To develop a tapping skill test for kho-kho female players

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Abstract
The purpose of the study was to develop the Tapping skill test for Kho-Kho female players. It is an offensive skill, which requires control over running speed, with proper coordination of body balances and flexibility. This test item was administered to 60 female Kho-Kho players, age ranged between 17 to 25 years. All the instruction & demonstration of the test item were given properly to avoid any vagueness of the test. Correlation analysis used to determine the reliability, objectivity and validity. Reliability was found to be .88 objectivity was .92, .87, & .89 and validity was found to be .84 hence it was concluded that the test is reliable to assess Tapping skill of Kho-Kho female players.

Keywords: Speed, Coordination, Flexibility, Reliability, Validity, objectivity.

Introduction
Kho-Kho ranks as one of the most popular traditional sports in India. The origin of Kho-Kho is difficult to trace, but many historians believe, that it is a modified form of 'Run Chase', which in its simplest form involves chasing and touching a person. With its origins in Maharashtra, Kho-Kho in ancient times, was played on 'raths' or chariots, and was known as Rathera. Like all Indian games, it is simple, inexpensive and enjoyable. It does, however, demand physical fitness, strength, speed and endurance. Dodging, feinting and bursts of controlled speed make this game quite thrilling. To catch by pursuit - to chase, rather than just run - is the capstone of Kho-Kho. The game develops qualities such as obedience, discipline, sportsmanship, and loyalty between team members.

Kho-Kho based on natural principles of physical development, fosters a healthy combative spirit of term understanding. Kho-Kho made its entry into INTERNATIONAL SPORTS Arena via 1st ASIAN KHO-KHO CHAMPIONSHIP held at Kolkata, India in 1996, organized by West Bengal Kho-Kho Association under the auspices of Kho-Kho Federation of India and ASIAN Kho-Kho Federation on “Tera Flex” Court at Netaji Subhash Indoor Stadium, Kolkata, West Bengal, India. India and Bangladesh were Winner and Runner-up respectively. The participant’s countries were Bangladesh, Pakistan, Sri Lanka, Nepal and host India.

If Kho-Kho players want to know their progress in a game, he has an idea about his own skill level. Appropriate skill tests can assess an ability of player’s. In game of kho-kho, there are offensive and defensive skills are required to command over the game. Tapping is one of the important skills of game Kho-Kho. Hence researcher developed specific skill test of Tapping for female Kho-Kho players. Sports specific skill test have been developed for various games like Handball (Singh and Kumar 2008) [6], Basketball (Mohaimin and Kishore 2014), Field Hockey (Kumar and Malhotra, 2015) [4], Ball-badminton (Kumar and Kalidasan 2013) [3], Wrestling (Khadadad and Tojari 2014) [2]. Test for evaluation of selected physical fitness variables of Kabaddi, Kho-Kho & Wrestling players were also developed by researcher Singh and Singh (2013). Construction and standardization of a battery of Kho-Kho skill test for school level students have been developed by Wagchoure and Bera (2000) [8].
There are standard skill tests in various sports to measure the playing ability of the players but very few tests, that too for selected population are available in Kho-Kho, hence this study was undertaken to construct specific test in Kho- Kho for female players.

Objective

Objective of the study was to develop Tapping skill test.

Tools

Stop watch, measuring tape, lime, whistle, 4 cone etc.

Ground:

Kho-Kho ground, 23.50 meter & 4 meter, pole to first block 2.50 meter, 2nd block to 7th block 2.30 meter, and 8th to 2nd pole 2.50 meter distance, and square box 3*3 c.m.

Administration Process

4 cones were placed in the ground between sitting blocks. Square 1st cone was placed between the first & second sitting blocks, 2nd cone between third & fourth sitting blocks, 3rd between fifth and sixth sitting blocks, and the 4th cone was placed between seventh and earth sitting blocks. On sound of whistle, a player starts running from the starting point, while running the player touches the first cone with palm of the right hand by bending the right knee, facing forward, then he continues running touches the third cone in the same manner at the second pole the player takes turn continues running touches the fourth and second cone in the similar way and finishes the run. A player was given three chances and best performance was recorded.

Measurement:

minimum time in second taken to complete the run.

![Drawing Showing Ground Position](image1.png)

Statistical analysis technique:

Reliability, objectivity and Validity of the test was calculated by using Pearson product moment correlation Reliability & objectivity:

Correlation Co-efficient was used to obtain reliability coefficient by the test retest method. The score of first test was correlated with the score of second test.

<table>
<thead>
<tr>
<th>SN</th>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th>Max. value</th>
<th>Min. value</th>
<th>Range</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Tapping</td>
<td>11.85±.12</td>
<td>1.0</td>
<td>14.25</td>
<td>9.89</td>
<td>4.36</td>
<td>.84</td>
</tr>
<tr>
<td>02</td>
<td>Playing ability</td>
<td>6.4±.13</td>
<td>1.05</td>
<td>8.9</td>
<td>4.7</td>
<td>4.2</td>
<td></td>
</tr>
</tbody>
</table>

N=60

Description:

From table No. 01, it is observed that the mean score of Tapping Skill test of female kho-kho players is 11.85±.12 seconds. The maximum score recorded was 14.25 seconds & minimum timing recorded was 9.89 seconds. The Range of score was 4.36 seconds. In case of playing ability judged by three judges out of 10 marks the mean value found was 6.4±.13, maximum and minimum values noted were 8.9 & 4.7 respectively. The range of scores of playing ability was 4.2.

![Descriptive view of TST & PA](image2.png)

Table 1: Descriptive Statistics mean ±SE, SD of Tapping Skill Test (seconds) and Playing Ability (number)

Fig 2: (Ref. Table no. 01): showing maximum value, minimum value & mean of TST & PA
Table 2: Reliability: Correlation between Two Tests (Test- Retest Method)

<table>
<thead>
<tr>
<th>Description</th>
<th>Item Correlation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliability</td>
<td>Tapping Skill Test (TST)</td>
<td>0.88</td>
</tr>
</tbody>
</table>

Description: Table no. 02 shows correlation between test 1 & test II scores. When the score of test 1 & test II were analyzed for correlation it was found that the two test exhibited high correlation coefficient the value being 0.88. This establishes that the test is reliable and can be used to measure Tapping Skill of female kho-kho players.

Table 3: Validity

<table>
<thead>
<tr>
<th>SN</th>
<th>Item Correlation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Tapping &amp; Playing</td>
<td>0.84</td>
</tr>
</tbody>
</table>

Description: Table no. 03 showing the score of Tapping Skill test was correlated with playing ability score obtained by three judges out of 10 marks, it was found that the score of Tapping Skill significantly correlated with playing ability, the correlation coefficient noted was 0.84 which indicate that the test is valid to measure Tapping Skill test for female kho-kho players as it is highly correlated with playing ability.

Table 4: Objectivity of playing ability: Correlation between scores of 3 judges on playing ability of female kho-kho players.

<table>
<thead>
<tr>
<th>Description</th>
<th>Item Correlation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objectivity</td>
<td>A&amp;B</td>
<td>0.92</td>
</tr>
<tr>
<td>02</td>
<td>A&amp;C</td>
<td>0.87</td>
</tr>
<tr>
<td>03</td>
<td>B&amp;C</td>
<td>0.89</td>
</tr>
</tbody>
</table>

Description: Table No. 04 shows objectivity of Playing Ability. The scores obtained by three judges on playing ability were analyzed for correlation among the scores, and it was found that the correlation coefficient were .92, .87, & .89 between judge 1 & 2, judge 1 & 3 & judge 2 and 3 respectively. This indicates that the assessment of Playing Ability was very accurate & proper.

Result

Present analyses based on the test-retest method, prelim results are given below. Tapping test 9.89 minimum score, 14.25 maximum score of test, N= 60, Range =4.36, Playing ability= min.=4.70, max.= 8.90, Range = 4.20; ect.0.88 correlation value of Reliability, 0.84 value to determine the validity of test, & separate three value results shows the objectivity result of score given by the judges, are 0.92, 0.87, & 0.89.

Conclusion

Within the limitation of the study, the result shows the reliability, validity and objectivity of the test item Tapping skill test for kho-kho female players, were fulfill the purpose of the study & acceptable test item for players and coaches.

References

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