



ISSN: 2456-4419

Impact Factor: (RJIF): 5.18

Yoga 2018; 3(2): 385-387

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www.theyogicjournal.com

Received: 26-05-2018

Accepted: 28-06-2018

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## A comparative study of anthropometric among women wrestlers and women boxers

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### Abstract

The present study will serve as guidelines to the teachers of physical education to fix the norms of anthropometric measurements of women wrestlers and to further research projects in this field will be helpful in planning out a programme of national women wrestlers on the basis of findings and conclusions. Thus, it would lead to improvement of standard in wrestling for excellence. For fulfillment this purpose researcher compares anthropometric component namely total arm length and trunk length between women wrestlers and women boxers belonging to Haryana. The study was carried out on 200 women (100 National Women Wrestlers and 100 Women Boxer who participated in National Tournaments) of similar weight were taken to help in assessing and comparing the difference in total arm length and trunk length of the National Women Wrestlers and national women boxers. The data was collected by use of measurements of weight as well as by application of anthropometric measurement. The data was analyzed and compared with the help of statistical procedures in which arithmetic mean, standard deviation (S.D.), t-test were employed. Women wrestlers and women boxers of these weight groups for trunk length i.e. up to 50 kg, 51-55 kg, 56-60 kg and above 61 kg has not been affected by their weights. The women wrestlers and women boxers for trunk length of these weight groups have performed equally.

**Keywords:** Anthropometric, Women wrestlers, women boxers

### Introduction

With the rise of civilization and progress in every field including education, the man has become more scientific. He tried to find out new and scientific ways to measure the human body. The history of measuring the body is not very old. Like medicine, physical education has also made its place of prominence and prestige in proportion to the development and refinement of its measuring techniques. The testing and measuring movement in physical education is only 100 years old. Its history can be divided into periods running from 1860 to the present. These periods tend to overlap and run together and there can be no clear cut demarcation of time. These periods are merely times when the specific measurement types came into prominence and were used mostly.

Anthropometric characteristics provide important information about normality of body size and body shape. Human body proportions give us information about the growth of each body segment. The goal of most studies has been to identify the level of evaluate anthropometric characteristics for talent identification or for the level of body development or to evaluate the harmony of the body.

Anthropometry (body size and composition) is a very important component of fitness for wrestlers. Skin fold should be performed to determine body fat levels. It is important to be as lean as possible so that the wrestler can maximize his muscle mass for their particular weight category. Being short is usually an advantage, with greater balance and stability. You can measure body size measurements such as height and arm span.

### Research Methodology

#### Sample

A sample of 200 women was taken (100 National Women Wrestlers and 100 Women boxers who participated in National Tournaments) of similar weight were taken to help in assessing

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and comparing the difference in power of the National Women Wrestlers. The tables show the details of the women wrestlers and women boxers weight wise

**Administration of the Tests**

The following measurements of the body were taken for comparing the body measurements of Women Wrestlers and

Women Boxers:

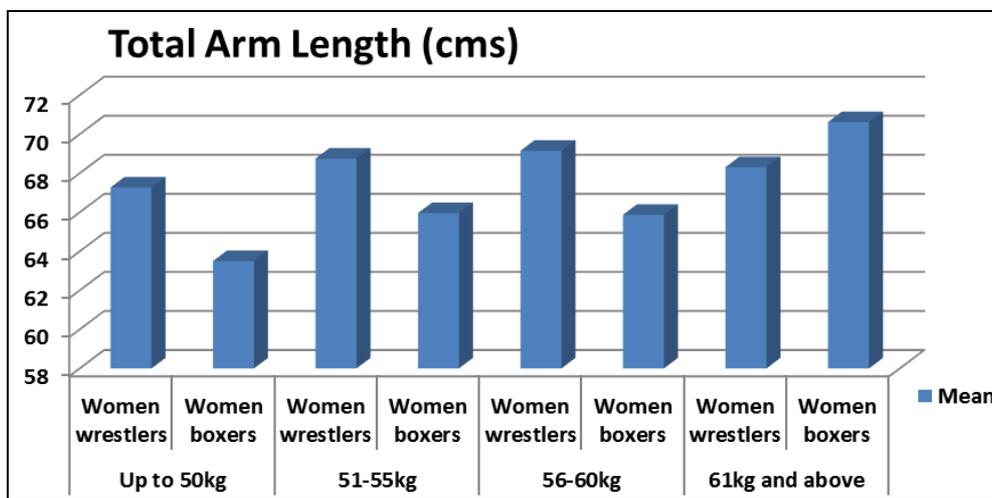
(i) Total Arm Length: Subtract the value of height sty lion radial from height a acromion.

(ii) Trunk Length: For measuring Trunk Length, the difference between height and leg length was taken.

Weight was measured through common procedure. Weight was taken in kilogram respectively.

**Table 1:** Significance of difference between the Means of Total Arm length of Women Wrestlers and Women Boxers of different Weight Groups

Weight in kg	Group	N	Mean	S.D.	T-value	Significant
Up to 50kg	Women wrestlers	22	67.27	2.27	7.34	S
	Women boxers	22	63.50	1.22		
51-55kg	Women wrestlers	29	68.75	2.70	4.62	S
	Women boxers	29	65.96	0.32		
56-60kg	Women wrestlers	33	69.15	2.95	5.68	S
	Women boxers	33	65.87	1.05		
61kg and above	Women wrestlers	16	68.31	1.85	2.76	S



**Fig 1:** Bar diagram shows the Weight wise total arm length of women wrestlers and women boxers

Table 4.1 shows that ‘t’ values 7.34, 4.62, 5.68 and 2.76 for the weight groups of up to 50 Kgs, 51-55 Kgs, 56-60 Kgs and above 61 Kgs, significant difference was found in the means of total arms-length of women wrestlers and women boxers at 0.01 and 0.05 level of confidence. When the results were compared in context of mean scores of total arms-length of these groups, it was found that there is significant difference in the means of total arm length of women wrestlers and women boxers of these groups. It means that the total arm

length of these groups has been affected by their weights. Therefore, the null hypothesis, ‘There is no significant difference between the means of Total Arm Length of women wrestlers and women boxers of different weight groups’ is rejected. The Table further shows that women wrestlers have are better total arm length as compared to women boxers in the three weight groups i.e. up to 50 Kgs, 51-55 Kgs and 56-60 Kgs but in the weight group of above 61 Kgs, women boxers have better total arm length

**Table 2:** Significance of difference between the Means of Trunk length of Women Wrestlers and Women Boxers of different Weight Groups

Weight in kg	Group	N	Mean	S.D.	T-value	Significant
Up to 50kg	Women wrestlers	22	48.68	1.17	2.11	Ns
	Women boxers	22	47.36	2.70		
51-55kg	Women wrestlers	29	47.68	2.72	0.37	Ns
	Women boxers	29	48.00	3.24		
56-60kg	Women wrestlers	33	47.09	3.06	0.32	Ns
	Women boxers	33	46.87	1.88		
61kg and above	Women wrestlers	16	47.37	2.39	0.14	Ns
	Women boxers	16	47.50	2.80		

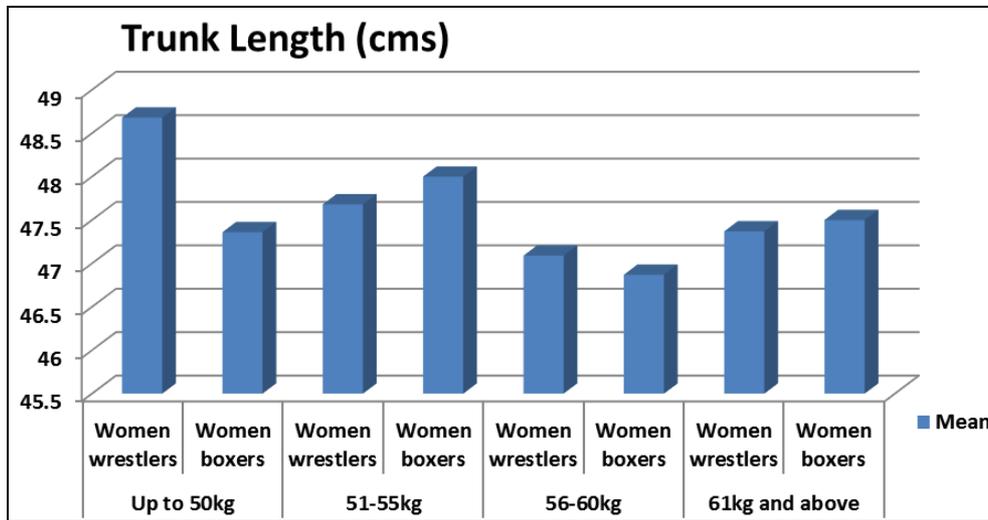


Fig 2: Bar diagram shows the Weight wise trunk length of women wrestlers and women boxers

Table 4.2 shows that the T values 2.11, 0.37, 0.32 and 0.14 for difference in the means of trunk length of women wrestlers and women boxers in the weight groups i.e. up to 50 Kgs, 51-55 Kgs, 56-60 Kgs and above 61 Kgs is not significant at 0.01 and 0.05 level of confidence. When the results were compared in context of mean scores of trunk length of these four groups, it was found that there is no significant difference in the means of trunk length of women wrestlers and women boxers. It means that the trunk length of these four groups has not been affected by the different weight groups. Therefore, the null hypothesis, 'There is no significant difference between the means of Trunk Length of women wrestlers and women boxers of different weight groups' is retained. The table further shows that women wrestlers and women boxers have almost equal trunk length in all the weight groups.

### Conclusion

On the basis of the above interpretation, it is concluded that the women wrestlers with better total arm length have shown better performance as compared to women boxers in the weight groups i.e. up to 50 Kgs, 51-55 Kgs, and 56-60 Kgs whereas in the weight group of above 61 Kgs women boxers have shown better total arm length. It is further concluded different groups of women wrestlers have different total arm length as compared to their weight range. The same is true to women boxers.

On the basis of the above interpretation, it is concluded that the trunk length of women wrestlers and women boxers of these weight groups i.e. up to 50 Kgs, 51-55 Kgs, 56-60 Kgs and above 61 Kgs has shown equal trunk length in all the weight groups. It is further concluded that women wrestlers and women boxers do not differ in trunk length in all the weight groups.

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