Assessment of hockey skill accuracy between male and female hockey players

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Abstract

The present study was aimed to assess the accuracy of hockey player variables are shooting in the target, balancing the ball on the stick and moving with the ball between female and male hockey player. The study was carried out total 30 subjects (fifteen (15) male and (15) female) players aged between 12 to 14 years and at least represented state level competition from fatehgarh sahib, Punjab. The data was collected by the SAI hockey skill test on 30 subjects of male and female hockey players. The number of accurate hits, timing of balancing the ball on the stick and moving with the ball test items were noted down and best attempt will be converted into SAI hockey skill testing evaluation standards and value of the no rms were final data/ score. Data was analyzed through statistical package software (SPSS) using descriptive statistics such as mean, standard deviation and t-test used to compare the data. The level of significance chosen was 0.05. The results of t-test revealed there was no significance difference between male and female player in skill accuracy.

Keywords: skill accuracy, shooting in the target, balancing the ball on the stick, moving with the ball, male and female hockey players

Introduction

Hockey is one of the oldest games in history it seems to have been an Asian game and was probably known to the Greeks. The name “hockey” probably derives from the French “hocquet”, or shepherd’s crook, and refers to the crooked stick which is used to hit a small ball. About thirty year age, a sculptured base relief dating back to 480 B.C. was discovered, which depicted half a dozen children playing a ball game with crooked sticks. Hockey is an ancient game played in India. It is played with a hockey stick and a ball. It was played in Ireland before 1272 BC and during 600 BC in Ancient Greece. There are various variations of the hockey; some of them are named as field hockey, ice hockey, sledge hockey, roller hockey, street hockey, etc. Now-a-days, field hockey is generally played. Ice hockey was evolved as a derivative of field hockey to be played in the icy conditions of Canada and northern United States.

History of hockey field

(Anders and Myers, 1999) [2]. In 1875 the game of hockey was introduced into England and the hockey association was established in 1886. The first International field hockey contests were played by men in 1895. Field hockey was introduced to the United States in 1901 by an English woman, Constance Applebee who was studying at Harvard. The United States Field Hockey Association (USFHA) was founded in 1922 in Philadelphia. The equivalent association for men was not established till 1930. The game of field hockey is more popular amongst women and the men’s game takes a back seat but field hockey participation by both genders has increased thanks to the influence of foreign players and coaches.

(Ward, 1995). The game of hockey is played between two teams consisting of eleven players over seventy minutes. There are many variations on formation but generally the positional roles within the team can be split into forwards, midfield players and defenders. The modern game of field hockey is a fast paced highly skillful game played over the world. Over the past decade there have been many rule changes implemented to make the game of hockey more...
exciting. Hockey is a complex game which requires a wide variety of skills.

**Sports skill test**
The development of sports skill has had a long and productive history. Among the earliest were the Athletic badge Test presented in 1913 by the playground and recreation Association of the USA. These tests were for the sports of Basketball, Tennis and Volleyball. Elizabeth Bell proposed other early skill tests in 1924 for Basketball by Brance and in 1925 for Tennis (Clarke and Clarke, 1987) \(^4\), the research council of the American Alliance for Health, physical Education and recreation (AAHPER) PUBLISHED several sport skill tests in the late 1960s that were developed from the combined efforts of researchers, city directors of physical education of public school teachers.

**Dribbling Accuracy**
According to Terry Podesta (1974) dribbling is moving with the ball under control and the control over the ball will be lost unless otherwise blade and ball are kept closely together while dribbling the ball.
Gian Singh (1979) says that, dribbling is the most important skill to gain the distance and to keep the ball to proceed further having full control over the ball with a required speed and towards some direction preferred towards the opponent’s goal line.
Dribbling may be defined as a method of advancing the ball with a good control in front or besides the player by a series of gentle and controlled taps with the stick (blade) while the player is on the move or run.

**Pushing Accuracy**
Pushing was described by Clarke (1976) as the quickest and easiest method of passing the ball to the partner. It is most important skill or action that the stick is on contact with the back of the ball, when the stroke is made.
Pushing is a very essential skill, which helps greatly to play a good hockey in many situations. Pushing is used for giving any type of passes, to restart the game, to take the penalty corners and penalty strokes and to score goals. No one could become a good hockey player without using the skill, "pushing" effectively in playing situations. Therefore this skill also has to be improved to the maximal for better efficiency during the game as a player.

**Hitting Accuracy**
Speed at which it can be made to travel. The ball should be made to travel faster and towards the target using any type of hitting for the success in the game of any player either an attacker or defender. Hitting is a process of propelling the ball for a longer distance by adopting any kind of stroke towards the required direction at the required speed with accuracy. Hitting may be used for long passes and for shooting towards the goal for scoring a goal.
– If you want to score more goals, you need to be able to handle the puck under pressure. Regularly, work on off-ice stick handling drills that will give you the ability to control the puck better, get it into a shooting position quickly, and get more pucks to the net.

**Scooping Accuracy**
Scooping is the ability of the players to shovel the ball over the opponent achieve height. The aim is to lift the ball well clear over the heads of opponents so that it falls in an open space for a team mate to run on to. The scoop can be very effective against defense who do not display insufficient departments.
Scoop is used for making an aerial pass. The aim is to lift the ball well clear over the heads of opponents so that it falls in an open space for a team mate to run onto. The relationship between height and distance is varied so that the forward speed of the ball after coming to earth is sufficiently reduced to ball after coming to earth is sufficiently reduced to enable it to be played before it goes out of play. The scoop can be very effective against defense who do not display insufficient departments. For this reason, it is the ideal weapon to use in countering the off side trap and forcing the opposition to a more normal defensive formation. The pass is best and to either wing and a complete break way can be achieved if the wing forward anticipate correctly and is speedy. When the stroke is used by the opposition, defender should remember that it is simply an attempt to by pass them. The effectiveness of the opposition’s move is thus greatly diminished on even completely nullified. It is in advisable therefore for defender sin the area concerned to fix their eyes on the ball while retreatin since this will reduce their speed of accuracy.

**Tackling Accuracy**
Tackling in field hockey is essential to having a strong defense, and there are subtleties that a defender must know when attempting to tackle without being penalized. There are different ways of attacking or tackling the opponent. As a defensive player, the different ways of tackling or attacking the forward who is coming with the ball is a jab, where it is going to just be jabbing at the ball, jabbing at the ball to distract him or to just slow him down. The other way—and one can swing tackle, which is actually a swing. It just tried to hit the ball away. That is one option. Or if he is coming on the reverse side, the player can actually step across. Tackling, or intercepting, is the goal of defense in field hockey. Once the player loses possession of the ball, tackling is the way he is going to get it back. It puts pressure on the opponent and allows to take the ball from him.

**Balancing Accuracy**
Balance is the ability to stabilize your body, whether standings still or maintaining motion. Ice-skating and bicycle riding are balance exercise. There are two types of balance – static and dynamic. Static balance refers to remaining upright while staying still, standing on one leg, for example. Dynamic balance deals with stability in motion. Test your balance by holding a stationary position as long as you can, without wobbling, after moving around. (Lynn Hetzler 2013).

**Coordination**
Coordination describes the synchronization of your senses and your body parts that enhances motor skill. Volleying a table tennis ball is an example of hand – eye coordination. A variety of test measure coordination, including juggling or hitting a ball. (Lynn hetzler 2013).

**Field of player position in hockey**
Hockey position are discussed notion of fluidity are very common. Each team can be field with a maximum of 11 players and will typically arrange themselves into forwards, midfielders, and defensive players (fullbacks) with payers frequently moving between these lines with the flow of play. Each team may also play with, a goalkeeper who wear a different color shirt and full protective equipment comprising.
at least headgear, leg guards and kickers; this player is referred to in the rules as a goalkeeper or a field player with goalkeeping privileges wearing a different color shirt and who may wear protective headgear, leg guards and kickers; this player is referred to in the rules as a goalkeeper or a field player with goalkeeping privileges wearing a different color shirt and who may wear protective headgear (but not leg guards any kickers or other goalkeeping protective equipment) when inside their defending 23m area; they must wear protective headgear when defending a penalty corner or stroke this player is referred to in the rules as a player with goalkeeping privileges or Only field players; no player has goalkeeping privileges or wears a different color shirt; no player may protective headgear except a face mask when defending a penalty corner or stroke.(Anders E.1999)\(^2\). Koley and Kar (2016) The purpose of this study was of two-fold: first, to estimate the back strength of Indian inter-university male field hockey players and, second, to search the correlations of it with selected anthropometric variables and performance tests. To serve this purpose, a total of nine anthropometric variables, such as height, weight, body mass index, percent body fat, knee height, length of femur, skeletal mass and back strength, and two performance tests, such as sit and reach test and Slalom sprint and dribble test were measured on purposely selected 120 Indian inter-university male hockey players aged 18–25 years collected from the inter-university competition held in Guru Nanak Dev University, Amritsar, India during March, 2014. An adequate number of controls (n=119) were also taken from the same place for comparison. The results showed that the hockey players had the higher mean values in all the variables, except percent body fat and slalom sprint and dribble test than their control counterparts, showing statistically significant differences (p ≤ 0.003 – 0.001) between them. No significant correlations of back strength were found with any of the variables in Indian inter-university male field hockey players. In conclusion, it may be stated that back strength may not be used as one of the indicating factors for the performance of the field hockey players.

Statement of problem
Problem stated as “Assessment Of Hockey Skill Accuracy Between Male And Female Hockey Players”

Objectives of the study
The Following Objectives of The Study will be:
- To observe the significant difference of shooting skill accuracy between male and female hockey players.
- To examine the significant difference of balancing the ball on the stick accuracy between male and female hockey players.
- To determine the significant difference of moving with the ball accuracy between male and female hockey players.

Hypothesis of the study
On the basis of different research findings, experts opinion and scholar’s own understanding of the problem, it is hypothesized that
- It is hypothesized that there was no significant difference of shooting skill between male and female hockey players.
- It is also hypothesized that there was no significant difference of balancing the ball on the stick between male and female hockey players.
- It is further hypothesized that there was no significant difference of moving with ball skill accuracy between male and female hockey players.

Sampling of subject
The samples for the present study consists of 15 male and 15 female Hockey Players between the age group 12 to 14 years. The selected all female players at least represented state level competition who have taken part in Fatehgarh Sahib, Punjab.

Selection of variables
- Shooting in the target
- Balancing the ball on the stick
- Moving with the ball

Collection of data
The data will be collected by the SAI hockey skill test on 30 subjects of male and female hockey players. The number of accurate hits, timing of balancing the ball on the stick and moving with the ball test items were noted down and best attempt will be converted into SAI hockey skill testing evaluation standards and value of the norms were final data/ score.

Table 1

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Variables</th>
<th>Measuring Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shooting in the target</td>
<td>SAI hockey skill test</td>
</tr>
<tr>
<td>2</td>
<td>Balancing the ball on the stick</td>
<td>SAI hockey skill test</td>
</tr>
<tr>
<td>3</td>
<td>Moving with the ball</td>
<td>SAI hockey skill test</td>
</tr>
</tbody>
</table>

Statistical Technique
Data obtained from the tests and measurements will be analyzed through statistical package software (SPSS) using descriptive statistics such as mean, standard deviation and t-test used to compare the data. The level of significance will be 0.05.

Results
Table 2: Significance of mean differences of shooting in the target between male and female hockey players.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>S. D.</th>
<th>DF</th>
<th>t* test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male hockey players</td>
<td>15</td>
<td>1.80</td>
<td>1.08</td>
<td>28</td>
<td>0.301</td>
</tr>
<tr>
<td>Female hockey players</td>
<td>15</td>
<td>1.93</td>
<td>1.22</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2 Depicts that mean and standard deviation values of shooting in the target of male and female hockey players were 1.80±1.08 and 1.93±1.22 respectively. The t value calculated 0.301 was less than the tabulated value t = 2.048 showed statistically insignificant difference at 0.05 level.

Table 3: Significance of Mean Differences of Balancing With Ball On The Stick Between Male And Female Hockey Players.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>DF</th>
<th>* test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male hockey players</td>
<td>15</td>
<td>2.06</td>
<td>1.03</td>
<td>28</td>
<td>2.182</td>
</tr>
<tr>
<td>Female Hockey players</td>
<td>15</td>
<td>2.46</td>
<td>0.74</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3 Depicts that mean and standard deviation values of balancing with ball on the stick of male and female hockey players were 2.06±1.03 and 2.46±0.74 respectively. The t value calculated 2.182 was more than the tabulated value t =
2.048 showed statistically significant difference at 0.05 level.

Table 4: Significance of mean differences of moving with ball between male and female hockey players.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>DF</th>
<th>‘t’ test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male hockey players</td>
<td>15</td>
<td>2.26</td>
<td>0.88</td>
<td>28</td>
<td>4.212</td>
</tr>
<tr>
<td>Female Hockey players</td>
<td>15</td>
<td>2.60</td>
<td>0.63</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$t_{0.05(28)} = 2.048$

Table 4 Depicts that mean and standard deviation values of moving with ball on the stick of male and female hockey players were $2.26 \pm 0.88$ and $2.60 \pm 0.63$ respectively. The $t$ value calculated 4.212 was more than the tabulated value $t = 2.048$ showed statistically significant difference at 0.05 level.

Discussion of finding
From the finding it has been observed that hockey female players had shown better performance than the male hockey players in skill accuracy test. In case of hockey male & female players there could be number of reasons for the better performance of hockey players, main reason could be the timing of the playing game. This may be due to duration of game, demand for skill related component and tactical preparation were almost similar. Hence there would be more reason for above findings.

Discussion of hypotheses
Thus proposed hypotheses
- There was no significant difference of shooting skill between male and female hockey players has been accepted.
- There was no significant difference of balancing the ball on the stick between male and female hockey player has been accepted.
- There was no significant difference of moving with ball skill accuracy between male and female hockey player has been accepted.

References