

Anthropometry variables for Identification of Talents of National Rowers in India

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Abstract

The purpose of the study was to find out the anthropometrical profile of the rowers for the identification of talent. To achieve the purpose of the study twenty rowers (20 boys) in the age group of 27 to 35 years were selected as subjects. The following anthropometrical parameters were mainly focused for the study namely height, weight and fat percentage. The following testing procedures were followed such as height was measured by digital Height measuring machine, weight was measured by weighing machine and fat percentage was measured by skinfold caliper and recorded with the help of durnin and rehman table. The test was conducted in SAI-LNCPE, Trivandrum campus. Descriptive and Percentiles were computed to analyses anthropometrical variables of Rowers. Percentile values at 90th, 50th and 10th percentile of height were 187.59, 180.92 and 168.93 respectively and Weight 96.83, 85.80 and 73.82 respectively, Fat Percentage were 23.94, 20.55 and 14.79. Rowers have average score in selected anthropometric variables i.e Height (179.49), Weight (84.25) and Fat Percentage (20.44). The study recommended to selected rowers on the basis of average score for talent identification between the ages 27-35.

Keywords: Talent, Identification, Rowers, Anthropometric

Introduction

Anthropometry in general: is a systematic technique which sizes the objective characteristics of the human body with principles and classifies the certain methods of measuring according to the structure (Maud & Foster, 2006; Ozer, 1993). In other words, Anthropometry is a metric evaluation of individual's body features (Ackland, Ong, Kerr & Ridge, 2003; Akin & Sagir, 2000).

Rowing demands high force production where muscularity of the sportsman plays a significant role during pedaling. Thus, physical structure is an important factor that contributes to success in rowing (Kaloupsis, S 2008). In the process of talent selection and orientation, the anthropometric features and abilities of the individual are two important factors that are jointly assessed for correct orientation and performance estimation (Anshel M H 2012). Anthropometric data are useful because some anthropometric variables are correlated with performance (Fry & Motton, 1991; Van Someren & Palmer, 2003).

The anthropometric characteristics of the rowers during the pre-selection phase are a very important factor to consider in their work towards sport

METHODOLOGY

The purpose of study was to identify the talent of national rowers of India on the basis of anthropometric variables. For the purpose of study, twenty (20 male) national rowers of India belonging to the age level of 27 to 35 years were selected for the study. Those represented for a country in various national and international competitions. The selected anthropometrical parameters were focused for this study such as height, weight and body fat percentage. For the purpose of the study Height was measured with a digital Height measuring machine, body mass was measured with a digital weighing scale and Skinfold thicknesses were measured with Harpenden skinfold caliper. Fat percentage was calculated by Durnin and Rehman table. Methods of measurement described in the ISAK manual were followed. The necessary data was collected by administering the tests for the chosen variable. The entire test which was conducted at SAI-LNCPE, Trivandrum. For the analysis of data Descriptive analysis was used to analyze the data in mean, standard deviation, minimum, maximum, range and percentile was computed for Anthropometrical variables of Rowers.

Result

Table-1: Descriptive Analysis of Height of Rowers.

Mean	Std Deviation	Range	Min	Max	Percentile
179.45	6.60	23.65	167.05	190.70	10 – 168.93
					20 – 173.27
					30 – 175.19
					40 – 176.56
					50 – 180.92

				60 – 182.00
				70 – 184.40
				80 – 185.80
				90 – 187.59

Table-1 reveals that the maximum score in Height is 190.70 cm and minimum score is 167.05 cm with the range of score as 23.65 cm. The mean value is 179.45 and standard deviation 6.60. It also reveals the Height percentile range from 167.05 to 190.70 percent of total Height in centimeter with mid score as 179.45.

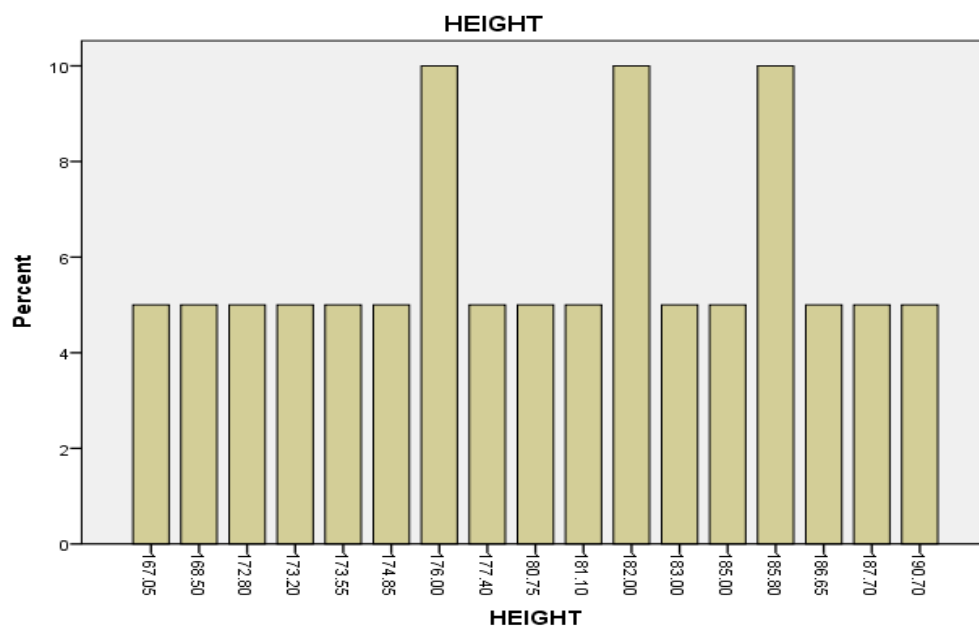


Figure 1: Graphical representation of Height of Rowers

Table-2: Descriptive Analysis of Weight of Rowers

Mean	Std. Deviation	Range	Min	Max	Percentile
84.25	8.06	32.90	65.30	98.20	10 – 73.82
					20 – 75.82
					30 – 81.56
					40 – 83.36
					50 – 85.80
					60 – 86.56
					70 – 87.26
					80 – 88.76
					90 – 96.83

Table-2 reveals that the maximum score in Weight is 98.20 and minimum score is 65.30 with the range of score as 32.90. The mean value is 84.25 and standard deviation 8.06. It also

reveals the Weight percentile range from 65.30 to 98.20 percent of total Weight in kilogram with mid score as 84.25.

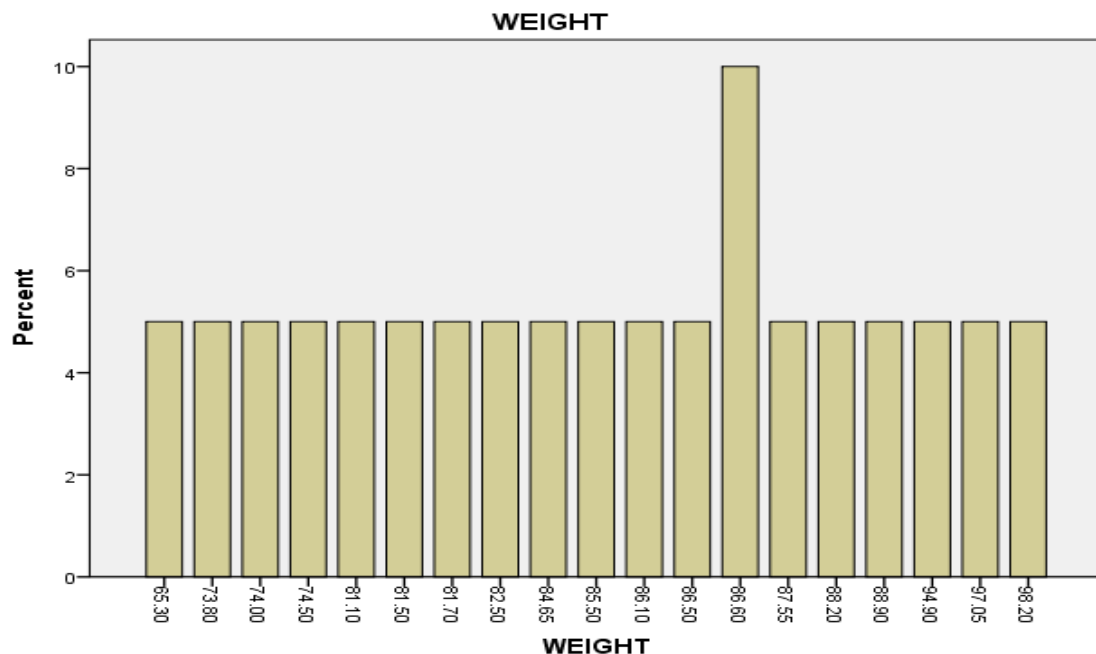


Figure 1: Graphical representation of Weight of Rowers

Table-3: Descriptive Analysis of Fat Percentage of Rowers

Mean	Std. Deviation	Range	Min	Max	Percentile
20.44	3.42	12.50	13.10	25.60	10 – 14.79
					20 – 17.90
					30 – 18.70
					40 – 19.80
					50 – 20.55
					60 – 22.36
					70 – 23.34
					80 – 23.60
					90 – 23.96

Table-3 reveals that maximum score in fat percentage is 25.60 and minimum score is 13.10 where the range of score is 12.50. The mean value 20.44 and standard deviation 3.42. It also reveals the fat percentage percentile range from 13.10 to 25.60 percent of total fat percentage with mid score as 20.44.

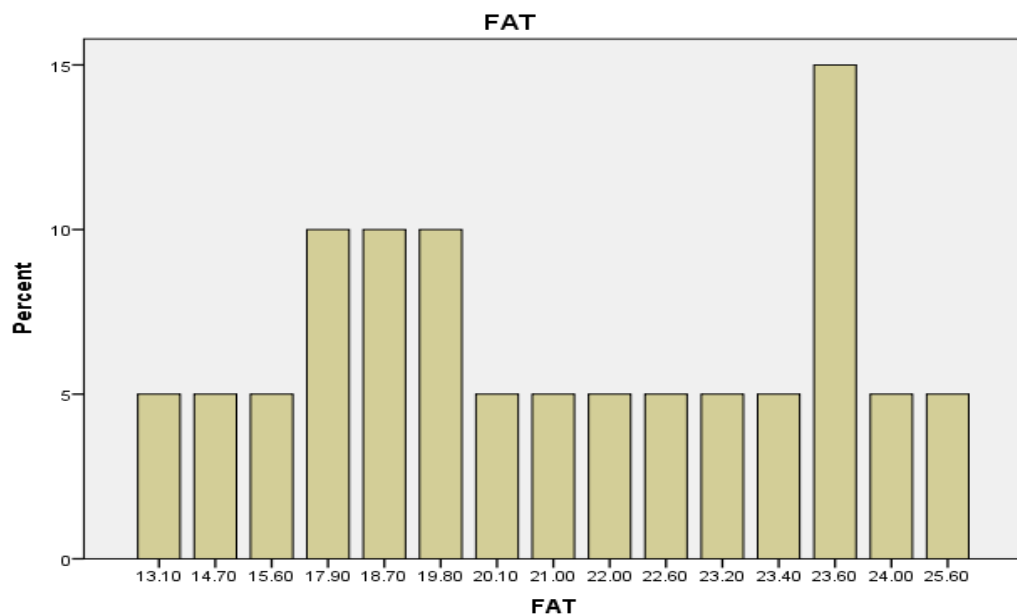
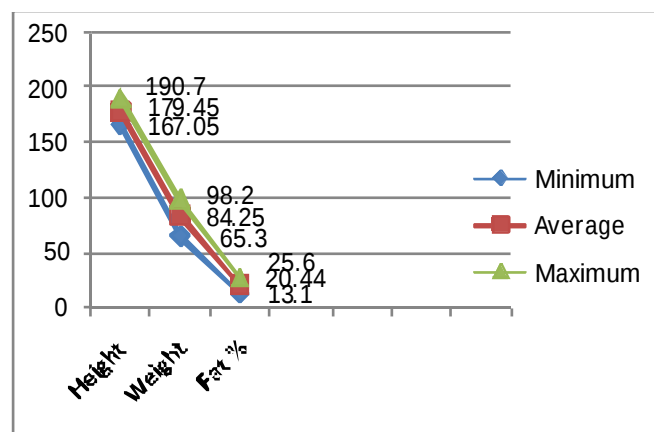


Figure 1: Graphical representation of Fat Percentage of Rowers

Figure-4

Graphical representation of Anthropometrical profile of Rowers



Discussion of findings

The aim of the present study was to identify the talent on the basis of anthropometric variables. The anthropometric variables is to determine the selection of Rowers and also very specific in developing the rowers for the major competitions too. The basic requisite for any

rowers is mainly focused on the anthropometric variables such as height, weight, fat percentage. Another study confirmed that the Stature is an important factor in rowing which helps to get more mechanical help to create more force during rowing (Markoviae, 2005). In rowing tall athletes have an advantage of their long arms and legs for paddling much longer (Slater, 2005). The rower is usually taller and heavier. However, the basic requisite for any rowers is mainly focused on the anthropometric variables such as height, weight, fat percentage.

Conclusion

The following points are concluded based on the results of the study

1. The rowers profile on height was between 1.67.05 cm to 1.90.70 cm and the average score of height was seen 179.45cm. The average height of the rowers was significantly good between the age group of 27-35 years.
2. The rowers profile on weight was between 65.30 kg to 98.20 kg and the average score of weight was seen 84.25 kg. The average weight of rowers was significantly good between the age group of 27-35 years.
3. The rowers profile on fat percentage was between 13.10 to 25.60 and the average score of fat percentage was seen at 20.44. The average fat percentage of rowers was significantly good between the age group of 27-35 years.

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