

Association of Selected Angles of Various Joints with the Performance of Jump Shot High in Team Handball

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Abstract – An association was carried out to study selected different angles of various joint with the performance of jump shot high in team handball. For this research 08 male handball players of LNIPE Gwalior of age 20 ±5, subject were selected on the basis of purposive sampling. The Pearson's product moment correlation was used in order to find out the association between selected different angles of various joint with the performance Jump shot high in team handball. For testing the hypothesis the level of significance was set at 0.05 where it was hypothesized that there may be significant association between selected different angles of various joint with the performance Jump shot high in team handball. For this ten different part of joint like Ankle Joint (Left), Ankle Joint (Right), Knee Joint (Left), Knee Joint (Right), Hip Joint (Left), Hip Joint (Right), Shoulder Joint (Left), Shoulder Joint (Right), Elbow Joint (Left) and Elbow Joint (Right) was taken to see the association with the performance of jump shot high in team handball. After applying product moment correlation the required value of coefficient correlation for 6 degree of freedom to be significant at 0.05 level is 0.707 and the obtained values were less than, therefore, the selected angles of various joint at Moment Execution and Moment Take-off have exhibited no significant association with the performance of subjects in Jump shot high. Therefore the research study revealed that there is no significant association between the selected different angles of various joint with the performance of jump shot high in team handball.

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INTRODUCTION

Team Handball is one of the fastest games in the world, which require lots of dynamic movement to score goal and also to defend the goal. Therefore to provide maximum advantages which a player in different position is really depends on the tactical and technical knowledge that have been used at the time of final position where players take action to shoot. As in handball there are lots of techniques which is require for scoring a goal like jump shot high, jump shot long, dive shot, reverse shot and set shot etc. In all these techniques the players have to be very much sound and skillful to execute ball into goal. Taking same thing further into action the coaches and players are always want that the techniques they are using it should be in such manner that they can utilize it in perfectly as it require to take best advantage. Therefore most of the sports researchers are eager to see the relations of lots of variables with the performance in particular sports for example in basketball shooting angle play a very important role in scoring a basket. So taking same concept in this research study researcher willing to see the relationship of angles of various joints like Ankle Joint (Left), Ankle Joint (Right), Knee Joint

(Left), Knee Joint (Right), Hip Joint (Left), Hip Joint (Right), Shoulder Joint (Left), Shoulder Joint (Right), Elbow Joint (Left) and Elbow Joint (Right) at the takeoff and execution moment with the performance of jump shot high in team handball.

METHODS

All the players were highly experienced and motivated during the collection of data. Total Eight male Handball players of Lakshmibai National Institute of Physical Education were selected as subjects for the research study. The age of subjects was between 20 ±5 years. The criterion measures for the study were: Measuring angle in nearest degree at selected joints at the moment of take-off and execution during Jump shot high performance, which was assessed through zinn battery test. The jump shot high of different players were photographed at Handball court and researcher draws the stick figure on the basis of photographs.

Administration of tests

All the players were given five trials for executing jump shot high. Researcher in advance guides the players to take three steps before attempting jump shot high technique from outside the free throw line (9 meter away from goal post). In goal post specific area was marked where player have to execute the throw and based on it they were get the points.

Statistical tool

The Pearson's product moment correlation was used in order to find out the association between selected different angles of various joint with the performance of Handball players in Jump shot high. For testing the hypothesis, the level of significance was set at 0.05.

RESULT

Table - 1

Association between selected different angles of various joint with the Performance of Subjects in Jump Shot High (Moment Take-off)

S. No.	Variables	Coefficient of Correlation (r)
1.	Ankle Joint (Left)	-0.088
2.	Ankle Joint (Right)	-0.481
3.	Knee Joint (Left)	0.472
4.	Knee Joint (Right)	0.182
5.	Hip Joint (Left)	-0.261
6.	Hip Joint (Right)	-0.331
7.	Shoulder Joint (Left)	0.019
8.	Shoulder Joint (Right)	0.540
9.	Elbow Joint (Left)	-0.577
10.	Elbow Joint (Right)	0.510

Significant at 0.05 level.

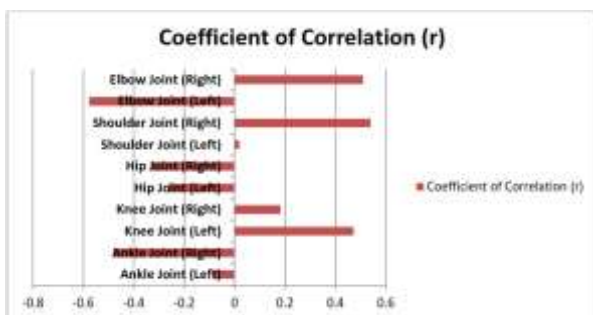


Figure- 1

Since in the table number 1 the required value of coefficient correlation for 6 degree of freedom to be significant at 0.05 level is 0.707 and the obtained values were less than that, therefore, none of the selected different angles of various joint at the point of takeoff moment have exhibited significant

association with the performance of subjects in Jump shot high.

Table - 2

Association between selected different angles of various joint with the Performance of Subjects in Jump Shot High (Moment Execution)

S. No.	Variables	Coefficient of Correlation (r)
1.	Ankle Joint (Left)	0.636
2.	Ankle Joint (Right)	0.695
3.	Knee Joint (Left)	0.611
4.	Knee Joint (Right)	-0.467
5.	Hip Joint (Left)	0.340
6.	Hip Joint (Right)	-0.251
7.	Shoulder Joint (Left)	0.097
8.	Shoulder Joint (Right)	0.314
9.	Elbow Joint (Left)	-0.116
10.	Elbow Joint (Right)	-0.277

Significant at 0.05 levels.

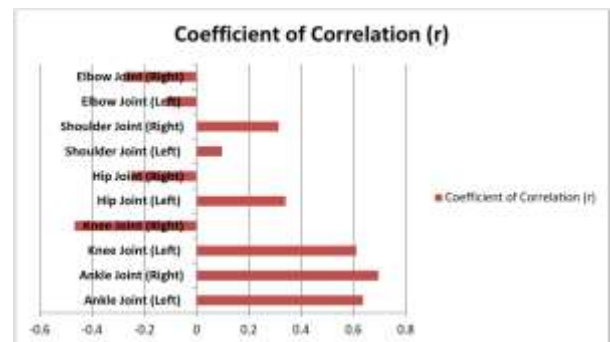


Figure- 2

Since in the table number 2 the required value of coefficient correlation for 6 degree of freedom to be significant at 0.05 level is 0.707 and the obtained values were less than that, therefore, none of the selected different angles of various joint at the point of have execution moment exhibited significant association with the performance of subjects in Jump shot high.

DISCUSSION AND CONCLUSION

As shown by the Table 1 and 2, the selected different angles of various joint i.e. ankle joint (left), ankle joint (right), Knee Joint (Left), Knee Joint (Right), Hip Joint (Left), Hip Joint (Right), Shoulder Joint (Left), Shoulder Joint (Right), Elbow Joint (Left), Elbow Joint (right) at the point take off and execution moment does not show significant relationships.

DISCUSSION OF HYPOTHESIS

Selected different angles of joint does not showed the significant association with the performance of subjects in Jump shot high. Therefore, the hypothesis as stated earlier that there may be significant association between the selected angles of various joint with the performance of the Handball players in Jump shot high is rejected at 0.05 level.

CONCLUSION

On the whole it may be as ascertained that the low value coefficient of correlation show by selected variables does not mean that these variables are not contributing to the performance of subjects in jump shot high. As in figure 1 take off moment elbow joint (right), shoulder joint (right) and knee joint (left) is close to 0.707 which is highly close then other selected angles of joint and in figure 2 execution moment Ankle Joint (Left), Ankle Joint (Right) and Knee Joint (Left) is close to 0.707 which is highly associated then other selected angles of joint. The insignificant value of coefficient correlation of these variables with the performance might show good association if highly advance camera been used during recording of the data.

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