The mean difference

for the football and hockey is 1.77. The obtained 't' ratio was 0.72. The table value of 't' ratio was 2.04. The obtained t-ratio was lesser than the table value. Hence, the obtained 't' – ratio was insignificant at 0.05 level of confidence.

**FIGURE-I
BAR DIAGRAM SHOWING THE MEAN VALUES OF FOOTBALL AND HOCKEY ON STANDING HEIGHT**



**TABLE-II
COMPUTATION OF T-RATIO BETWEEN FOOTBALL AND HOCKEY PLAYERS ON BODY WEIGHT**

GROUP	M	SD	Σ DM	MD	T-Ratio
Football	68.82	5.62	2.24	1.46	0.65
Hockey	70.29	6.63			

It was observed that the mean value for football was 68.82 and hockey was 70.29. The standard deviation for the football was 5.62 and hockey was 6.63. The standard error of the different between the means was found out and the value is 2.24. The mean difference for

the football and hockey is 1.46. The obtained 't' ratio was 0.65. The table value of 't' ratio was 2.04. The obtained t-ratio was lesser than the table value. Hence, the obtained 't' – ratio was insignificant at 0.05 level of confidence.

FIGURE-II
BAR DIAGRAM SHOWING THE MEAN VALUES OF FOOTBALL AND HOCKEY ON BODY WEIGHT

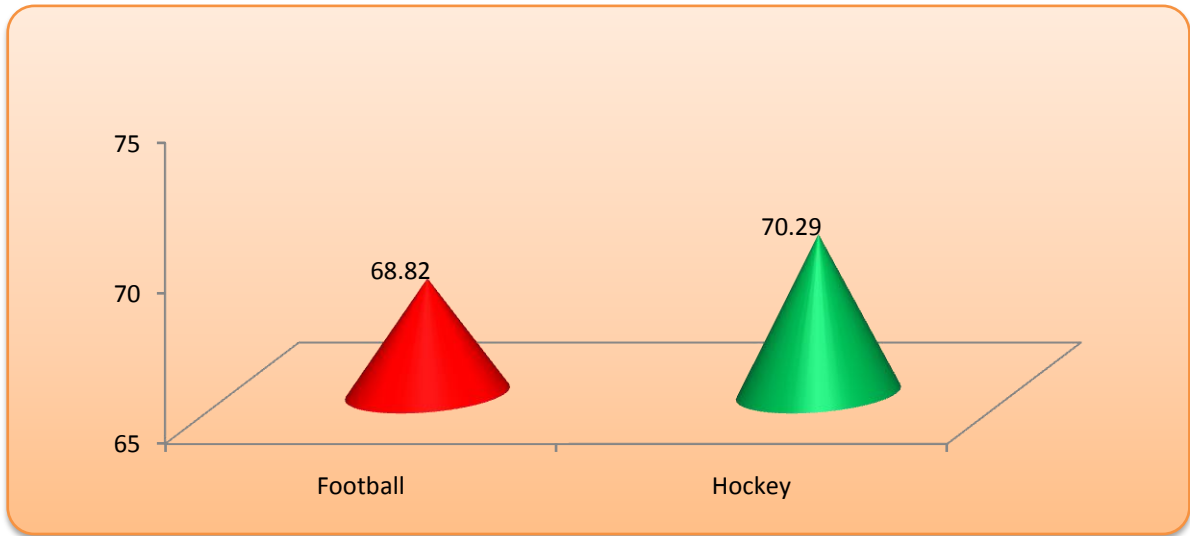
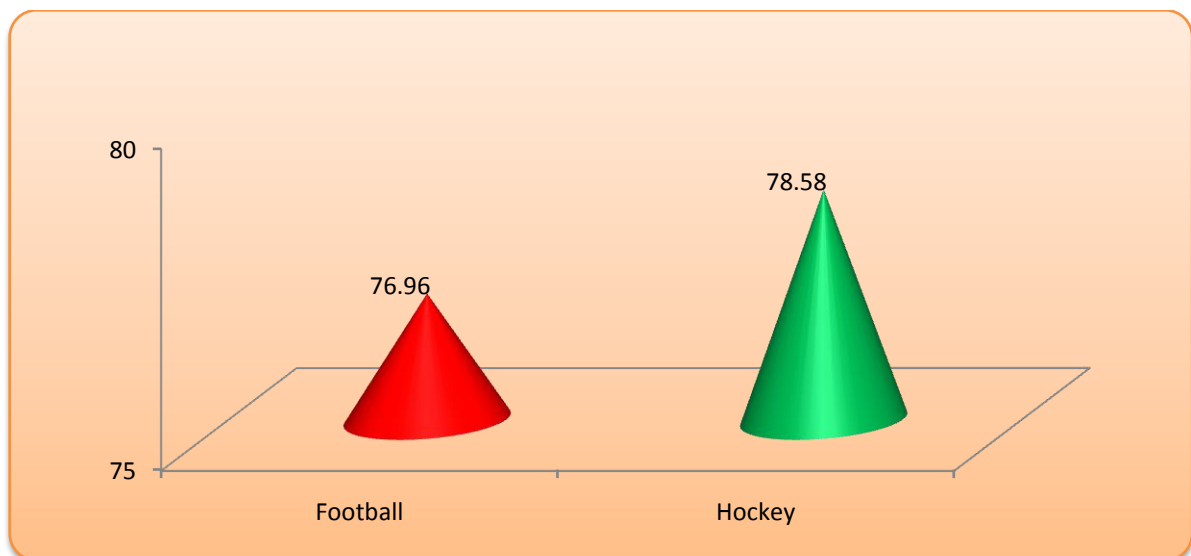


TABLE-III
COMPUTATION OF T-RATIO BETWEEN FOOTBALL AND HOCKEY PLAYERS ON ARM LENGTH

GROUP	M	SD	ΣDM	MD	T-Ratio
Football	76.96	5.02	1.82	1.61	0.88
Hockey	78.58	4.97			

It was observed that the mean value for football was 76.96 and hockey was 78.58. The standard deviation for the football was 5.02 and hockey was 4.97. The standard error of the different between the means was found out and the value is 1.82. The mean difference for the football and hockey is 1.61. The obtained ‘t’ ratio was 0.88. The table value of ‘t’ ratio was 2.04. The obtained t-ratio was lesser than the table value. Hence, the obtained ‘t’ – ratio was insignificant at 0.05 level of confidence.

FIGURE-III
BAR DIAGRAM SHOWING THE MEAN VALUES OF FOOTBALL AND HOCKEY ON ARM LENGTH



CONCLUSION

1. The result of the study showed that there was insignificant difference in selected anthropometrical variables namely standing height between football and hockey players.
2. The result of the study showed that there was insignificant difference in selected anthropometrical variables namely body weight between football and hockey players.
3. The result of the study showed that there was insignificant difference in selected anthropometrical variables namely arm length between football and hockey players.

REFERENCES

1. Beim, G. (1977). *Principles of Modern Soccer*. U.S.A: Houghton Mifflin Company.
2. BujjiBabu, M. & Johnson. P. (2012). Effect Of Plyometric Training And Speed Agility And Quickness (Saq) Training On Speed And Agility Of Male Handball Players. *Asian Journal of Physical Education and Computer Science in Sports*. Volume.7 No.1 pp26-30.
3. Burr, J.F., Jamnik, V.K., Dogra, S., & Gledhill, N. (2007). Evaluation of jump protocols to assess leg power and predict Hockey playing potential. *J Strength Cond Res*.
4. Grieco, C.R., Cortes, N., Greska, E.K., Lucci, S. & Onate, J.A. (2012). Effects of a combined resistance-plyometric training program on muscular strength, running economy, and Vo2peak in division I female soccer players. *J Strength Cond Res*. 26(9):2570-6.
5. Groger .A (2001) Anthropometry and muscle force measurement of German male national junior hockey players.
6. Sivaraji (2000) Physiological and anthropometric characteristics of amateur rugby league players. (Unpublished Master's Degree Thesis, Alagappa University, Karaikudi,
7. Srinivasa Reddy, (1995) a comparative study on selected physiological variables and motor ability components among the college soccer hockey and hand ball players. (Unpublished Master's Degree Thesis, Alagappa University, Karaikudi,
8. Sunderland, C. & Nevill, M.E. (2005). High-intensity intermittent running and Field Hockey skill performance in the heat. *Journal of Sports Sciences*, 23, 5, 531-540.