

Construction of Overhead Service Test in Volleyball

Dr. Amar Kumar

Department of Sports Biomechanics, Lakshmibai National Institute of Physical Education, Gwalior

Abstract: The offense is the best defense. In volleyball, the rally starts from service in the opponent court and it decides the pattern of opponent attack composition, which also helps to predict the opponent attack and at the same time more comfort movement to blockers and defenders. This study is used to evaluate the perfection of a server in the opponent court. Fifty (50) male subjects were selected from the Volleyball match practice group of LNIPE, Gwalior. The procedure and description of the test were well explained to the students by the scholar himself before the administration of the test. The subjects were also acquainted with the markings and scores awarded in service after landing of the ball in their respective area of volleyball court for the float service. The subject stood as per their comfort within the free zone behind the end line and after the whistle players attempted service with intentions to get maximum marks in the test. Each subject performed 3 trials of 10 repetitions. Faulty service and foot fault were not considered for the score. The test consisted of a maximum of 50 points. After collection of data statistical technique reliability analysis was applied to establish the reliability based on internal consistency and objectivity at 0.05 level of significance. It was found that test was highly reliable and objective in nature and may be considered as the standardized test for the evaluation of the overhead service in Volleyball instead of other tests which is outdated and not applied in the modern era of volleyball.

Index Term - Overhead Serve, Cronbach's Alpha, Reliability, Volleyball

1. Introduction

In modern volleyball, FIVB is continuously striving to increase the duration of rally. For that purpose FIVB changed the rules tremendously in last few decades like introduction of Antenna, Libero and unlimited replacement between two Liberos all towards defensive side. (Chesaux Samuel, 2016) The only target to attract more spectators and to make the game more thrilling is to make balance between offense and defense in volleyball. Service is considered to be first attack as well as defense for the serving team. (Selinger's Arie, 2002) Service is considered to be a powerful weapon for any team. A good server makes the blocker and defender in comfortable position by destroying the first pass of the opponent team.

Many attempts were put on to make the objective test for serve in volleyball like Russell Launge Volleyball Test, Volleyball Skill Test of SAI (Sports Authority of India) and also by various research scholars time to time. In today's scenario the service accuracy and effectiveness has different meaning from what it was earlier. The score awarded or marked in the test are not practical according to the real game situation in serve test given by various authorities. Short serves are also tough to perform as it requires great control over the skill of service. (Athanasios and Spitzley, 2002)

Hence, the scholar is keen interested to develop a specific serve test for volleyball overhead serve which may help the coaches and player for evaluation and also can be used to measure the effectiveness of service.

2. Methodology

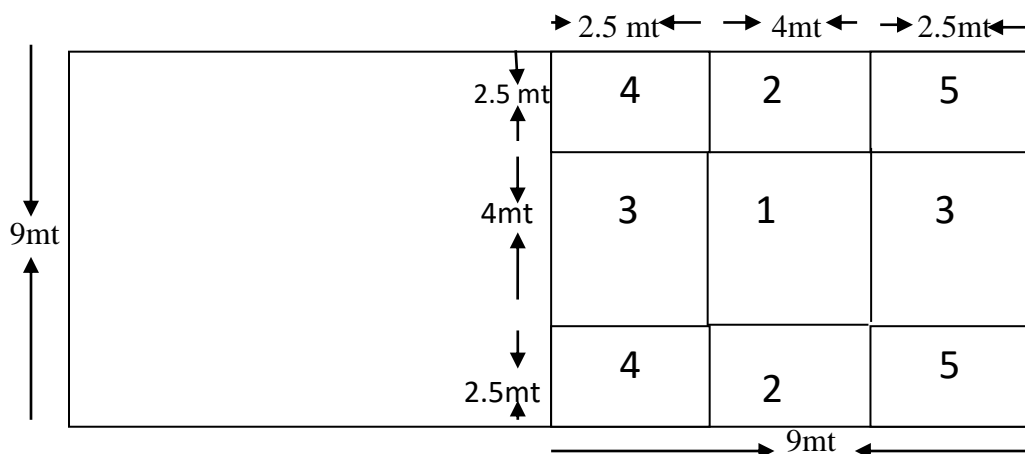


Fig-1
Markings and Scores in Volleyball Court

50 male subjects were selected from the Volleyball match practice group of LNIPE, Gwalior. The Subjects were from Under Graduate, Post Graduate and Diploma course. The procedure and description of test was well explained to the students by the scholar himself before the administration of the test. The subjects were also acquainted with the markings and scores awarded in service after landing of the ball in their respective area of volleyball court for the float service as shown in above Fig-1. After proper warm-up subjects were allowed to execute the service as per instruction.

The subject stood as per their comfort within the free zone behind the end line and after the whistle players attempted service with intentions to get maximum marks in the test. Each subject performed 3 trials of 10 repetitions. All three trials were considered as score for the test to establish reliability and objectivity of the test. Faulty service and foot fault was not considered for the score. Test consisted of maximum 50 points.

3. Result and Discussion

For establish the reliability and validity of the test. Two trial recordings were done by same administrator and the third trial recording was done by the other administrator. After collection of data statistical technique reliability analysis were applied to establish the reliability based on internal consistency and objectivity at 0.05 level of significance. More specifically Cronbach's alpha correlation was used to check the reliability and objectivity. (Andy Field, 2009)

Table-1
Relationship between the First and Second Trial of Float Service in volleyball

S.No	Overhead Service	First Trial	Second Trial
1.	First Trial	1	0.826*

*Significant at 0.05

Based on Internal consistency cronbach's alpha was calculated for establishing the reliability and objectivity

Table-2
Reliability Statistics Test

S.No	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
1.	0.871	0.905	2

Table-3
Objectivity Statistics Test

S.No	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
1.	0.749	0.755	2

It was revealed from Table-1, 2 and 3 that overhead Float service has high reliability and objectivity in nature. If the value of Cronbach's Alpha is more than 0.70 than data is considered has highly reliable and objective in nature. The norms for the overhead serve were divided in five grades are as following:

Table-4
Grading of Overhead serve based on Scores

S.No	Grade	Score Limits
1	Very Poor	<25
2	Poor	25-31
3	Average	31-37
4	Good	37-43
5	Very Good	>43

The grades were presented in Table -4 as per their performance, out of three trial best is to be considered for grading.

4. Conclusion

It was found that test was highly reliable and objective in nature and may be considered as standardized test for the evaluation of the overhead service in Volleyball instead of other test which is outdated and not applied in the modern era of volleyball.

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