

# Construction of Rating Scales for Forehand and Backhand Overhead Clear in Badminton

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## ABSTRACT

The purpose of the study was to construct the rating scales for Forehand and Backhand Overhead Clear in badminton. Thirty men badminton players, who participated in the M. P. state university badminton tournament conducted by Vidya Niketan Samiti College, Bhopal (M.P.) from 8th - 10th September 2008, were randomly selected to serve as subjects for this study. Validity of the rating scales was established by correlating the scores on forehand (0.795) and backhand overhead clear (0.78) in badminton with the scores obtained by administering the Lockhart and McPherson Badminton Test. Inter class correlation coefficient by analysis of variance method was employed to compute the reliability of the rating scales for forehand (0.829) and backhand overhead clear (0.892) through three trials administrated by the same tester. Objectivity of the rating scales for forehand overhead clear was 0.728 and was 0.768 for backhand overhead clear through three trials administrated independently by three different testers.

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**Key Words:** Rating Scale, Forehand Overhead Clear, Backhand Overhead Clear

Badminton at its best; a game of swift and graceful movement, of power play contrastingly highlighted by a delicacy of touch, of wrong footing deception, of incredible retrieving and lightening interception, and of varied chess-like tactics of singles, doubles and mixed doubles each an absorbing and different game in its own. Rating scales are, in fact, a means of objectifying subjective evaluations. In other words with the rating scale, the teacher can assign a numerical value to qualitative judgments. The purpose of the study was to construct the rating scales for Forehand and Backhand Overhead Clear in badminton.

## Methodology:

Thirty men badminton players, who participated in the M. P. state university badminton tournament conducted by Vidya Niketan Samiti College, Bhopal (M.P.) from 8th – 10th September 2008, were randomly selected to serve as subjects for this study.

The criterion measures for this study was the playing ability scores obtained by administering the Lockhart and McPherson Badminton Wall Volley Test. On the basis of opinion empirical views of experts and after carefully examining the related literature, the skills i.e. forehand and backhand overhead clear were ascertained for the construction of rating scales.

The coaches and managers of the teams were consulted at personal level to conduct the test on Badminton players, and a rapport was established with them for the testing programme. All those incharge of teams, 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 test, the subjects were briefed about the purpose of the study and details of the test were explained to them. The subjects were 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. The duration of test administration was set in a manner so that fatigue may not occur. Though no special technique was used to motivate the subjects, the subjects were very co-operative throughout the test.

The skills (forehand and backhand overhead clear) for which the rating scales have been prepared were further subdivided into ten components in consultation with the experts including physical education teachers, selectors, officials and the N.I.S. trained coaches. The details of each component were prepared and then the rating scales were distributed to the experts for further comments, views and suggestions for improvement. The experts were consulted personally by the research scholar, and modified the rating scales based on their views and suggestions before finally preparing the rating scales. Each of the components of forehand and backhand overhead clear in badminton was scored on 5-4-3-2-1 basis.

## Findings:

Data using the prepared rating scales were obtained independently from three badminton experts on all the subjects. The subjects were asked to perform the selected skills i.e. forehand and backhand overhead clear in a non-competitive situation. The judges were given five point rating scales to evaluate the performance on the forehand and backhand overhead clear in badminton. The average of the score assigned independently by each of the three badminton experts was the final score of the rated player on forehand and backhand overhead clear. A maximum score of fifty was possible on each rating scale.

Validity of the rating scales was established by correlating the score on forehand and backhand overhead clear in badminton with the scores obtained by administering Lockhart and McPherson Badminton Test. Results thus obtained has been presented in Table-1.

**TABLE - 1**  
**RELATIONSHIP OF THE RATING SCALE**  
**SCORES FOR FOREHAND AND BACKHAND**  
**OVERHEAD CLEAR TO THE CRITERION**

S. No.	Variable Correlated with Criterion	Correlation Coefficient 'r'
1	Forehand Overhead Clear	0.795*
2	Backhand Overhead Clear	0.780*

N = 30 \*Significant at 0.05 level  $r_{0.05}(28) = 0.361$

Table-1 revealed that there was significant relationship between independent variables i.e. forehand and backhand overhead clear rating scale scores and the criterion i.e. Lockhart and McPherson Badminton Wall Volley Test scores. Therefore it is evident that independent variables were highly related to the criterion.

Interclass correlation by analysis of variance method was employed to compute the reliability of the rating scales for forehand and backhand overhead clear through three trials administrated by the same tester. Analysis of Variance for reliability estimates and the obtained reliability coefficient (R) values for the rating scales have been presented in Table-2.

**TABLE - 2**  
**ANALYSIS OF VARIANCE FOR RELIABILITY**  
**ESTIMATE FOR THE RATING SCALES**  
**IN BADMINTON**

Skill	S.V.	Sum of Squares	df	MSS	F - Ratio	R
Forehand Overhead Clear	Sub	701.156	29	24.178		
	Trial	20.689	2	10.344	2.50*	0.829**
	Inter	239.978	58	4.136		
	Total	961.823	89			
Backhand Overhead Clear	Sub	942.989	29	32.517		
	Trial	0.822	2	0.411	0.117*	0.892**
	Inter	203.178	58	3.503		
	Total	1146.989	89			

\*Insignificant at 0.05 level  $\text{tab } F_{0.05}(58,2) = 3.15$

\*\* Significant at 0.05 level  $R_{0.05}(28) = 0.361$  N = 30

Table-2 revealed that the obtained inter class correlation values for the rating scales were 0.829 and 0.892, significant at 0.05 level because required value with 28 degree of freedom was 0.361. Hence the scales have been considered reliable.

The data obtained as a result of the administration of rating scales separately and judged by three badminton experts who noted the performance of the subjects independently were correlated in order to obtain objectivity coefficients. Analysis of variance for objectivity estimates for the rating scales and the objectivity coefficient (R) values have been presented in Table-3.

**TABLE - 3**  
**ANALYSIS OF VARIANCE FOR OBJECTIVITY**  
**ESTIMATE FOR THE RATING SCALES**  
**IN BADMINTON**

Skill	S.V.	Sum of Squares	df	MSS	F - Ratio	R
Forehand Overhead Clear	Sub	344.900	29	11.893		
	Trial	10.067	2	5.033	1.533*	0.728**
	Inter	187.933	58	3.240		
	Total	542.900	89			
Backhand Overhead Clear	Sub	702.100	29	24.210		
	Trial	11.667	2	5.833	1.037*	0.768**
	Inter	326.333	58	5.626		
	Total	1040.100	89			

\*Insignificant at 0.05 level  $\text{tab } F_{0.05}(58,2) = 3.15$

\*\* Significant at 0.05 level  $R_{0.05}(28) = 0.361$  N = 30

Table-3 revealed that the obtained inter class correlation values for the rating scales were 0.728 and 0.768, significant at 0.05 level because required value with 28 degree of freedom was 0.361. Hence the scales have been considered objective.

#### Discussion of Findings:

Analysis of data on forehand and backhand overhead clear in badminton indicated that the constructed rating scales were found to be reliable. The findings of the study further reveal that the rating scales for forehand and backhand overhead clear in badminton were also found to be objective. The significant values showed that the directions for administration of the test were specific and clear for performance as well as evaluation.

#### Conclusions:

Within the limitations of the present study, the following conclusions were drawn: -

1. The rating scales for forehand and backhand overhead clear in badminton showed significant relationship with the criterion.
2. The newly developed rating scales for forehand and backhand overhead clear in badminton meet the criterion of scientific authenticity i.e. the scales were reliable, objective and valid.

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