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A comparative study of cardio-respiratory level among women wrestlers and women boxers

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Abstract

In this study, an attempt has been made to compare physiological component namely cardio-respiratory 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 height were taken to help in assessing and comparing the difference in cardio-respiratory of the National women wrestlers and national women boxers. The data was collected by use of measurements of height as well as by application of test like Harvard step test. 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 height groups i.e. up to 150 cms, 151-160cms, 161-170cms and above 171 cms has not been affected by their heights. The women wrestlers and women boxers of these height groups have performed equally.

Keywords: Cyclist, cycling speed, core strength

Introduction

Physical activity is a natural need, indispensable for maintaining health and normal physiological functions. Insufficient physical activity is an independent risk factor of many diseases, like obesity, type 2 diabetes, osteoporosis, hypertension, coronary heart disease, emotional disorders, etc.; it increases the global death rate, as well as that due to cardiovascular and malignant disease.

These combat sport discipline has caught the attention of scientists since 1943 which is the date that matches the appearance of the first scientific research dealing with wrestling. Regardless of gender and wrestling styles, an optimal level of cardio-respiratory fitness is important to help sustaining effort throughout the duration of the match and to stimulate the recovery process between periods. With regard to the anaerobic power and capacity, the available studies were in agreement about their critical importance toward reaching high-level wrestling success since these variables have discriminated well between successful and less-successful wrestlers regardless of age, weight classes and wrestling styles.

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 height were taken to help in assessing and comparing the difference in agility of the National Women Wrestlers. The tables show the details of the women wrestlers and women boxers height wise

Administration of the Tests

Harvard step test was administered to the National Women Wrestlers and Women boxers. Both groups were subject to measure the cardio-respiratory. Height was measured through common procedure. Height was taken in centimeters respectively.

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Table 1: Significance of difference between the Means of Cardio-respiratory of Women Wrestlers and Women Boxers of different Height Groups

Height in cms	Group	N	Mean	S.D.	T-value	significant
Upto 150	Women wrestlers	19	86.00	2.90	0.24	ns
	Women boxers	19	86.26	2.35		
151-160	Women wrestlers	25	89.36	4.66	1.65	ns
	Women boxers	25	86.92	4.18		
161-170	Women wrestlers	28	80.60	3.37	0.60	ns
	Women boxers	28	79.92	3.50		
171-180	Women wrestlers	28	72.07	5.76	0.17	ns
	Women boxers	28	71.71	6.71		

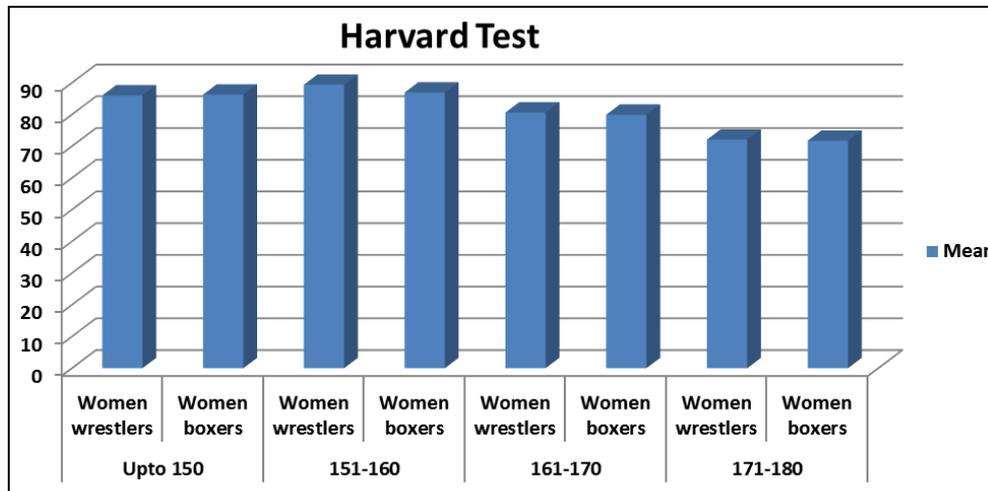
**Fig 1:** Bar diagram shows the Height wise cardio respiratory of women wrestlers and women boxers

Table no. 1 shows that the 't' values 0.24, 1.65, 0.60 and 0.17 for difference in the means of Harvard test of women wrestlers and women boxers in the height groups i.e. up to 150 Cms, 151-160 cms, 161-170 cms and above 171 cms is not significant a 0.05 level. When the results were compared in context of near scores of Harvard test of these four groups, it was found that there is no significant difference in the means of Harvard test of women wrestlers and women boxers. It means that Harvard test of these groups has not been affected by different heights. Therefore, the null hypothesis, 'There is no significant difference between the means of Harvard Test of women wrestlers and women boxers of different height groups' is retained for these height groups.

Conclusion

On the basis of the above interpretation, it is concluded that Harvard Test of women wrestlers and women boxers of these height groups i.e. up to 150 cms, 151-160 cms, 161-170 cms and above 171 cms has not been affected by their heights. The women wrestles and women boxers of these height groups have performed equally. It is further concluded that cardio-respiratory of women wrestlers and women boxers of the height groups of up to 150 Cms, 151-160 Cms, 161-170 Cms and above 171 Cms has not been affected by their heights.

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