An Assessment and Comparison of Anthropometrical Variable (Hand Length) at Different Level of Basketball Players

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Abstract – The purpose of this study is to know about the physical profiles of different level of basketball players. On the basis of review of related literature expert's opinion in the field of Basketball and scholar's own understanding, following physical variables have been selected for the purpose of this study. Selected physical variables were Hand length. To assessment of physical variables profile, mean standard deviation were used. To compare selected physical variables at three different levels i.e. Intercollegiate, Interuniversity and National. Analysis of variance was used. In order to test the hypothesis level of significance was set at 0.05.

Keywords: Hand Length.

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INTRODUCTION

Athletes for superior performance in any sports are selected on the basis of his physical structure and body size, which has proved to be appropriate for high performance in the given sports.

After and intensive study of anthropometric measures of Olympic athletes, Greasy, Levine and Lindsay carter concluded that level of performance in a particular event demand a particular time of body size and shape, other aspect being similar, they established high relationship between structure of an athlete and the specific task (event)in which he excelled.

Anthropometrics measurements were control concerns of the first phase of the scientific area of measurements which has been began in the 1860's current interest in anthropometrics measurements focus in three areas girth measure body type and body composition. The asses of such measures include classification, prediction of growth patterns and prediction of success in motor activities as well as assessment of ability.

Subject where instructed to hand on the table with Palm facing upward and fingers close with wrist Extension and elbow flexion in relaxed position the hand length was taken with flexible Steel tape from the base of the thumb to the tip of the middle finger.

METHODOLOGY

Selection of Subjects:

The subjects for this study were 20 (Twenty) male Basketball players from different University those who participated in intercollegiate and inter University championship. Besides it's the member of national coaching camps were also constitute the sample.

Selection of Variables:

The variables selected for this study were as follows:

- Hand length

Statistical Technique:

Mean and standard deviation was used to compare selected physical variables at three different levels i.e. Intercollegiate, Interuniversity and National Analysis of variance was used in order to test the hypothesis level of significance was set at 0.05.

RESULTS OF THE STUDY

The data was analyzed by ANOVA to investigate physiological profile at different level of Basketball Players.

FINDINGS OF THE STUDY

The findings pertaining to descriptive statistics, one way analysis of variance (ANOVA) for the Hand Length variable of sixty basketball players from India have been presented in table no. 1 to 2.

Table-1: Descriptive Statistics of Basketball Players from India in relation to Hand Length

Intercollegiate		Interuniversity		National	
Mean	19.0250	Mean	19.0250	Mean	19.2500
Standard Deviation	.80255	Standard Deviation	.80255	Standard Deviation	.93892
Minimum	18.00	Minimum	18.00	Minimum	18.00
Maximum	20.50	Maximum	20.50	Maximum	21.00

it is evident from table - 1 that mean and standard deviation scores of Intercollegiate, Interuniversity and National basketball players in relation to Hand Length has been found 19.0250, 19.0250 and, 19.2500 & .80255, .80255 and, .93892 respectively.

Table-2: Analysis of Variance of Basketball Players from India in relation to Hand Length

Source of Variation	Sum of Squares	df	Mean Square	F-Value
Between Groups	.675	2	.338	.467
Within Groups	41.225	57	.723	

* Significant at 0.05 level of significance
F 0.05 (2, 57) = 5.01

Table- 2 revealed that there was significant difference was found among Basketball players from India in relation to Hand Length, as obtained F-ratio was .467, which was higher than the tabulated value 5.01, required for F-ratio to be significant at 0.05 level with (2, 57) degree of freedom.

Since the one way analysis of variance was found significant in relation to Hand Length, the LSD test was applied to find out the differences of the paired means among Intercollegiate, Interuniversity and National basketball Players of India

Table-3: Least Significant Difference (LSD) post hoc test for the paired means among Intercollegiate, Interuniversity and National Basketball Players of India in relation to Hand Length
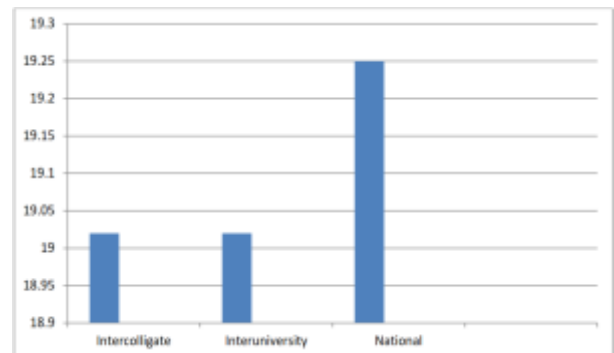
Intercollegiate	Interuniversity	National	Mean Difference
19.025	19.025		.000
19.025		19.250	.225
	19.025	19.250	.225

Table- 3 revealed that there was significant difference between in Intercollegiate and Interuniversity;

Intercollegiate and National & Interuniversity and National basketball Players of India in relation to Hand Length, as Critical Difference was 1.357, which was higher than the Mean Difference value and there was significant difference among Intercollegiate, Interuniversity and National basketball Players of India in relation to Hand Length.

The graphical representation of means among Intercollegiate, Interuniversity and National basketball Players of India in relation to Hand Length has been presented in figure No.1

Figure 1: Graphical representation of the Comparison of Means of Intercollegiate, Interuniversity and National Basketball Players of India in relation to Hand Length

The graphical representation of means among Intercollegiate, Interuniversity and National basketball Players of India in relation to Hand Length has been presented in figure No.1

DISCUSSION OF FINDINGS

The findings of the study revealed that insignificant difference was found among Intercollegiate, inter University championship and national coaching camp basketball Players of India in relation to Hand Length. Further, graphical picture represents that national coaching camp basketball Players have high mean value in comparison to inter University championship and intercollegiate basketball Players of India in relation to Hand Length.

CONCLUSIONS

On the basis of the findings of the study, the following conclusions are drawn:

1. Insignificant difference was found among Intercollegiate; inter University championship and national coaching camp basketball Players of India in relation to Hand Length.

2. National coaching camp basketball Players possessed greater / higher Hand Length in comparison to Intercollegiate and inters University championship basketball Players of India in relation to Hand Length.

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3. In case of Hand Length insignificant difference was found between Intercollegiate and inter University championship; Intercollegiate, and national coaching camp basketball Players & inter University championship and national coaching camp basketball Players whereas and observed sequence of performance was found national coaching camp > Intercollegiate and inter University championship basketball Players of India in relation to Hand Length.

REFERENCES

J.M. Tanner (1964). The Physique of the Olympic Athletes (London: George Allen and Unwin Ltd.), p.13.

Alfonso L. Garay, Louis Levine and Y.E. Lindsay Carter (1974). Genetic and Anthropological Studies of Olympic Athletes (New York: Academic Press), p: 73.

Alten Philips and James E. Hamok (1979). Measurement and Evaluation in Physical Education. (New York: John Willey & Sons.), p. 223.

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