

## Construction of overhead shot test in handball

S. K. Yadav and Sunil Dudhale

See end of the article for authors' affiliations

Correspondence to:

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



### ABSTRACT

The purpose of the study was to construct Overhead 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 Overhead 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:** Overhead Shot, Handball, Reliability, Objectivity, Validity, Authenticity.

A beginner handball player needs to learn the basic skills. These skills of the handball players represent a collection of specific actions that may be identified as techniques used to obtain maximum efficiency of play. These technical procedures are involved with the manipulation of the ball and the movements of the players. 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 Overhead 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.

Overhead shot test was developed through objective methods. The data for this study was collected through administering the overhead 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 overhead shot with accuracy. Test may be used with male college handball players. Goal post was marked with the help of ropes. A rope was tied on both the uprights below the cross bar at 30 cm from the inner edge of crossbar. Two ropes were tied with the crossbar at a point 45 cm. inside and parallel to each upright. Two more ropes were tied with both the uprights parallel to and 30 cm. above the floor. The subject stood behind the seven m. line i.e. penalty point, with a ball in his hand. On blowing the whistle the subject attempted the shot in the goal using overhead shot. The points values allotted were 10 in all corner zones, 6 in remaining zone filled up by ropes and 2 for rest of the zone in the goal post. However, no point was awarded when a ball went outside the goal post. Five attempts were given for each trial and three trials were given. The score was the total points made in five attempts in each trail and the best of three trials was the score of the player. A maximum score of 50 was possible on this test.

**Results and Discussion**

Test-retest method was used to establish the reliability of the overhead 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 Overhead shot test has been presented in Table - I.

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

Source of Variance	Sum of Squares	Degree of Freedom	Mean Squares	F - Ratio	tab F	Inter - Class Correlation (R)
Subjects	19395.67	99	195.92			
Trials	18.35	2	9.17	2.067*	3.04	0.973**
Interaction	877.65	198	4.43			
Total	20291.67	299				

\*Not significant at 0.05 level

tab F<sub>0.05</sub> (198, 2) = 3.04

\*\* Significant at 0.05 level

R<sub>0.05</sub> (98) = 0.195

N = 100

The data obtained as a result of the administration of overhead 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 overhead shot test has been presented in Table - II.

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

Source of Variance	Sum of Squares	Degree of Freedom	Mean Squares	F - Ratio	tab F	Inter - Class Correlation (R)
Subjects	20453.05	99	206.60			
Trials	15.71	2	7.855	1.805*	3.04	0.973**
Interaction	861.63	198	4.35			
Total	21330.39	299				

\*Insignificant at 0.05 level

tab F<sub>0.05</sub> (198, 2) = 3.04

\*\* Significant at 0.05 level

R<sub>0.05</sub> (98) = 0.195

N = 100

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

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

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

\* Significant at 0.05 level

r<sub>0.05</sub> (98) = 0.195

N = 100

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

**REFERENCES:**

Bosco, James S. and Gustafson, William F. **Measurement and Evaluation in Physical**

**Education, Fitness and Sports** Englewood Cliffs, N. J.: Prentice Hall, Inc., 1983.

Fleishman, Edwin A. "Abilities and Motor Skill", **The Structure and Measurement of Physical Fitness** Englewood cliffs: N. J.: Prentice Hall, Inc., 1965.

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

**Authors' affiliations:**

**Sunil Dudhale**  
**Department of Physical Education and Sports**  
**Devi Ahilya University**  
**Indore (M. P.)**

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