

Construction of diving shot test in handball

Dr. S. K. Yadav and Dr. Sunil Dudhale

See end of the article for authors' affiliations

Correspondence to:

Prof. S. K. Yadav
School of Physical Education
Devi Ahilya University
Indore (M. P.)



ABSTRACT

The purpose of the study was to construct Diving Shot Test in Handball. One hundred male handball players from South-West Zone and North-East Zone Universities (four University teams from each Zone) who qualified for the All India Inter Zonal Varsity Handball Tournament held at Banaras Hindu University, Varanasi, Uttar Pradesh from 25th to 29th October 2002, were selected to serve as subjects for this study. The criterion measure was the average of the playing ability scores of the handball players assigned independently by three handball experts. It was concluded that the newly developed Diving Shot Test in handball meet the criterion of scientific authenticity i.e. the test was reliable, objective and valid.

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Key Words: Diving Shot, Handball, Reliability, Objectivity, Validity, Authenticity.

Handball is a game of running, jumping, throwing and catching, it is an excellent activity to develop these natural basic movement patterns. Although enjoyed by an individual at any fitness level, it is a game of movements where running plays a dominant role and therefore is a good cardio-respiratory conditioner. It also develops in its participant's speed, agility, strength and endurance. Since very limited research in the area of skills in handball has been done, the researcher felt the need to take up this study. The purpose of the study was to construct Diving shot test in handball.

Methodology:

One hundred male handball players from South-West Zone and North-East Zone Universities (four University teams from each Zone) who qualified for the All India Inter Zonal Varsity Handball Tournament held at Banaras Hindu University, Varanasi, Uttar Pradesh from 25th to 29th October 2002 were selected to serve as subjects for this study. The age of the subjects ranged between 17 to 25 years. The criterion measure was the average of the playing ability scores of the handball players assigned independently by three handball experts.

Diving shot test was developed through objective methods. The data for this study was collected through administering the diving shot test on one hundred handball players who participated in the All India Inter-Zonal Inter-Varsity Handball Tournament. The coaches and managers of the teams were consulted at personal level to conduct the test on handball players, and a rapport was established with them for the testing programme. All those coaches and managers were made fully conversant with the

study. Tentative times were finalized with them. The researcher approached each player after giving proper and timely information before the test was conducted. Before administering the tests, the subjects were briefed about the purpose of the study and details of the test were explained to them. The subjects were given a demonstration of the skill test by a trained helper. They were also given sufficient number of trials to enable them to become absolutely familiar with the test. To ensure uniform testing conditions, the subjects were tested in the morning and evening sessions after warming-up during practice sessions. Though no special technique was used to motivate the subjects, the subjects were very co-operative throughout the test. The purpose of the test was to measure the ability of a player to shoot the handball in the goal using diving shot with accuracy. Test may be used with male college handball players. A regulation handball court was marked with three shooting points clearly marked on the goal area circle line at an angle of 45° , 90° and 135° from the center of the goal post. Goal post was marked with a rope tied to both the uprights 45 cm. below the crossbar and parallel to it. Two more ropes were tied with the crossbar at a point 60cm. inside and parallel to each upright. A dotted line 60cm. away and in front of both the uprights and parallel to it was marked on the floor in the goal area. The subject stood behind the goal area line at the shooting point with a ball in his hand. On blowing the whistle the subject jumped quickly inside the goal area and attempted the diving shot on the goal. Two attempts were given from each point in each trial. Three trials were given. The point values of 8, 6 and 2 of the zone in which the ball entered were recorded for each attempt. The score

was the total points made in best five attempts of the six and best of the three trials was the score of the subject. However, no point was given for any ball going outside the goal post. A maximum score of 50 was possible on this test.

Results and Discussion

Test-retest method was used to establish the reliability of the diving shot test. All the players were

given three trials administered by the same tester and inter-class correlation coefficient by analysis of variance method was employed to compute the reliability of the tests. Analysis of variance for reliability estimates and the obtained reliability coefficient (R) value for the Diving shot test has been presented in Table - I.

Table – I: Analysis of variance for reliability estimate of diving shot test

Source of Variance	Sum of Squares	Degree of Freedom	Mean Squares	F - Ratio	tab F	Inter - Class Correlation (R)
Subjects	32611.33	99	329.41			
Trials	23.49	2	11.745	1.967*	3.04	0.982**
Interaction	1181.85	198	5.969			
Total	33816.67	299				

*Not significant at 0.05 level $\text{tab } F_{0.05} (198, 2) = 3.04$

** Significant at 0.05 level $R_{0.05} (98) = 0.195$ $N = 100$

The data obtained as a result of the administration of diving shot test and judged by three different handball experts who recorded the performance of the players independently was correlated in order to obtain

objectivity coefficient. Analysis of variance for objectivity estimate and the objectivity coefficient (R) value for the diving shot test has been presented in Table - II.

Table – II: Analysis of variance for objectivity estimate of diving shot test

Source of Variance	Sum of Squares	Degree of Freedom	Mean Squares	F - Ratio	tab F	Inter - Class Correlation (R)
Subjects	32675.67	99	330.06			
Trials	19.28	2	9.64	1.751*	3.04	0.983**
Interaction	1090.05	198	5.51			
Total	33785.00	299				

*Insignificant at 0.05 level $\text{tab } F_{0.05} (198, 2) = 3.04$

** Significant at 0.05 level $R_{0.05} (98) = 0.195$ $N = 100$

Correlation coefficient of diving shot test and the criterion variable has been presented in Table - III.

Table – III: Relationship of diving shot test to the criterion (Playing ability scores)

S. No.	Test	Coefficient of Correlation
1.	Diving shot Test	0.745*

* Significant at 0.05 level $r_{0.05} (98) = 0.195$ $N = 100$

Analysis of data on diving shot test indicated that the constructed test in handball was found to be reliable and objective. The significant values showed that the directions for administration of the test were specific and clear for performance as well as evaluation.

Conclusions:

1. The diving shot test showed highly significant relationship with handball playing ability.
2. The newly developed diving shot test in handball meet the criterion of scientific authenticity i.e. the test was reliable, objective and valid.

REFERENCES:

Clarke, Harrison H. **Application of Measurement Health Physical Education and Recreation** Englewood Cliff N.J.: Prentice Hall I.N.C. 1967.

Johnson, Barry L. and Nelson, Jack K. **Practical Measurements for Evaluation in Physical Education** Third Edition Delhi: Surjeet Publications, 1988.

Neil, Graham **Modern Team Handball – Beginner to Expert** Montreal, Canada: McGill University, 1978.

Stein, H. G. and Federhoff, E. **Handball** Leipzig: German College of Physical Culture, 1982.

Authors' affiliations:

Dr. Sunil Dudhale, Assistant Director
Department of Physical Education and Sports
Devi Ahilya University
Indore (M. P.)

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