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Comparative study of selected anthropometrical and physiological variables of all India inter university level canoeing and kayaking players

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Abstract

Anthropometry and physiology play an important role in deciding the particular build of the body with various measurements of the segments of the body it has also its importance in the field of Canoeing and Kayaking game. Somewhat or altogether the body height length of various level and measurements of the varies body segments, pulse rate blood pressure, vital capacity and body composition have definite effects on the performance of these game players. The researcher in the present study made an effort to test this hunch to compare the difference between the various physiological and Anthropometrical measurements of Canoeing and Kayaking players. The present comparative study is related Canoeing and Kayaking players in relation to anthropometry and physiological variables. In the present study, 20 male Canoeing and 20 male Kayaking players selected through simple random technique from All India Inter University Canoeing & Kayaking players who participated in Inter University Tournament. To know the difference between Canoeing and Kayaking players in relation to anthropometry and physiological variables, Independent sample 't' test was applied.

From the results, it may be concluded that there is a significant difference in Standing Height, Sitting Height, Body Weight & Leg Length of Canoeing and Kayaking players. But no significant difference found in Hand Length, Heart Rate, Systolic blood pressure, Diastolic blood pressure, Inspiratory Rate and Body Mass Index.

Keywords: Canoeing & kayaking players, anthropometry and physiology

Introduction

As a sport with physical fitness as a leading factor, Canoeing and kayaking is featured by aerobic endurance. Its forward relies on non-fulcrum paddle according to certain rules. There are two types of canoeing, namely, kayak and canoe which is only participated by men. Based on the number of athletes, canoeing can be divided into single kayak, double kayak and four-people kayak, single canoe, double canoe and four-people canoe. The race is 200 meters, 500 m, 1000 m and 5000 m. The maximum strength (front 10-20 paddle), power speed (paddle power), rapid strength endurance (the latter part of the game)

In Canoeing and kayaking, the special physical condition is always a key factor to monitor the training and select the equipment. Test indicators of body shape include height, sitting height, upper arm length, leg length, weight, percentage of body fat, body mass index. With various indicators of athletes known, training schemes can be made to help them make more progress. Physiological and Anthropometric measurement and motor fitness variable play a vital role in almost all games and sports. One of the fundamentals of this approach is the study of human measurements or anthropometry. Anthropometry plays an important role in deciding the particular built of the body with various measurements of the body segments, suitable for a particular game and sports and essentially helpful to excel in that game. Physiology is defined by dictionaries as 'the science of the normal functions and phenomena of living things'. Involuntary, such as pulse rate, hemoglobin; blood pressure and vital capacity

Material and Method

Subjects

For this study total No. of 40 i.e. 20 Canoeing and 20 Kayaking players mean age (22.04±1.37) from All India Inter University competition participated players was selected as

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sample of the study, using simple random sampling technique. This was further used for collecting and analyzing data.

Selection of Variable

The study was taken to pinpoint the Anthropometry &

Physiology variables. Therefore, based on literary evidence and scholars own understanding the following variable was selected for the purpose of this study.

Selection of variable Table

Test	Tools	Unit
Standing Height	Stadiometer	Centimeter
Sitting Height	Stadiometer/ Meter tape	Centimeter
Body Weight	Weighing scale	Kilogram
Hand Length	Meter tape	Centimeter
Leg Length	Meter tape	Centimeter
Heart Rate	Stethoscope/stopwatch	Minute
Systolic blood pressure	Sphygmomanometer	High/Low
Diastolic blood pressure	Sphygmomanometer	High/Low
Inspiratory Rate	Stopwatch	Minute
Vital Capacity	Peak flow meter	Lit/Minute
Body Mass Index	Omron body fat monitor	Percentage

For this research, descriptive comparative method was used. Descriptive statistics (mean, Standard Deviation) and independent sample t test was used for the evaluation of the differences between both the groups, to test the hypothesis at 0.05 level of significance.

Procedure

The researcher was explain details about the conducted test to selected players and then was collect data and was do scoring

based on players perform test. For the collected score compute mean, Standard Deviation (SD) and compare using Independent “t” test to find out the differences amongst canoeing and kayaking game players.

Result of the study

The purpose of the study to find out the comparison of Canoeing and Kayaking players among All India Inter University tournament participated.

Table 1: Canoeing & kayaking players Descriptive statistics

Test	Players	No	Mean	SD
Standing Height	Canoeing	20	173.9	4.5
	Kayaking	20	169.9	5.9
Sitting Height	Canoeing	20	87.3	4.4
	Kayaking	20	84.3	2.1
Body Weight	Canoeing	20	61.8	7.2
	Kayaking	20	57.4	6.4
Hand Length	Canoeing	20	71.8	15.4
	Kayaking	20	76.4	3.8
Leg Length	Canoeing	20	92.3	3.5
	Kayaking	20	88.5	6.3
Heart Rate	Canoeing	20	78.9	9.4
	Kayaking	20	81.6	12.2
Systolic Blood Pressure	Canoeing	20	106.3	11.6
	Kayaking	20	104.2	11.9
Diastolic Blood Pressure	Canoeing	20	62.4	13.5
	Kayaking	20	59.8	10.4
Inspiratory Rate	Canoeing	20	17.2	3.4
	Kayaking	20	16.5	3.0
Vital Capacity	Canoeing	20	460.0	73.1
	Kayaking	20	447.0	115.1
BMI	Canoeing	20	18.7	4.7
	Kayaking	20	19.3	3.6

Given below in Table no.1, which shows the descriptive statistics, where mean score of Anthropometry &

Physiological Variable for Canoeing & Kayaking players was showed above table with standard deviation.

Table 2: Comparison between Canoeing & Kayaking players Using Independent sample Test

Levene's Test for Equality of Variances			t-test for Equality of Means				
Test		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference
Standing Height	Equal variances assumed	1.17	0.28	2.36	38	0.02	3.95
	Equal variances not assumed			2.36	35.48	0.02	3.95
Sitting Height	Equal variances assumed	9.36	0.00	2.69	38	0.10	3.00
	Equal variances not assumed			2.69	27.11	0.10	3.00
Weight	Equal variances assumed	0.00	0.96	2.03	38	0.04	4.40
	Equal variances not assumed			2.03	37.51	0.04	4.40
Hand Length	Equal variances assumed	6.29	0.01	1.28	38	0.20	4.55
	Equal variances not assumed			1.28	21.39	0.20	4.55
Leg Length	Equal variances assumed	3.97	0.05	2.31	38	0.02	3.75
	Equal variances not assumed			2.31	30.03	0.02	3.75
Heart Rate	Equal variances assumed	0.57	0.45	0.76	38	0.44	2.65
	Equal variances not assumed			0.76	35.71	0.44	2.65
Systolic Blood Pressure	Equal variances assumed	0.10	0.74	0.57	38	0.56	2.15
	Equal variances not assumed			0.57	37.98	0.56	2.15
Diastolic Blood Pressure	Equal variances assumed	0.39	0.53	0.66	38	0.50	2.55
	Equal variances not assumed			0.66	35.63	0.50	2.55
Inspiratory Rate	Equal variances assumed	0.02	0.87	0.68	38	0.49	0.70
	Equal variances not assumed			0.68	37.44	0.49	0.70
Vital Capacity	Equal variances assumed	1.82	0.18	0.42	38	0.67	13.0
	Equal variances not assumed			0.42	32.18	0.67	13.0
BMI	Equal variances assumed	1.62	0.21	0.44	38	0.65	0.60
	Equal variances not assumed			0.44	35.92	0.65	0.60

Table no.2 shows comparison between Canoeing & Kayaking players from All India Inter University competition participated. Since the significance value is less than 0.05, Standing Height, Sitting Height, Body Weight and Leg Length tests. Which shows significant difference between Canoeing and Kayaking players at 0.05 level of significance ($p=0.02$), ($p=0.10$), ($p=0.04$), ($p=0.02$). Hence the null hypothesis is rejected and research hypothesis is retained. But no significant difference found in Hand Length, Heart Rate, Systolic blood pressure, Diastolic blood pressure, Inspiratory rate and Body Mass Index tests. Which shows no significant difference between Canoeing and Kayaking players at 0.05 level of significance ($p=0.20$), ($p=0.44$), ($p=0.56$), ($p=0.50$), ($p=0.49$), ($p=0.67$), ($p=0.65$), Hence the research hypothesis is rejected and null hypothesis is retained.

Discussion

The present study shows that there exists significance difference between Canoeing & Kayaking players which is similar to the study by Parvinder Singh (2012). In his study he has studied physiological and anthropometry variable of Kabbadi and KhoKho players and the purpose was to assess if both groups differ in each other. He at last concluded that there is significant difference between Standing Height, Sitting Height, Body Weight and Leg Length variables of canoeing and kayaking players. Hence the null hypothesis is rejected and research hypothesis is retained. But no significant difference found in Hand Length, Heart Rate, Systolic blood pressure, Diastolic blood pressure, Inspiratory rate and Body Mass Index variables of canoeing and kayaking players. Hence the research hypothesis is rejected and null hypothesis is retained.

Conclusion

On the basis of the result obtained in the study the researcher made the conclusion that significant difference exist between Standing Height, Sitting Height, Body Weight and Leg Length variables of canoeing and kayaking players. It was further concluded that Standing Height, Sitting Height, Body Weight and Leg Length variables of canoeing players is better

than kayaking players. But no significant difference exists between Hand Length, Heart Rate, Systolic blood pressure, Diastolic blood pressure, Inspiratory rate and Body Mass Index variables of canoeing and kayaking players. It was further concluded that Hand Length, Heart Rate, Systolic blood pressure, Diastolic blood pressure, Inspiratory rate and Body Mass Index variables of kayaking players is better than canoeing players.

References

1. Candy MD, Bell Z. Time motion analysis Heart rate and physiological of international canoeing players. Canadian journal of applied sports science. 2013; 10:175-215.
2. Denial LP, Fernando A. sprint kayaking and canoeing performance prediction based on the relationship between maturity states anthropometry and physical fitness in young elite paddlers. 2017; 79:481-492.
3. Biyios IA, Bergeles NK. Anthropometric, body composition and somatotype differences of Greek elite female basketball, volleyball and handball players. Sports Med Phys Fitness. 2006; 46(2):271-80.
4. Clark HH. Application of Measurement to Health and Physical Education 3rd Ed., Englewood Cliffs, N.J., Prentice Hall Inc, 1978.
5. Gabbett TJ. A comparison of physiological and anthropometric characteristics among playing positions in sub-elite rugby leaguer players. Sports Sci., 2006; 24(12):1273-80.
6. Kala. A Comparative Study of Physical Fitness, Physiological and Psychological variables of Players of different Indigenous Games. Unpublished Master's Thesis, Kurukshetra University, Kurukshetra, 1999.
7. Kamlesh ML. Methodology of Research in Physical Education and Sports. New Delhi: Metropolitan Book Co. Pvt. Ltd, 1994.
8. Kansal DK. Test and Measurement in Sports and Physical Education. New Delhi: D.V.S. Publications, 1996.