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Comparative study of selected kinanthropometric variables of government senior secondary school sports boys and public senior secondary school sports boys of Himachal Pradesh

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Abstract

A study has been conducted on selected kinanthropometric variables of Government Senior secondary schools sports boys and public senior secondary school sports boys at state level championship in different games of Himachal Pradesh. The purpose of the study was comparison between male government senior secondary school sports boys and male public senior secondary school sports boys with selected kinanthropometric variables. Sample consisted of randomly selected total 200 sports boys of Himachal Pradesh. T-test statistical techniques were used by the investigator.

Keywords: Kinanthropometric, sports, variables, measurement

Introduction

Kinanthropometry is newly emerging scientific specialization. It is the scientific study of human size, shape, proportion, composition, maturation and gross function in order to understand human growth, exercise, performance and nutrition with implication for medicine, education and government with respect to individual rights in the service of humankind. In other words, kinanthropometry is the application of measurements of human size, shape, proportion, composition, maturation and gross function. It has the purpose of helping us to understand human movement in the context of growth, exercise, performance and nutrition enabling its objectives being achieved through applications in medicine, education and government.

Kinanthropometry provides quantitative interface between human structure and function. That's why the application of kinanthropometric knowledge is getting tremendous importance and popularity to identify the potential talents in sports for particular event. India is a country of population with enormous variations. There is an ample scope for kinanthropometric study in India. Nowadays, kinanthropometry is widely used for sports talent identification, human growth study medical examinations, performance enhancement in sports etc. In the present study an attempt has been made to evaluate twelve kinanthropometric variables in inter university female gymnasts and rope mallakhamb players.

Hypothesis

For the present study the investigator has formulated the null hypothesis that there is no significant difference between government senior secondary school sports boys and public senior secondary school sports boys of Himachal Pradesh.

Objectives

To compare and find out the significant difference with selected kinanthropometric variables of government senior secondary school sports boys and public senior secondary school sports boys.

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Methodology

Sampling

A total 200 sports boys who represented state level tournament were selected from different government senior secondary school and public senior secondary school of Himachal Pradesh. Subjects were divided in two groups 100 government senior secondary school boys and 100 private senior secondary school boys. Subjects were ranging from 16 to 18 years of age.

Tool Used

The investigator has used score card, sheet, flexible steel

measurement tape, stopwatch, hard scale, standing height stand tools for the present study.

Statistical Analysis

For the purpose of the study and on the basis of the obtained score the mean, standard deviation and 't' test were calculated respectively to compare the mean of government senior secondary school sports boys and public senior secondary school sports boys at .05 level of significance.

Discussion and Findings

Table 1: Significance of Mean Difference in Score of Government Senior Secondary School Boys and Public Senior Secondary School Boys of Himachal Pradesh for Selected Kinanthropometric Measurement Variables

Sr. No.	Variables	Government Senior Secondary School Sports Boys	Public Senior Secondary School Sports Boys	df	't'-value
1.	Age	M=17.70	M=18.01	198	1.612*
		SD=1.29	SD=1.424		
2.	Height	M=166.33	M=166.17	198	0.169*
		SD=6.20	SD=7.128		
3.	Weight	M=52.68	M=52.38	198	0.277*
		SD=7.356	SD=7.945		
4.	Shoulder Length	M=40.23	M=40.52	198	0.727*
		SD=2.681	SD=2.952		
5.	Total Arm Length	M=54.13	M=54.83	198	1.636*
		SD=3.546	SD=2.39		
6.	Upper Arm Length	M=29.62	M=30.40	198	3.835*
		SD=1.482	SD=1.392		
7.	Lower Arm Length	M=24.48	M=24.38	198	0.502*
		SD=1.487	SD=1.324		
8.	Hand Length	M=19.78	M=19.87	198	0.667*
		SD=.990	SD=0.917		
9.	Hand Width	M=10.10	M=10.92	198	8.227**
		SD=0.659	SD=0.747		

*Not significant at 0.05 level of confidence

** Significant at 0.05 level of confidence

Table 1 provides information related to the selected Kinanthropometric variables Age, Height, Weight, Shoulder Length, Total Arm Length, Upper Arm Length, Lower Arm Length, Hand Length and Hand Width. 't' test is applied for

these variables. The 't' value is come out to be 1.612, 0.169, 0.277, 0.727, 1.036, 3.835, 0.502, 0.667, 8.227 at the significant level of 0.01 and 0.05. 't' value of hand width showing significant difference.

Table 2: Significance of Mean Difference in Score of Government Senior Secondary School Sports Boys and Public Senior Secondary School Sports Boys of Himachal Pradesh for Selected Kinanthropometric Measurement Variables

Sr. No.	Variables	Government Senior Secondary School Sports Boys	Public Senior Secondary School Sports Boys	df	't'-value
1.	Waist Length (Hip)	M=70.89	M=70.68	198	0.258*
		SD=5.277	SD=6.198		
2.	Total Leg Length	M=94.13	M=94.79	198	0.595*
		SD=4.296	SD=10.219		
3.	Upper Leg Length	M=50.84	M=52.53	198	3.886**
		SD=2.823	SD=3.307		
4.	Lower Leg Length	M=43.31	M=43.23	198	0.244*
		SD=2.325	SD=2.317		
5.	Foot Length	M=24.70	M=25.32	198	3.488**
		SD=1.218	SD=1.294		
6.	Foot Width	M=10.30	M=10.51	198	2.280**
		SD=0.611	SD=0.688		

*Not significant at 0.05 level of confidence

** Significant at 0.05 level of confidence

Table 2 gives information regarding kinanthropometric variables Waist Length (HIP), Total Leg Length, Upper Leg Length, Lower Leg Length, Foot Length and Foot Width. The 't' value is come out to be 0.258, 0.598, 3.886, 0.244, 3.488 and 2.280 at the significant level of 0.01 and 0.05. 't' value of upper leg length, foot length, foot width is showing significant difference.

Conclusion

1. The government senior secondary school boys younger in age comparative to public senior secondary school boys.
2. The height and weight government senior secondary school boys are more than the private senior secondary school of Himachal Pradesh.
3. The government senior secondary school boys are

observed superior to the private senior secondary school boys in case of shoulder length.

4. The private senior secondary school boys is observed superior to the private senior secondary school boys in case of upper arm length and both groups having same lower arm length and same hand length.
5. The government senior secondary school boys are observed superior to the private senior secondary school in case of hand width and waist length.
6. Private senior secondary school boys are superior to comparison to the government senior secondary school boys in case of total length and upper leg length.
7. Both group having apparently equal level of lower leg length, foot length and foot width.

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