Comparative study of depth perception among the female players of handball

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Abstract
The purpose of the study was to compare the depth perception of female handball players of inter college and inter university level. For achieving the purpose of the study total forty female (n = 40) handball players were selected as samples from Guru Nanak Dev University Amritsar and Punjabi University Patiala. From all the selected subjects, twenty were inter college ranked players and twenty were inter university ranked players. The age of subjects ranged between 18 to 25 year. Me Digraph Depth Perception Tester was the best suited instrument for the present study and it was also used to measure the depth perception of forty female handball players. After the collection of relevant data, it was processed and analyzed with descriptive statistics. To compare the depth perception of subjects, Mean, standard deviation and t-test was employed with the help of statistical package of SPSS. To test the hypothesis the significance level was set at 0.05 percent. After statistical treatment, result showed that there were insignificant differences for depth perception between inter college and inter university female handball players.

Keywords: Comparative, study, depth perception, players of handball

Introduction
Whenever we talk about handball. It is directly related with vision and visual skills. The more important visual skills for handball are: speed of recognition, time, visual adjustability, dynamic visual activity, peripheral awareness, depth perception and eye-hand/foot co-ordination are consider more important factors in handball.

Handball is dynamic field team game, played by both sexes, requiring a high level skills, excellent conditioning and well co-ordinate team efforts.

Depth perception is the visual ability to perceive the world in three dimensions (3D) and the distance of an object. Depth perception arises from a variety of depth cues. There are typically classified into binocular cues that require input from both eyes and monocular cues that requires the input from just one eye. Binocular cues includes stereo sis, yielding depth from binocular vision through exploitation of parallax. Monocular cues include size distant objects subtend smaller visual angles then near objects. A third class of cues requires synthetic integration of binocular and monocular cues.

In this study an effort was made to look into the one such human performance factor, the depth perception of handball players. The visual system plays a critical role in sports performance, as it does in the performance of virtually all perceptual-motor skills. To improve sports performance through improving vision an understanding of the visual demands of different sports is required. One also needs to consider the extent that different visual parameters can be modified through vision training. However the ultimate question is whether training certain aspects of the visual system can be translated into improvement with on field performance.

The game handball needs well focus anticipations concentrations peripheral vision good reaction times and also depth perception.

Depth perception is a critical visual skill for a goalie or all the player excellent depth perception allow judging the distance, speed and direction of the ball as it approaches to them. Players need to know where their team mates are in relation to the opposing players in order to make effective passes in a one on one situation, good depth perception helps you judge when to make you move in relation to the defence player between you and the net. You can
also more accurately judge the movement of the puck as it relates to stationary lines and or moving players to prevent off sides.

**Objective**
To evaluate Depth Perceptions of female Handball players of inter college and inter university level.

**Methodology**
The survey type study was designed with a main objective to compare Depth Perception of female Handball players. Total forty female (n = 40) handball players were selected as sample from Guru Nanak Dev University Amritsar and Punjabi University Patiala. From all the selected subjects, twenty were inter college ranked players and twenty were intervarsity ranked players. The age of subjects ranged between 18 to 25 year.

**Tool**
Me Digraph Depth Perception Tester was the best suited tool for the present study and was used to measure the depth perception of sample.

**Statistical Analysis**
After the collection of relevant data, it was processed and analyzed with descriptive statistics. To compare the depth perception of subjects, Mean, standard deviation and t-test was employed with the help of statistical package of SPSS. To test the hypothesis the significance level was set at 0.05 percent.

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inter College Handball Players</td>
<td>9.70</td>
<td>32.65</td>
<td>7.30</td>
<td>1.432</td>
</tr>
<tr>
<td>Inter university Handball Players</td>
<td>-2.50</td>
<td>19.62</td>
<td>4.39</td>
<td></td>
</tr>
</tbody>
</table>

Table-1 depicts that the Mean and Standard Deviation values of Depth Perception with regards to inter college Handball players are 9.70 and 32.65 whereas in the case of inter university Handball players are -2.50 and 19.62 respectively. The calculated t-value (1.432) which is less than tabulated t-value (2.021) at 0.05 level. So it indicates that there has been an insignificant difference between inter college and inter university players.

**Discussion of Findings**
The present study was based on the hypothesis that there exist significant differences between depth perception among inter college and inter university female handball players. But the hypothesis is totally rejected. According to the result obtained it is established that there exist an insignificant differences between depth perception among inter college and inter university female handball players. The reason behind the insignificance differences is that, at the time of data collection the subjects were performing inconsistently. On the basis of analysis of the data, investigator found that the earlier study of P Deshaies and D Pargman (1977) supported the present study.

**Conclusions**
It was observed that there was an insignificant difference between inter university and inter college female handball players for their depth perception.

**References**
3. Manuel Sillero Quitana, Javier Sampredo Molinyevo. Perceptual visual skills in young highly skilled basketball players. Perceptual and motor skills. 2007; 104:547-61