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## A comparative study on selected anthropometrical measurements of Kabaddi and boxing players

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### Abstract

This research was entitled as "A Comparative study on selected Anthropometrical Measurements of kabaddi and Boxing Players". In the present study district and State level junior kabaddi and boxing male players were selected as the subjects. All subjects were the trainees of kabaddi and boxing at Shiksha Bharti Vidya Niketan Kalayat, Haryana. The Lange's skinfold caliper was used to measure the skinfold and the weight of the subject was measured with the help of digital weighing machine. Triceps skinfold, Biceps skinfold, Suprailiac skinfold, Subscapular skinfold, Calf skinfold, Thigh skinfold, Body density, Fat Percent, Fat weight, Lean Body Mass measurements were taken on each subject. It is observed that kabaddi players possess more thickness of triceps, biceps, suprailiac, calf & thigh skinfolds than those of the Boxers, except sub-scapular skinfold. Further it is observed that there exist significant differences in mean score of body composition variables i.e. kabaddi players possess more fat weight and fat percentage than those of the Boxers whereas Boxers possess more body density and lean body mass than those of the kabaddi players.

**Keywords:** comparative study, anthropometrical, Kabaddi and Boxing

### Introduction

Physical qualities and body organization have been known to be essential to perfection in sports execution. Particular occasions require distinctive body sorts and weights for maximal execution. Proficient boxing is a battle don sorted into a progression of weight classes. Body organization has turned into a vital piece of player's evaluation. Kabaddi has at this point formed into a present day Olympic game. The root and improvement of Kabaddi as an aggressive game exhibits the prevalence of methods over quality. Subsequently, the present day Kabaddi was created, regarding its specialized framework and aggressive technique. In Kabaddi different manifestations of methods are conceivable and in the meantime vital by methods for "Standing" and "Ground." Also body piece assumes an essential part with a specific end goal to control the rival. These focuses have built up Kabaddi as a cutting edge and dynamic game, having a solid interest. An intermittent appraisal of body synthesis likewise enables the player to comprehend if the preparation regimen is causing the sorts of physical changes that are being looked for. In sports, body piece measures are broadly used to recommend alluring body weights, to upgrade aggressive execution, and to survey the impacts of preparing. It is by and large acknowledged that a lower relative muscle to fat ratio ratios is alluring for fruitful rivalry in the vast majority of the games. This is on the grounds that extra muscle to fat quotients adds to the heaviness of the body without adding to its compel generation or vitality creating capacities, which implies an abatement in relative quality. In the present investigation, an attempt has been made to compare the selected Anthropometrical Measurements of kabaddi and Boxing Players.

### Procedure

#### Sample

In the present study district and State level junior kabaddi and boxing male players were selected as the subjects. All subjects were the trainees of kabaddi and boxing at Shiksha Bharti Vidya Niketan Kalayat, Haryana.

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**Tools Used**

- a) The lange's skinfold caliper was used to measure the skinfold.
- b) The weight of the subject was measured with the help of digital weighing machine.

**Selection of Variables**

The following anthropometric measurements were taken on each subject:

**Skinfolds**

- a) Biceps skinfold
- b) Triceps skinfold
- c) Subscapular skinfold
- d) Suprailiac skinfold
- e) Thigh skinfold
- f) Calf skinfold

**Body composition variables**

- a) Body density
- b) Fat Percent
- c) Fat weight
- d) Lean Body Mass

**Administration of Test**

All the tests were administered at the Shiksha Bharti Vidya Niketan Kalayat, Haryana. Standard technique described by Weiner and Lourie (1969) was used for measurements. The essential anatomical landmarks and sites for skinfolds were marked with a sketch. The measurements were documented to the nearest of a millimeter.

**Statistical Analysis**

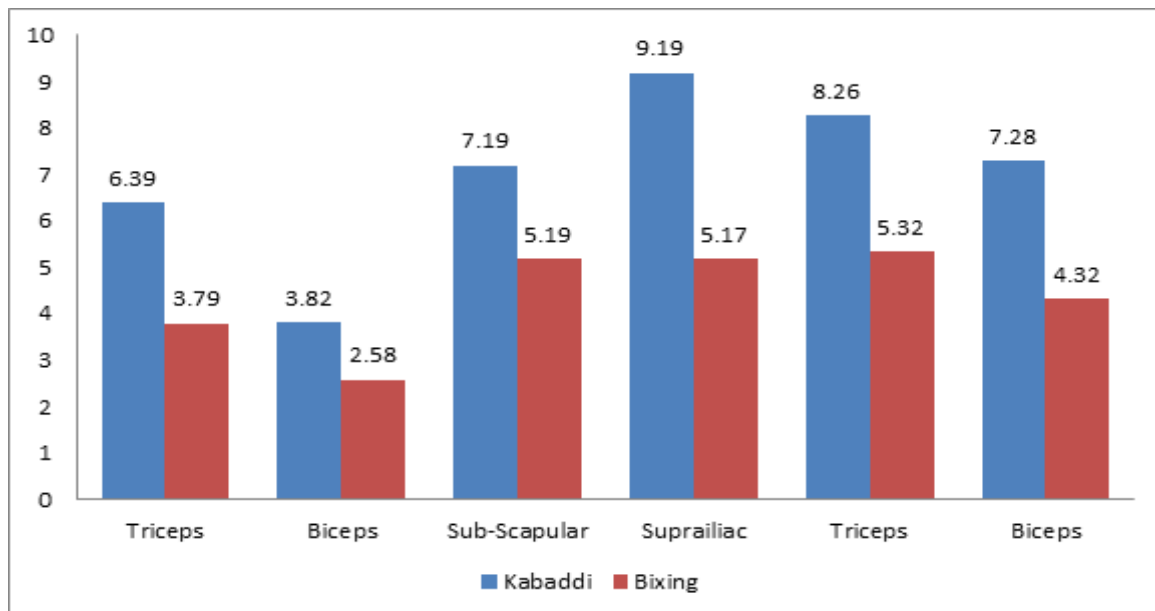
To compare the selected skinfold Measurement and body composition variables of kabaddi players and Boxing players, 't' test was used.

**Table 1:** Mean's SD's, SED and t-Ratio of the skinfold measurements scores of kabaddi players and Boxing Players

Variables	Kabaddi		Boxing		t-Ratio
	Mean	S.D.	Mean	S.D.	
Triceps	6.39	2.44	3.79	1.13	3.29**
Biceps	3.82	1.32	2.58	0.54	3.35**
Sub-Scapular	7.19	3.34	5.19	8.32	0.91
Suprailiac	9.19	4.54	5.17	1.24	4.23**
Calf	8.26	3.33	5.32	1.24	3.34**
Thigh	7.28	3.23	4.32	1.42	3.32**

\* Significant at 0.05 level of confidence

\*\* Significant at 0.01 level of confidence



**Fig 1:** Comparison of mean of skinfold measurement of kabaddi and boxing players

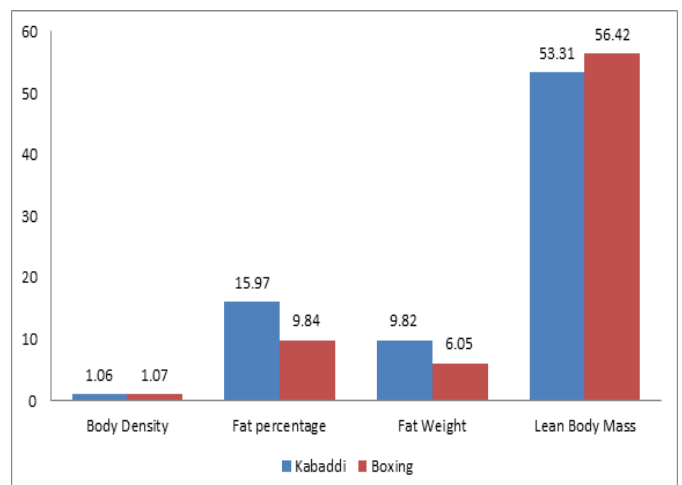
Table no. 1 reveals that the thickness of subcutaneous tissue of various skinfolds of kabaddi players are more than those of the Boxing players, except sub-scapular skinfold thickness. Since the difference in mean scores of sub-scapular measurement between Kabaddi and Boxing players is not significant at any level of confidence. Hence both the groups of players possess equal thickness of sub scapular skinfold.

**Table 2:** Mean, SD, SED and t-Ratio of Body Composition Scores of KABADDI and Boxing Players

Variables	kabaddi		Boxing		SED	t-Ratio
	Mean	S.D.	Mean	S.D.		
Body Density	1.06	0.01	1.07	0.04	0.03	4.67**
Fat percentage	15.97	3.26	9.84	1.99	0.85	7.21**
Fat Weight	9.82	3.21	6.05	1.97	0.84	4.48**
Lean Body Mass	53.31	3.04	56.42	3.16	0.98	3.17**

\* Significant at 0.05 level of confidence

\*\* Significant at 0.01 level of confidence



**Fig 2:** comparison of body composition measurements of kabaddi and boxing players

The table no. 2 shows the mean score and standard deviation of body composition variables of Kabaddi and Boxing players. The mean scores of Body density of Kabaddi players is less than that of the Boxing players. This means the Boxing player have been found better in body density as compare to Kabaddi players. The mean value of fat percentage of Kabaddi players is higher than Boxing players. Therefore Kabaddi players are found better in fat percentage in comparison to boxing players. Kabaddi players are having more fat weight in comparison to the Boxing players. The mean value of Lean Body Mass of Kabaddi players is less than boxing players. Therefore boxing players are found better in terms of Lean Body Mass as compared to Kabaddi players. The difference in the mean scores of Body density, fat percentage, fat weight and lean body mass between Kabaddi and Boxing players are significant at 0.01 level of confidence.

### **Conclusion**

From the above, it is observed that Kabaddi players possess more thickness of triceps, biceps, suprailiac, calf & thigh skinfolds than those of the Boxers, except sub-scapular skinfold. Further it is observed that there exist significant differences in mean score of body composition variables i.e. Kabaddi players possess more fat weight and fat percentage than those of the Boxers whereas Boxers possess more body density and lean body mass than those of the Kabaddi players.

### **References**

1. Marwaha BS. The Art of Boxing, Published by Army Educational Stores, Karolbagh, New Delhi, 1965.
2. Benny K. An Investigation of Selected Anthropometric Measurements and Body Composition Variables as Prediction of Kabaddi players Performance Published M.Phil Dissertation, Jiwaji University, 1988.
3. DE GL, Carter. Genetic and Anthropological Studies of Olympic Athletes, 2010, 73.
4. Graeme K. A Pictorial History of Boxing", Published by Spring Books, 2004.
5. Singh H. Teaching and Coaching Modern Boxing. Published by Sports Publication, Delhi, 2011.