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RESEARCH ARTICLE

CRITERION ANTHROPOMETRIC MEASUREMENTS WITH RELATION TO FAST BOWLER'S PERFORMANCE

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ABSTRACT

The purpose of this study was relationship among anthropometric measurements and fast bowlers performance. The 82 male fast bowlers were selected from inter district level representation in Andhra Pradesh on non-randomly by purposive sample was used. Karl Pearson coefficient of correlation was used to Analysis of the collected data on anthropometric measurements are Height (0.585*), Ponderal Index (0.259*), Fore Arm Girth (-0.237*), Shoulder Width (0.364*) coefficient of correlation with fast bowlers performance was positively with significant level 0.05. Remaining anthropometric measurements not correlated on this current study.

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INTRODUCTION

Anthropometric means the scientific study of the measurements and proportion of the human body parts either living or non-living. In India, cricket as a popular and attractive children's, young stars and spectators. Spectators moreexpected effective bating and bowling during the match. Bowling as a significant role in the match win or lose.in bowling divides different categories i.e. fast bowlers, medium bowlers, medium fast bowlers and spin bowlers.While selecting a team of bowler's especially fast bowlers, to see anthropometric measurements, physical fitness and physiological fitness. Anthropometric measurements as an effective role with best performance of fast bowlers may to give as best as possible bowling. The present study is anthropometric measurements with relation to fast bowling performance. Its leads to won the match.

MATERIALS AND METHODS

Purpose of the Study: This study was to decide to the anthropometric measurements relation with fast bowler's performance.

Selection of the Subjects : 82 male fast bowlers were selected from inter district levelrepresentation in Andhra Pradesh on non-randomly by purposive sample same was used.

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Selection of the Anthropometric Measurements

- Height
- Weight
- Fore Leg Length
- Thigh Length
- Leg Length
- Upper Arm Length
- Fore Arm Length
- Ponderal Index
- Crural Ratio
- Arm Length
- Hand Length
- Upper Arm Girth
- Fore Arm Girth
- Wrist Circumference
- Shoulder Width
- Chest Girth
- Thigh Girth
- Calf Girth

Collection of the Data and Tools

The was collected by administrating the standard procedures for taking anthropometric measurements as well as fast bowling performance and tools were used weighing machine for weight, stadiometer for height and steel measuring tape for lengths, girths and circumference measurements. The score is

recorded weights in kegs and remaining the nearest one tenth of the centimeters.

Performance of Fast Bowlers

Velocity of the ball is considered as the performance of the fast bowlers.

STASTICAL ANALYSIS AND DISCUSSION

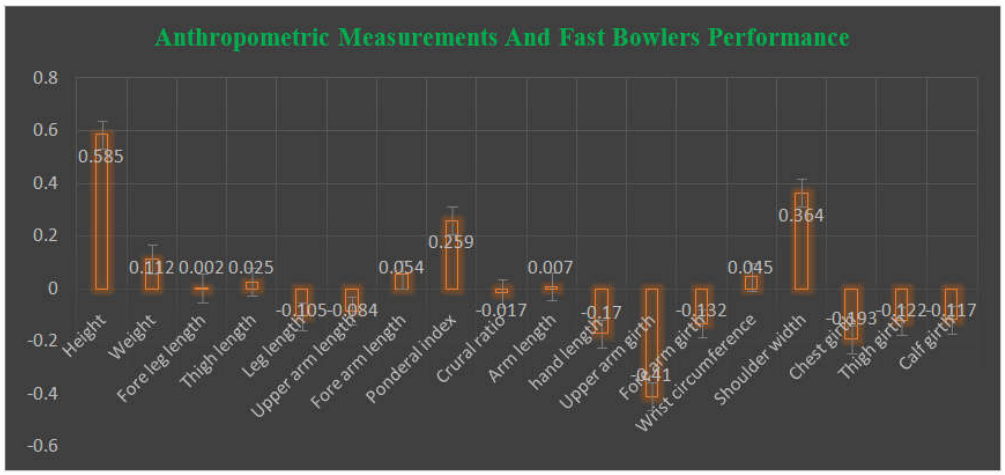
In order to find out the relationship of anthropometric measurements with fast bowling performance with the Karl Pearson coefficient of correlation is used and testing the hypothesis the level of confidence is 0.05.

Criterion of Anthropometric Measurements relation with Fast Bowling Performance

S.No	Anthropometric Measurements	Coefficient Of Correlation 'r'
1	Height	0.585*
2	Weight	0.112
3	Fore Leg Length	0.002
4	Thigh Length	0.025
5	Leg Length	-0.105
6	Upper Arm Length	-0.084
7	Fore Arm Length	0.054
8	Ponderal Index	0.259*
9	Crural Ratio	-0.0170
10	Arm Length	0.007
11	Hand Length	-0.170
12	Upper Arm Girth	-0.41
13	Fore Arm Girth	-0.237*
14	Wrist Circumference	0.045
15	Shoulder Width	0.364*
16	Chest Girth	-0.193
17	Thigh Girth	-0.122
18	Calf Girth	-0.117

N=82, $r_{.05\,(80)}$ =0.217,*significant at 0.05level.

Anthropometric Measurements and Fast Bowlers Performance



An analysis of the above table indicates that velocity of the ball is significantly related to Height (0.585*), Ponderal Index (0.259*), Fore Arm Girth (-0.237*), Shoulder Width (0.364*) as obtained values of correlation were greater than the value of r= 0.217 the correlation to be significant at 0.05 level of confidence.The remaining anthropometric measurements Fore Leg Length, Thigh Length, Leg Length, Upper Arm Length, Fore Arm Length, Crural Ratio, Arm Length, Hand Length, Upper Arm Girth, Wrist Circumference, Chest Girth, Thigh Girth, and Calf Girth as their correlation values are less than the value of r=0.217 need for significance at 0.05 level of confidence.Finally the study reveals that velocity of the ball is significantly related to height. Ponderal index, fore arm girth and shoulder with. Height plays a prominent role in fast bowling in cricket as greater height may be associated with longer limbs especially arms. The study of biomechanics find out that longer the arm greater the force. Hence, significant relationship between velocity of the ball and is attained.Wider shoulder have played a significant role towards generating force from the shoulders. The Final bowling action is such in which one is goes down whereas another arm goes up for the delivery of the ball. Even in this action shoulder with as an important role as more force can be generated because of the greater body mass. The greater mass will produce greater force.Wrist circumference contributes significantly in bowling performance as greater circumference is related to greater mass.

The greater the mass more force that can be generated in act of bowling.Ponderal index and velocity of the ball may also be due to the same reason as mentioned above because height plays an important role in the calculation of Ponderal index.

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