Construction of Fielding Ability Test in Softball for Junior Boys

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Abstract – This examination was directed to structure a test for fielding ability in the game Softball. 220 male junior softball players from different locale of Kerala inside the age group of 15 to 19 years were picked as subjects for this test. Point of the test was to check the ability of the subjects to gather a softball with fielding glove and execute controlled throws to a target from a specific separation. This test was then checked for its reliability and objectivity. Test was named as Wall Fielding test. Data was gathered with the assistance of expert testers. A sum of 120 male junior softball players of Kerala state who took an interest in the state championship directed by the Kerala State Softball Association were chosen as subjects for dissecting reliability and a sum of 220 for examining objectivity. The principle goal of the examination was to foresee the performance of a player by the level of skills had. Intra Class Correlation Coefficient with Two-way irregular impact ANOVA model was utilized to gauge the reliability and objectivity of this test. Rehashed trials were led by a similar tester to break down the reliability and rehashed trials by two distinct testers at comparative conditions on similar subjects were led for deciding the objectivity. A reliability coefficient of 0.959 and Objectivity coefficient of 0.952 was gotten.

Keywords -Fielding Accuracy, Objectivity, Reliability, Skill test, Softball

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1. INTRODUCTION

Otherwise called American Cricket, the game Softball takes its cause in the United States of America. Hitting, throwing, running and fielding are the key skills of the game. Here we have concentrated on fielding skills. Multi playing circumstances happens oftentimes in this game, in this way, it's significant for all players to execute exact fielding and throws. A test was developed to decide the fielding skills of the players. Data was gathered and investigated to check the reliability and objectivity coefficients.

Since days of yore, competitors have gone up against one another. Various kinds of training techniques and programs are created by the nature and demands of the activity. Training techniques are quite certain in nature and are one of a kind regarding singular contrasts, limit and level of proficiency. Coherence, periodization, progression of load, diet and rest enables a competitor to stage remarkable performance. In every single stage, performance level and the effectiveness of training are examined with the assistance of standard skill tests and rivalries. Highly scientific method for anticipating the potential abilities and screening of gifts from a group is basic to accomplish our point of ideal performance. Standardized skill test batteries can support a mentor or selector to acquire these goals.

2. MATERIALS AND METHODS

The Aim of this examination was to develop a particular softball Fielding ability test for junior boys. A test named wall fielding test was created for the equivalent. This test requires a zone checked like a target on a wall and a restraining line on the floor. A sum of 120 male junior softball players of Kerala state were chosen as the subjects for the examination to dissect the reliability and a sum of 220 subjects to investigate objectivity. Their ages ranged from 15 to 19 years. The principle objective was to anticipate the performance by the level of skills had. Intra Class Correlation Coefficient with Two-way arbitrary impact ANOVA model was utilized to assess the reliability and objectivity of this test. Rehashed trials were directed by one tester to examine the reliability of this recently built test and rehashed trials by two distinct testers at comparative conditions in same subjects were led for deciding the objectivity.

2.1 Purpose

The motivation behind this test is to quantify the player's ability to keep up accuracy and control in ground ball fielding under strain.

2.2 Materials

Wall, marking powder, measuring tape, chalk, softballs, scorer, recorder.

2.3 Markings

A target is set apart on a wall at a stature of 5 feet over the ground with a width of 8 feet. A restraining line of 8 feet length parallel to the width of the target is drawn 20 feet from the wall.

2.4 Procedure

The subject is approached to remain behind the restraining line with a ball. The subject needs to throw the ball towards the target underneath the 5 feet line and field the bounced back ground ball with a glove and rehashes this for 30 seconds.

2.5 Rules

Any ball that strikes the target over 5 feet line won't be tallied. Throw ought not contact the ground before striking the target. Direct throws are to be made to the target. Just skiped returns are considered. Time begins when the primary throw strikes the wall target. On the off chance that a subject execute a throw crossing the restraining line that throw won't be tallied. On the off chance that a subject neglects to handle a bounce back ball and gone anyplace, the subject needs to take the ball wherever it is and return back to the 8 feet restraining line and execute throws once more. Any throws that execute past the restraining line won't be checked.

2.6 Scoring

The beginning of 30 s time will begins with the primary legal throw strikes the wall target. At the point when the main throw strikes the wall target, clocks begin their watches. Score is the all-out number of balls fielded legally with in 30s. Two sets of 30 second throws (30sx2) will be given in a trial. An aggregate of two trials will be given. Best of the two sets will be taken as conclusive score of every trial.
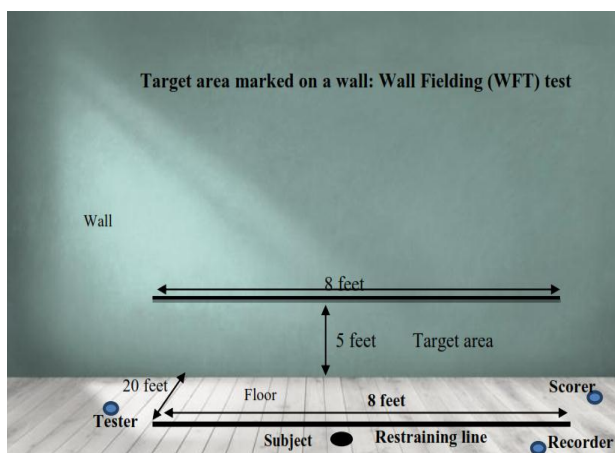

Fig: 1. Target marked on a wall

3. ANALYSIS OF DATA

The data got was factually investigated to register the reliability and objectivity of the tests. Two sets of data taken by a tester were utilized to investigate reliability and two sets of data taken by two unique testers were taken to dissect the objectivity. The reliability gauges were processed utilizing Intra Class Correlation Coefficient with Two-way irregular impact ANOVA model (Safrit& Wood model 1989). Two significant sources of variation in the watched data are because of the distinctions among subjects and between rehashed trials. The variations in the data were partitioned in to three; between subjects, between rehashed measurements and furthermore collaboration among subjects and rehashed measurements.

For n subjects with k rehashed measures for each subject, the degrees of freedom related with subjects is n-1, rehashed measures k-1, and with cooperation is (n-1)(k-1) and an aggregate of nk-1. A gauge of the reliability (R) is determined utilizing the formula,

R= (MSS –MSI)/MSS   (1)

Where, MSS is the mean square for subjects gotten by partitioning total of squares between subjects with the relating DF. Along these lines, MSI the cooperation mean square can be processed. Note that mean square because of rehashed measures does not show up in the calculation of R. Consequently that term isn't consolidated in the tables

3.1 Reliability Estimates

TABLE 1

Sl No.	Name of test	Source	SS	DF	MS	ICC
1	Wall Fielding Test (WFT)	BS IN	1451.296 58.896	119 119	12.196 0.495	0.959*

Source of Variance:

BS: -   Between Subjects

IN: -   Interaction

SS: -   Sum of Squares

MS: -   Mean Sum of Squares

DF: -   Degrees of Freedom

ICC: -   Intra Class Correlation

*   -   Highly Reliable Test Items

TABLE 1 demonstrates the reliability evaluations of Wall Fielding Test (WFT). As per Barrow and McGee (1986), a reliability coefficient in the range 0.80 to 0.89 is acceptable; 0.90 to 0.94 is awesome; and

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Excellent on the off chance that it ranges somewhere in the range of 0.95 and 0.99. Morrow et al. (1995) stated that, reliability coefficient speaks to the repeatability or consistency.

3.2 Objectivity Coefficients

Intra Class Correlation Coefficient with Two-way irregular impact ANOVA model was utilized to appraise the objectivity coefficients of highly reliable skill test things. The two significant sources of variation are because of contrasts among subjects and contrasts between two testers.

Those skill test things with objectivity coefficients more noteworthy than or equivalent to 0.80 were acknowledged. The objectivity gauges for the Wall Fielding Test (WFT) test is appeared TABLE 2.

3.3 Objectivity Estimates

TABLE 2

Sl No.	Name of test	Source	SS	DF	MS	ICC
1	Wall Fielding Test (WFT)	BS IN	2380.000 114.718	219 219	10.868 0.524	0.952*

The objectivity coefficient of the Wall Fielding Test (WFT) is appeared TABLE 2. In this test package, the objectivity coefficient ranges from 0.80 to 0.99. When in doubt the objectivity coefficients of a highly reliable and target test should ranges from 0.80 or above. Thus it tends to be inferred that the test thing is highly objective in nature.

4. RESULT& DISCUSSION

The reliability coefficient is .959 and Objectivity coefficient is .952 we can say that this test has high reliability and objectivity. This demonstrates this test is highly legitimate for estimating the accuracy in softball throw.

5. CONCLUSIONS

Wall Fielding Test (WFT) can gauge the softball fielding ability and accuracy with abnormal state of reliability and objectivity. It additionally measure the fielding ability and we can likewise say that this test is substantial. We can infer that this test is valuable for the investigation of softball throw for accuracy.

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