Volume-3, Issue-12, Dec-2014 • ISSN No 2277 - 8160

Research Paper Physical Education

# A COMPARISON OF HEIGHT AND WEIGHT AMONG HANDBALL PLAYERS IN DIFFERENT PLAYING POSITIONS

**Dr. B. Chittibabu**

Assistant Professor, Department of Physical Education and Sports Sciences, Annamalai University, Chidambaram – 608002, Tamilnadu.

**ABSTRACT**

*The purpose of the study was to compare height and weight among handball players in difference playing positions. Thirty two (32) male handball players were selected from Department of Physical Education and Sports Sciences, Annamalai University, Chidambram, Tamilnadu, India. These players were classified into four groups as backs (n = 12), wings (n = 7), pivots (n = 7) and goalkeepers (n = 6) respectively. The height and weight was selected as criterion variables. The collected data was analysed using one way Analysis of variance (ANOVA). When F ratio was found significant, Scheffe's post hoc test was applied to know the difference between the four groups. The result of the study showed that height (F = 3.353, p = 0.033) and weight (F = 4.385, p = 0.012) among handball players of different playing position showed a significant difference. It denotes that height and weight found to be high in back court players. It is concluded that handball players of different playing position showed significant difference on height and weight. The physique of the back court players plays a vital role to perform jump shots.*

**KEYWORDS : Height, weight, stadiometer, weighing machine, Handball players**

## Introduction

Handball is one of the Olympic Games team sports which requires a high standard of preparation in order to complete 60 min of competitive play and to achieve success. In this game movement patterns are characterised as intermittent and change continuously in response to different offensive and defensive situations. Anthropometric factors and morphological characteristics can influence the effectiveness of such responses, as has been observed in other sports (Deng et al. 1990). Therefore, anthropometric profiles may contribute to understanding the suitability of players for the sport of handball, particularly at a high standard of play. Anthropometric characteristics are very relevant for handball players because the game of handball entails physical contact in which specific physiques with a high level of strength and power may provide an advantage. The physical characteristics of handball players are considered in the choice of players to implement the game plan.

Hirata (1979) and Khosla (1983) demonstrated that the players in medal-winning teams were taller than the others, thus suggesting how important body height and mass are to play handball successfully. Despite the game's world-wide popularity, there have been few other investigations of anthropometric and physiological characteristics of elite male handball players: most notably, recent data are lacking. Previous reports have shown that body structure and morphological characteristics can determine the selection of participants in many sports. Results of cross-sectional anthropometric studies have tended to suggest that certain physical factors including body composition (body fat, body mass, muscle mass) and physique (somatotype) significantly influence athletic performance (Carter 1984). Knowledge of the physical characteristics of handball players could provide insight into those individual factors which influence the players' performance in the game. Therefore, the purpose of the study was to compare height and weight among handball players in difference playing positions.

## Method

### Subjects

Thirty two (32) male handball players were selected from Department of Physical Education and Sports Sciences, Annamalai University, Chidambram, Tamilnadu, India. These players were classified into four groups as backs (n = 12), wings (n = 7), pivots (n = 7) and goalkeepers (n = 6) respectively. These selected subjects, who practice handball regularly and take part in competition. The selected subjects mean age: 21.62 ± 1.90 years; weight: 64.59 ± 7.25 kg and height: 172.07 ± 7.25 cm.

Variables and Test

The height and weight was selected as criterion variables. To measure height stadiometer was used and weight was measured through weighing machine. The equipments used in the present study were reliable and accurate.

Height

To measure the subjects standing height, they were asked to stand erect on the platform of the stadiometer without shoes, by keeping the heels together, back and head touching the scale and the face looking straight. Height was recorded correct to the nearest centimetre.

Weight

The subjects were wearing the minimum of clothing. The standard weighing used to measure body weight should be placed in an area, which was smooth and even surface and with sufficient light, so that, the investigator is capable of properly recording the observation. The zero point of the weighing machine must be checked often during the measurements. The weight of the subjects was recorded to the nearest kilogram.

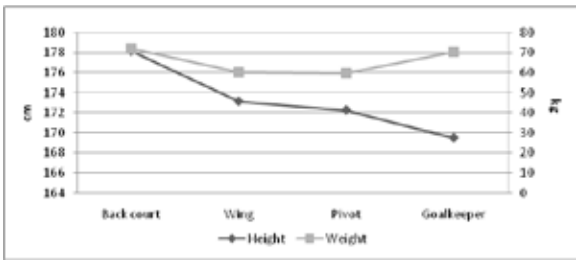
### Statistical technique

The collected data was analysed using one way Analysis of variance (ANOVA). When *F* ratio was found significant, Scheffe's post hoc test was applied to know the difference between the four groups. All the statistical tests were calculated using the statistical package for the social science (SPSS) for windows (Version 16).

## RESULTS

Table 1 clearly shows that height ($F = 3.353$, $p = 0.033$) and weight ($F = 4.385$, $p = 0.012$) among handball players of different playing position showed a significant difference. It denotes that height and weight found to be best in back court players (Figure 1). Scheffe's post hoc test was no difference between all comparisons ($p > 0.05$).

**Figure 1: Height and weight of handball players with different playing position**




## DISCUSSION

The results of the present study showed that the height and weight of Annamalai university male handball players differ significantly among different playing position. It is also noted that back court players are found to be heavy and taller than other position players. Stature and body mass showed significant differences between athletes of different playing status, and these differences were all in favor of the top elite. These global results are in accordance with Reilly (2001), who considered body mass and stature as very important to achieve a high level of performance in throwing. Body mass appears to be essential, especially in handball-specific skills, and for this reason most of the national athletes are very heavy.

## Conclusion

It is concluded that height and weight of Annamalai university male handball players show significant difference with respect to playing position. It clearly from the study that strong back court players required for both attack and defensive part of the game. They have to perform block and jump shot during the game for which height and weight essential for back court player. So the coaches prefer tall and heavier players to as backcourt player.

## REFERENCES

1. Deng P.L., Z.H.R.Lin, H.Q.Xia, Y.H.Cheng (1990) A study of somatotypes of Chinese elite handball players. J.China Sports Sci.Soc. 10:48-53. | 2. Hirata K. (1979) Selection of Olympic Champions. Vols. I and II. Chukyo University, Tokyo. | 3. Khosla T. (1983) Sports for tall. Br.Med.J. 10:736-738. | 4. Carter J.E.L. (1984) Somatotypes of Olympic athletes. In: J.E.L.Carter (ed.) Physical Structure of Olympic Athletes. Part II: Kinanthropometry of Olympic Athletes. Karger, Basel, pp. 80-109 | 5. Reilly T. Assessment of Sports Performance with Particular Reference to Field Games. Eur. J. Sports Sci. 2001;1:1-12. |