Statement of the problem

The purpose of this study was to construction and validation of a test for general playing ability of field hockey players.

Objectives of the study

1. To construction of a test for general playing ability of field hockey players.

2. To validate of a test for general playing ability of field hockey players.

3. To find out the status of playing ability of field hockey players.

Delimitations

1. The study was delimited to the 300 male college hockey players.

2. The study was delimited to male Field Hockey player’s only.

3. The study was delimited by the subjects who come under 17 to 24 years age category only.

4. The study was delimited by player of field hockey from selected different colleges and Hockey academics run in different states of India.

Limitations

1. Variation in playing ability due to climate condition, ground condition, player physical and psychological factor that may affect the study.

2. Goal keeper was not considering in this study.

Significance of the study

1. Study will develop Skills related Test for field hockey players.

2. Study will help to locate potential in field hockey players.
3. The Test will help to coaches and physical education teacher to evaluate the effectiveness of their training and conditioning program.

4. It will provide guidelines to field hockey coaches to develop a skills related training program for the players.

5. The study will serve as a motivational force to field hockey players to improve their status of skills.

6. The study will yield norms to be used for the evaluation, classification, and selection of the players at different levels of competitions.

**Selection of the subjects**

For this study, 300 male subjects were randomly selected from the different universities, colleges and academy of field hockey run in various States of India. The subjects who come under 17 to 24 years age category were considered in present study.

**General hockey playing ability**

The general hockey playing ability of the subjects was assessed by a panel of three experts who were technically qualified in Hockey. All the experts were asked to give marks to the subject from a maximum of fifty points. The evaluation was done by the expert through observing the performance of the subject in the real game situations.

**Selection of skills for Test**

On the basis of available literature and discussion with field hockey experts, it was felt that performance in unitary fundamental skill such as Dribbling, Rolling, Hitting, Pushing, Slap Shot, Flick, Receiving and like through can be measured objectively, do not prove a valuable guide for predicting the ability of a player in a game situation. The tests available on field hockey are meagre, so it will be worthwhile attempt to construct the skill test in field hockey.

**Selection of the test items**

The test could be used for grading students taking instruction in hockey and selecting players for a team on the merit of their objectively demonstrated ability. By reviewing books on the method of teaching physical education, research reports and discussion with the hockey experts
the following combination skill test items were selected which to a greater extent assess the general playing ability of hockey players.

1. Zig-zag Dribbling (30 Second)
2. Forehand Rolling
3. Straight Push
4. Straight Hit
5. Slap
6. Flick
7. Receiving

These seven test items having three variations to each and measurements were set on the basis of pilot study which was conducted on the students of Banaras Hindu University, Varanasi. The subjects were from different faculty in the age group of seventeen to twenty four years.

Pilot study

Twenty four male hockey players of Banaras Hindu University, Varanasi were randomly chosen for conducting a pilot study to determine the final test item for the seven test items. In pilot study each skill has three variations of test. Before administering the test items a brief description and importance of the study was explained by research scholar. Each variation of test item was administered on selected subjects.

COLLECTION OF DATA

For the purpose of the study 300 players from different universities, sports colleges, sports academy and institute were selected from BHU Varanasi, IIT BHU Varanasi, IIT Roorkee, STC Lucknow, STC Ranchi, Saifai sports hostel, Karmpur, Gorakhpur sports stadium, MII collage Allahabad, Short NIS BHU Varanasi, Sambalpur hostel, M.G.K.V.P. Varanasi, D.L.W. Varanasi. The data of the study was collected by administering the test item used. The items were explained to the subjects prior to the administration of each test. The test items were demonstrated by the research scholar and the subjects were allowed to have adequate practice, whenever necessary to become familiar with the test.

The subject started undergoing the test with 30 Second Zigzag Dribbling test, Fore Hand Rolling test, Straight Push test, Straight Hit test, Slap Shot test, Flick and Receiving test items. All the test item were administered on the same day.
STATISTICAL PROCEDURE

The following statistical techniques were considered for the analysis of data in the present study.

The data was analyzed by using descriptive statistics and Pearson Product Moment Correlation. The Norms & rating scale for hockey players were developed by using percentile and 6 sigma scale as well as properties of normal curve.

Summary

At first a set of 21 test items were constructed and conducted a pilot study with 24 male Field Hockey players from Banaras Hindu University age ranged between 17 and 24 years. In the consultation with the experts those who were present at the pilot study, seven test items were finalized by collected data was correlated with the playing ability score. The selected skills were as follows,

1. Dribbling (Zig-zag 30 Second)
2. Rolling- Forehand
3. Push- Straight
4. Hit- Straight
5. Slap
6. Flick
7. Receiving

The construction of a Field Hockey skill test items was based on the administration of seven skill test items to a sample of three hundred male college level Field Hockey players excluding goal keepers were randomly selected from different universities, colleges and academy of field hockey run in different States of India their age ranged between 17 and 24 years.

The general hockey playing ability of the subjects was assessed by a panel of three experts who were technically qualified in Hockey. All the experts were asked to give marks to
the subject from a maximum of fifty points. The evaluation was done by the expert through observing the performance of the subject in the real game situations.

The data pertaining to the entire seven test item were subjected to the Descriptive Analysis to understand performance status of 300 subjects on each test.

The mean and standard deviation of Dribbling, Rolling, Push, Hit Slap, Flick, Receiving, Playing Ability of Hockey Players (Dribbling 32.47± 4.98, Rolling 11.01± 1.84, Push 5.85±1.00), Hit 6.09± 1.12, Slap. 6.08± 1.10, Flick 6.21±1.18, Receiving 6.21±1.15, Playing Ability 33.40±4.71

The scientific authenticity of the test items were established by computing reliability, objectivity and validity.

The reliability of each test items was established using test - retest method. For this purpose consecutively two tests were conducted under similar conditions by Research Scholar on 40 Hockey players. The finding pertaining to Test Retest Reliability Coefficient of Dribbling (30 Second Zig-zag) 0.91, Rolling 0.82, Push 0.70, Hit 0.76, Slap 0.74, Flick 0.80, Receiving 0.77, these value indicated that the hockey skill test items were reliable for establishing reliability of the test.

The objectivity of each test items was established by testing the subject on each test item of field hockey playing ability test on two days with an interval of one day in between as it was done in the case of establishing objectivity. At the first intense the test was administered by research scholar himself and after one day interval the test was repeated by other expert. The finding pertaining to Test Retest objectivity Coefficient of Dribbling (30 Second Zig-zag) 0.95, Rolling 0.81, Push 0.96, Hit 0.84, Slap 0.93, Flick 0.91, Receiving 0.90, these value indicated that the hockey skill test items were objective for establishing objectivity of the test.

For establishing validity, the raw score of each test items were converted into standard scores (z-scores) the standard scores for each subject for all the seven test items were added to obtain a composite score. The composite scores obtained on field hockey skill test items were correlated with the hockey playing ability scores of the subjects rated by a panel of hockey experts. The validity coefficient obtained was 0.86 the validity coefficient of each test item were
also computed by correlating the raw score of each test item were also computed by correlating the raw scores of each item with the rating of three hockey experts. The finding pertaining to validity of Dribbling (30 Second Zig-zag) 0.81, Rolling 0.81, Push 0.72, Hit 0.77, Slap 0.76, Flick 0.58, Receiving 0.63, these value indicated that the hockey skill test items were valid for establishing validity of the test.

Finally, Norms of the test items were developed by using percentile and 6 sigma scales from collected data. The score is further classified in to four grades i.e. Excellent, Good, Satisfactory and Poor. In this grading scale for different categories of grading 3sigma below the mean and 3sigma above the mean were considered. Based on six sigma criteria grading scale were developed for the different test items which were presented in table 13.

**TABLE - 21**

**INTERPRETING GRADING OF DIFFERENT TEST ITEMS**

<table>
<thead>
<tr>
<th>Interpretation</th>
<th>Dribbling (30 Sec. Zig-Zag)</th>
<th>Rolling (Forehand)</th>
<th>Push (Straight)</th>
<th>Hit (Straight)</th>
<th>Slap</th>
<th>Flick</th>
<th>Receiving</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Excellent</strong></td>
<td>42 – above</td>
<td>7.80- below</td>
<td>8-above</td>
<td>8-above</td>
<td>8-above</td>
<td>8-above</td>
<td>8-above</td>
</tr>
<tr>
<td><strong>Good</strong></td>
<td>32 - 41</td>
<td>7.81-10.90</td>
<td>6 -7</td>
<td>6 -7</td>
<td>6 -7</td>
<td>6 -7</td>
<td>6 -7</td>
</tr>
<tr>
<td><strong>Satisfactory</strong></td>
<td>22 -31</td>
<td>10.91-13.89</td>
<td>4 -5</td>
<td>4 -5</td>
<td>4 -5</td>
<td>4 -5</td>
<td>4 -5</td>
</tr>
<tr>
<td><strong>Poor</strong></td>
<td>21 – below</td>
<td>13.90-above</td>
<td>3- below</td>
<td>3- below</td>
<td>3- below</td>
<td>3 - below</td>
<td>3 - below</td>
</tr>
</tbody>
</table>
Conclusions

With the limitation of the present study the following conclusions may be drawn:

1. The hockey skill test constructed meets the criteria of scientific authenticity i.e. tests items are reliable, objective and valid.

2. There is a significant correlation between the dribbling (30 second Zig Zag) test and playing ability rated by the panel of three experts.

3. There is a significant correlation between the rolling test (fore hand) and playing ability rated by the panel of three experts.

4. There is a significant correlation between the straight push test and playing ability rated by the panel of three experts.

5. There is a significant correlation between the straight hit test and playing ability rated by the panel of three experts.

6. There is a significant correlation between the slap test and playing ability rated by the panel of three experts.

7. There is a significant correlation between the flick test and playing ability rated by the panel of three experts.

8. There is a significant correlation between the receiving test and playing ability rated by the panel of three experts.

9. Norms derived by six sigma scale and percentile may be used to assess the playing ability of field hockey players.

10. All the test items as skill test battery contributed significantly in explaining the variance in the playing ability of the college level players.
Recommendations

1. The skill test items constructed may be used by sports hostels, colleges, universities and department of physical education for selecting potential hockey players and also for evaluating the hockey performance as an essential part of activity instructional programme.

2. The norms developed in this study will be help to the player to understand where he stands in terms of scores.

3. The different Hockey Skill tests items are highly recommended for use to assess or evaluate hockey playing ability of university level hockey players.

4. The similar study may be undertaken with Field Hockey players of different levels such as school level, District, National and International levels.

5. Similar study may be conducted on women Field Hockey players and also for other games.

6. It is also recommended as Skill Related Test items Course were in the test was developed as a course within which skill based testing items are included similar experiment can be done with team sports namely soccer, volleyball, basketball etc.