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**Avadhesh Kumar** 

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RELATIONSHIP OF PERFORMANCE ABILITY TO THE SELECTED ANTHROPOMETRIC CHARACTERISTICS OF NATIONAL JUNIOR DISCUSS THROWER



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**ABSTRACT** 

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The aim of the study was to investigated the relationship of performance ability to the selected anthropometric characteristics of national junior discuss throwers. Fifteen male national junior discuss thrower were selected as a subjects for this study. There was age ranged 12-16 years. Result revealed that Table 1 revealed that five anthropometric characteristics have significant relationship with performance ability of discuss throwers. These are weight = 0.642, arm length= 0.553, upper arm girth = 0.675, lower arm girth = 0.712 and chest circumference = 0.633, they are the more than the table value= 0.514 at 0.05 level of significance. Other anthropometric characteristics standing height= 0.292, leg length= -0.186, hip width= 0.411 and thigh girth= -0.463 have insignificant relationship with performance ability of discuss throwers at 0.05 level of significance. They are the less than the table value 'r'= 0.514. The anthropometric characteristics i.e. weight, arm length, upper arm girth, lower arm girth and chest circumference were significantly related with the performance ability of discuss throw. The anthropometric characteristics i.e. standing height, leg length, hip width and thigh girth were not significantly relationship with the performance ability of discuss throw.

**KEYWORDS:** Anthropometric Characteristics, Discuss, Junior National Players.

### **INTRODUCTION**

Anthropometric measurement consists of objective measurement of structure and function of body. The measurement of structure includes item such as weight, height, and length of limbs, depths

and width and circumference of the different parts of body. The body structure of an individual plays an important role on his motor performance. Hence the coaches and teacher of physical education while selecting there teams for participation give due consideration to the skill possessed by the player and at the sometime, they provide due weightage to the various anthropometric and strength variables also.

Anthropometrical measurement for assessment of physical status was expanded quite naturally to include consideration of body types and the relation of physique to one's health, immunity from diseases, posture, physical performance and personality qualities. Anthropometric variables such as weight, standing height, sitting height, foot length, fore leg length, thigh length, leg length and shoulder width are related to optimum and skilful performance in team as well as individual sport.

Anthropometric characteristics plays an important role in discuss throw performance. Certain anthropometric measurements are advantageous for a good performance in wicket keeping in discuss throw performance.

### **METHODOLOGY**

Fifteen male national junior discuss thrower were selected as a subjects for this study. There was age ranged 12-16 years. These subjects were selected from 58<sup>th</sup> National School Games which were held in international athletics stadium, Saifai, Etawah. Selected Anthropometric measurement such as weight, standing height, leg length, arm length, leg length, upper arm girth, lower arm girth, chest circumference, hip width and thigh girth.

The distance chosen for the assessing performance ability of junior national discuss throw

### **HYPOTHESIS**

It was hypothesized that there was no significant relationship of the selected anthropometric characteristics with performance ability of discuss throwers.

### **RESULT**

TABLE 1
RELATIONSHIP OF ANTHROPOMETRIC MEASUREMENT WITH THE DISCUSS THROW PERFORMANCE

Variables	Mean	SD	Calculated 'r'
Weight	64.39	3.75	0.642*
Standing Height	173.26	2.89	0.292
Arm Length	79.58	3.11	0.553*
Leg Length	98.94	4.02	-0.186
Upper Arm Girth	26.43	1.85	0.675*
Lower Arm Girth	21.76	1.22	0.712*
Chest Circumference	84.11	2.43	0.633*
Hip Width	26.89	1.51	0.411
Thigh Girth	49.99	2.03	-0.463

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# MEAN AND SD OF ANTHROPOMETRIC CHARACTERICTICS 180 160 140 120 100 80 60 40 20 0 Mean SD Mean SD

FIGURE 1

### **FINDING**

Table 1 revealed that five anthropometric characteristics have significant relationship with performance ability of discuss throwers. These are weight = 0.642, arm length= 0.553, upper arm girth = 0.675, lower arm girth = 0.712 and chest circumference = 0.633, they are the more than the table value= 0.514 at 0.05 level of significance. Other anthropometric characteristics standing height= 0.292, leg length= -0.186, hip width= 0.411 and thigh girth= -0.463 have insignificant relationship with performance ability of discuss throwers at 0.05 level of significance. They are the less than the table value 'r'= 0.514.

### DISCUSSION

Table 1 shows that the significant relationship of anthropometric characteristics i.e. weight, arm length, upper arm girth lower arm girth and chest circumference with the performance ability of discuss throw and therefore the hypothesis is rejected. Whereas the other anthropometric characteristics such as standing height, leg length, hip width and thigh girth were not significantly relationship with the performance ability of discuss throw and hence the hypothesis is accepted.

### CONCLUSION

1. The anthropometric characteristics i.e. weight, arm length, upper arm girth, lower arm girth and chest circumference were significantly related with the performance ability of discuss throw.

2. The anthropometric characteristics i.e. standing height, leg length, hip width and thigh girth were not significantly relationship with the performance ability of discuss throw.

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