

COMPARISON OF ANTHROPOMETRIC CHARACTERISTICS AMONG ALL INDIA INTER-UNIVERSITY LONG JUMPERS AND HIGH JUMPERS

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Abstract:

The study was to find out the comparison on anthropometric characteristics among all india inter-university jumpers. To achieve that subjects aged from 18-28 years from the 73rd All India Inter-University Athletic Championship held at University Of Kalyani in West Bengal from 22nd to 26th January 2013. In this athletic championship, 168 universities were participated. I have selected for male athletes in long jumpers and high jumpers. The difference on the independent variables such as standing height, upper leg length, lower leg length, thigh girth among the categorical variables of long jumpers and high jumpers. The analysis of 't' ratio was used to determine any significant difference was present among the independent variables. The study revealed that the selected independent variables such as standing height, upper leg length, lower leg length, thigh girth. That there was no significant difference for long jumpers and high jumpers.

KEYWORDS:

1.Standing Height 2.Upper Leg Length, 3.Lower Leg Length, 4.Thigh Girth.

INTRODUCTION

Anthropometry is a technique to measure physical characteristics (body size, shape of specific body parts and proportion) of living beings, including men. Anthropometry has been widely applied in a broad range of disciplines, such as ergonomics and health sciences. Because of its convenience, anthropometry has also been applied to understand physical characteristics of athletes in the field of sports science which targets improvement of athletic performance. Since correct application of anthropometric techniques and interpretation of the information assist management of health status in athletes and also improves their performance, it is important that support staff in the athletic fields, including sports dieticians, share the knowledge associated with anthropometry. To date, the measurement protocol proposed by the International Society for the Advancement of Kinanthropometry (ISAK) has been recognized as an international standard for anthropometric measurements in health and sports science and has been applied across many countries. It is hoped that the international measurement protocol such as that by ISAK to be recognized widely in the sports sciences also and will lead to development of human resources skilled in anthropometry (Masaharu and Kagawa, 2008). Jumpers is considered to be the oldest form of athletic competition. In specific terms, it is not easy or even possible to give a list of qualities necessary for an athlete to become a successful jumpers. However, on the basis of top class jumpers, some of these qualities can be mentioned.

METHODOLOGY

In the present study achieve the subjects aged from 18-28 years. The subjects were selected from

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COMPARISON OF ANTHROPOMETRIC CHARACTERISTICS AMONG ALL INDIA.....

the 73rd All India Inter-University Athletic Championship held at University of Kalyani in West Bengal from 22nd to 26th January 2013. This subjects only selected 16 male jumper who have qualified for the finals of long jumpers and high jumpers respectively. This subjects measured by tap in centimetre.

Table-1: The Variables measurements

S.NO	VARIABLES	TEST ITEMS	UNIT OF MEASUREMENT
1.	Standing height	Stadiometre	In centimetres
2.	Upper leg length	standard tap	In centimetres
3.	Lower leg length	standard tap	In centimetres
4.	Thigh girth	standard tap	In centimetres

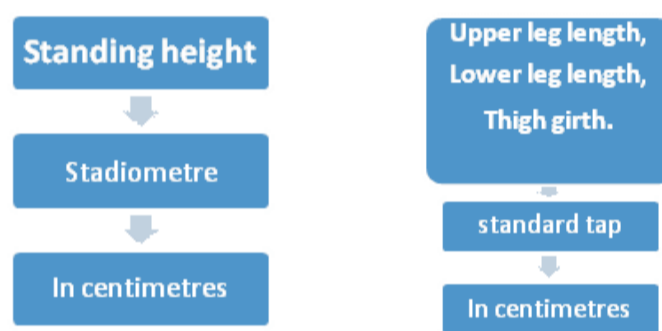


Figure-1: Graphs 1, Showing on standing height measuring steps. Graphs 2, Showing on upper leg length, lower leg length, thigh girth, measuring steps.

RESULTS AND DISCUSSION

The data collected finals qualified jumpers on Standing height, Upper leg length, Lower leg length, Thigh girth for long jump and high jumpers. For statistical analysis and interpretation of data 't'-test was conducted. The result have been presented in table 2, 3, 4, 5.

Table-2: Mean, SD of standing height and Comparison of t-test Between Means of long jumpers and high jumpers

VARIABLE	JUMPERS GROUP	N	MEAN	SD	'T' RATIO
Standing height	Long jump	8	1.7062	3.11391	2.040
	High jump	8	1.7362	3.81491	

*Significant at 0.05 level

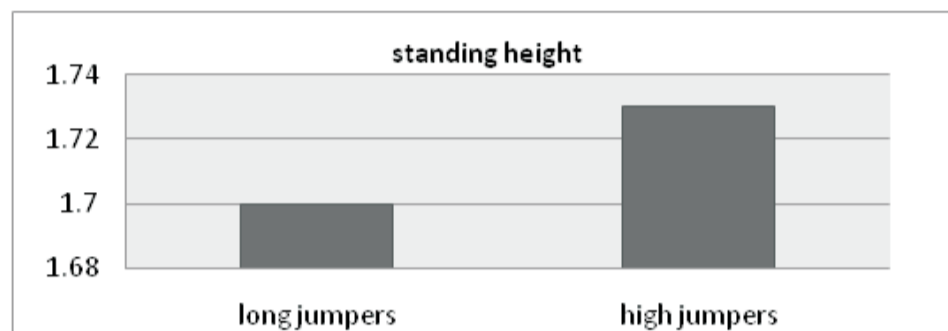


Figure-2: Graphs Showing Means of standing height between long jumpers and high jumpers.

Table-2 shows that the mean values of all india inter university athletes for men long jump and high jump on standing height were 1.70 and 1.73 respectively. 't' test was applied and t-value (2.13) appeared significant at 0.05 level of confidence.

Table-3: Mean, SD of upper leg length and Comparison of t-test Between Means of long jumpers and high jumpers

VARIABLE	JUMPERS GROUP	N	MEAN	SD	'T' RATIO
Upper leg length	Long jump	8	49.0000	3.29502	1.169
	High jump	8	50.7500	2.65922	

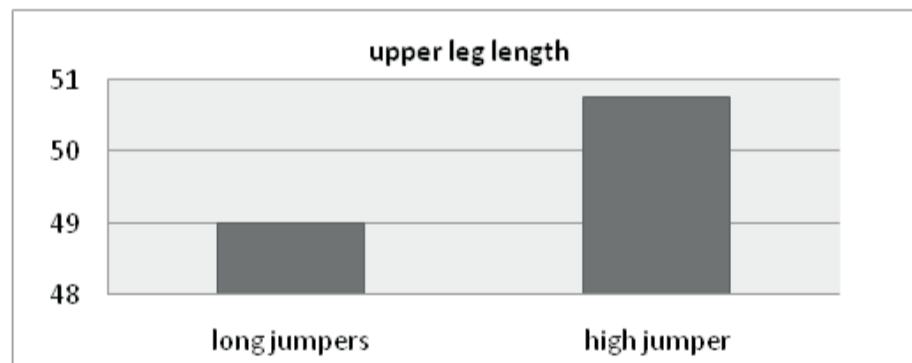


Figure-3: Graphs Showing Means of upper leg length between long jumpers and high jumpers.

Table-3 shows that the mean values of all india inter university athletes for men long jump and high jump on upper leg length were 49.00 and 50.75 respectively. 't' test was applied and t-value (2.13) appeared significant at 0.05 level of confidence.

Table-4: Mean, SD of lower leg length and Comparison of t-test Between Means of long jumpers and high jumpers

VARIABLE	JUMPERS GROUP	N	MEAN	SD	'T' RATIO
Lower leg length	Long jump	8	52.8750	2.16712	1.743
	High jump	8	54.8750	2.41646	

COMPARISON OF ANTHROPOMETRIC CHARACTERISTICS AMONG ALL INDIA.....

*Significant at 0.05 level



Figure-4: Graphs Showing Means of lower leg length between long jumpers and high jumpers.

Table-4 shows that the mean values of all india inter university athletes for men long jump and high jump on lower leg length were 52.87 and 54.87 respectively. 't' test was applied and t-value (2.13) appeared significant at 0.05 level of confidence.

Table-5: Mean, SD of thigh girth and Comparison of t-test Between Means of long jumpers and high jumpers

VARIABLE	JUMPERS GROUP	N	MEAN	SD	'T' RATIO
Thigh girth	Long jump	8	59.7500	3.32738	.966
	High jump	8	58.3750	2.26385	

*Significant at 0.05 level



Figure-5: Graphs Showing Means of thigh girth between long jumpers and high jumpers

Table-5 shows that the mean values of all india inter university athletes for men long jump and high jump on thigh girth were 59.75 and 58.37 respectively. 't' test was applied and t-value (2.13) appeared significant at 0.05 level of confidence.

The obtained variables "t" ratio values of 2.04, 1.16, 1.74, .96 respectively. The result of the study there was no significant difference between long jumpers and high jumpers on standing height, upper leg length, lower leg length, thigh girth. The mean values of all india inter university athletes for men finals high jumper had taller than long jumpers for standing height, upper leg length, lower leg length. The mean values of all india inter university athletes for men finals long jumper had bigger than high jumpers for thigh girth.

CONCLUSIONS

The following conclusions were drawn within the limitation of the present study.

The men high jumpers had taller than long jumpers for standing height, upper leg length, lower leg length.
The men finals long jumpers had bigger than high jumpers for thigh girth.

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