

## **“Relationship of Arm Length and Leg Length with the Performance Score of Women Discus Throwers of Universities of Punjab”**

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### **ABSTRACT**

The objective of the study was to find out the relationship of Arm Length and Leg Length with the performance score of women Discus throwers of Universities of Punjab. To achieve the purpose of the study total 30 female throwers of selected universities were selected as subjects. Only first six position holder women athletes in Inter college competition of the universities namely Guru Nanak Dev University Amritsar, Punjabi University Patiala, and Panjab University Chandigarh were considered in this study. The age limit of the subjects was ranged from 18 to 28 years. To measure the Arm Length and Leg Length of female discus throwers was measured with the help of standardized Measuring tape. To scrutinize the relationship of Arm Length and Leg Length with the performance score of women discus throwers of universities of Punjab, Karl Pearson's product moment coefficient correlation statistical technique was used by the investigator.

Key Words: Discuss Throwers, Arm Length, Leg Length, Punjab

### **I.INTRODUCTION**

Athletics in India has a history which dates back to the vedic period and it can be said that the principles of the atharvaveda gave shape to the formation of Indian athletics. Never the less it

is indeed a mystery as to when exactly athletics in India made its presence felt as a distinct sports form.

Sports like chariot racing, archery, horsemanship, military tactics, wrestling, weight lifting, swimming and hunting made athletics a colossal presence in the vedic age or much later in the period of Ramayana and Mahabharata. Historical evidence shows that Indian athletics acquired a remarkable dimension, during the Buddhism era and many events like archery, equitation, hammer throwing and chariot-racing were in vogue during that period. All these games were made compulsory in the military training sessions the Indian empires, during that period.

Kinanthropometry is an emerging scientific specialization concerned with the application of measurement to appraise human size, shape, proportion, composition, maturation and gross function. It is a basic discipline for problem-solving in matters related to growth, exercise, performance and nutrition. The area has been defined as the quantitative interface between anatomy and physiology. It puts the individual athlete into objective focus and provides a clear appraisal of his or her structural status at any given time, or, more importantly, provides for quantification of differential growth and training influences. Without an understanding of the growth of children and youth and their structural evolution, selection of talent and monitoring of training is largely a matter of sophistry and illusion. Kinanthropometry provides the essential structural basis for the consideration of athletic performance.

## II.PROCEDURE AND METHODOLOGY

**Selection of Subjects:** To achieve the purpose of the study total 30 female (N= 30) Discus throwers of selected universities were selected as subjects. Only first six position holder women athletes in Inter college competition of the universities such as Guru Nanak Dev University Amritsar, Punjabi University Patiala, and Panjab University Chandigarh were considered in this study. The age limit of the subjects was ranged from 18 to 28 years. **Tool**

**for Data collection:** The Arm Length and Leg Length of female discus throwers were measured with the help of standardized measuring tape. Further to find out the relationship of Arm Length and Leg Length with the performance score of women discus throwers of universities of Punjab, best recent performance of all athletes were considered as the performance score of female athletes. **Leg Length Measurement:** The subject wearing minimal dress exposing the greater Trochanter stood in bare feet. With a tape, the length of the leg was estimated from greater Tronchanter to the floor. The leg length was recorded in centimeters. **Arm Length Measurement:** The subject stood without any clothing on the Torso. The arm length was measured from the acromion process to the tip of the third finger. The length of arm was recorded in whole centimeter. **Statistical Analysis:** To scrutinize the relationship of Arm Length and Leg Length with the performance score of women discus throwers of universities of Punjab, Karl Pearson's product moment coefficient correlation statistical technique was used by the investigator.

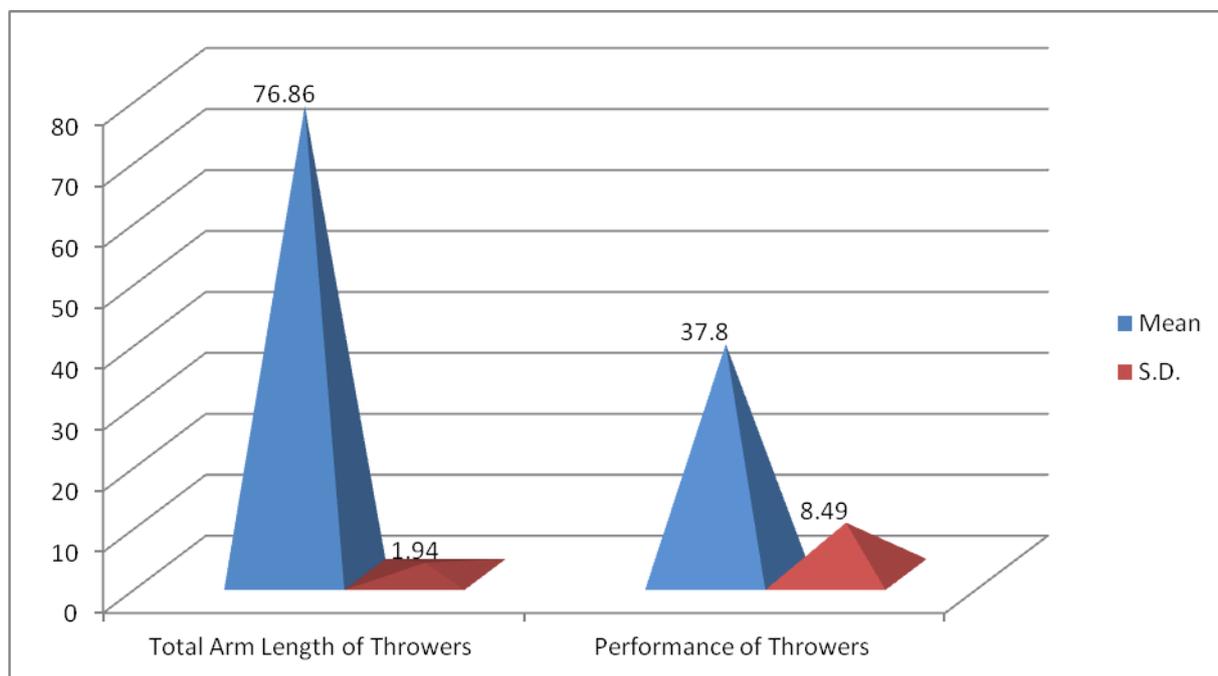
### III.DATA ANALYSIS AND RESULTS OF THE STUDY

**Table-1: Relationship between Total Arm Length and performance of Discus Throwers**

Variable	Mean	S.D.	'r' Value
Total Arm Length (cm)	76.86	1.94	.461*
Performance	37.80	8.49	

$$r'_{0.05(28)}=0.361$$

Table & figure 1: represent that the mean of the Total Arm Length and Discus Throwers performance is 76.86 and 37.80 respectively. Whereas standard deviation of the Total Arm Length and Discus Throwers performance is 1.94 and 8.49 respectively, 'r' value is .461. The result shows that significant correlation between Total Arm Length and Discus Throwers performance.



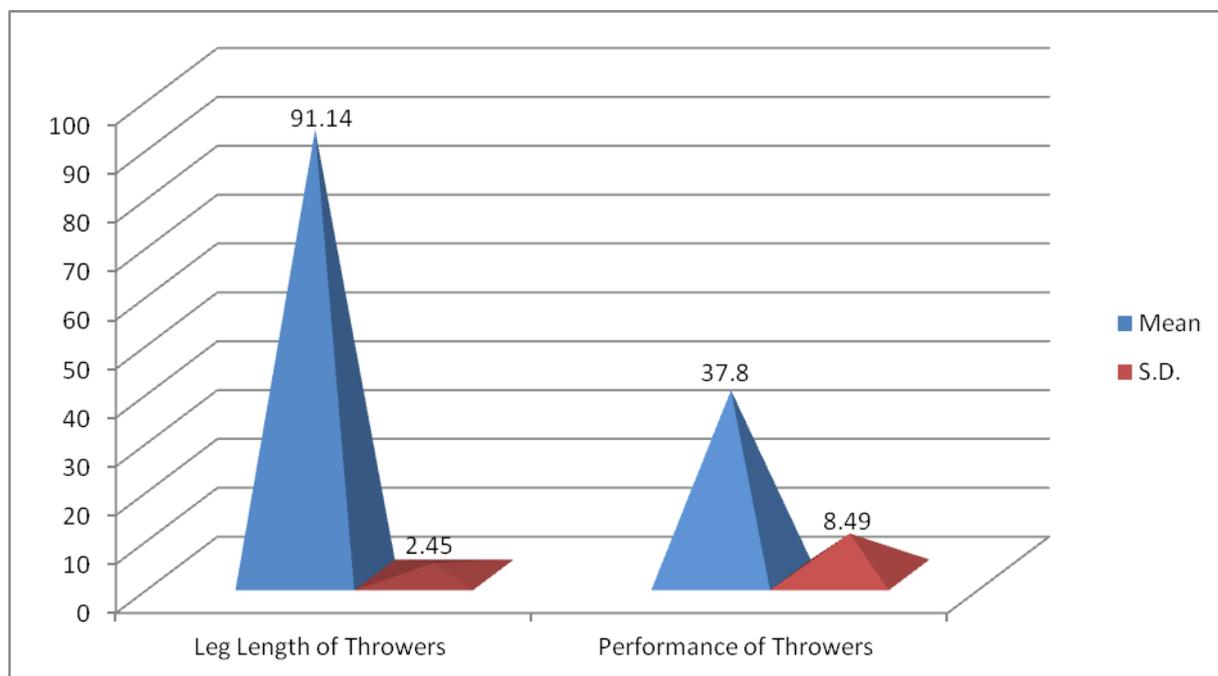
**Figure 1: Shows the Mean & S.D. value of Total Arm Length and performance of Discus Throwers**

**Table 2: Relationship between Leg Length and performance of Discus Throwers**

Variable	Mean	S.D.	'r' Value
Leg Length (cm)	91.14	2.45	.504*
Performance	37.80	8.49	

$r_{0.05(28)} = 0.361$

Table & figure 2 represent that the mean of the Leg Length and Discus Throwers performance is 91.14 and 37.80 respectively. Whereas standard deviation of the Leg Length and Discus Throwers performance is 2.45 and 8.49 respectively, 'r' value is .504. The result shows that significant correlation between Leg Length and Discus Throwers performance.



**Figure 2: shows the Mean & S.D. value of Leg Length and performance of Discus Throwers**

#### IV.DISCUSSION

The result of the study informs that there was significant relationship between Total Arm Length with performance of Discus Throwers. Further the results of the study explain that there is significant relationship of Leg length with Discus Throwers performance.

#### V.CONCLUSION

After the analysis of data, it was concluded that there was significant relationship of total arm length with the performance score of women discus throwers of universities of Punjab. Further it was concluded that there was significant relationship of leg length with the performance score of women discus throwers of universities of Punjab.

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