Comparative study of depth perception between male and female students at higher secondary school level

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Abstract

The purpose of the study was to compare the depth perception of female and male students at higher secondary school level. For achieving the purpose of the study twenty male (n - 20) and twenty female (n - 20) students were selected as samples from Senior Secondary Model School Punjabi University Patiala. The age of subjects ranged between 15 to 20 years. I Digraph Depth Perception Tester was the best suited instrument for the present study and it was also used to measure the depth perception of male and female students. 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 male and female students.

Keywords: depth perception, male, female students, higher secondary school.

1. Introduction

“Depth perception is the visual ability to perceive the world in three dimensions (3D) and the distance of an object.”

Depth perception arises from variety of depth cues. Binocular cue - vision in which both eyes are used together. Monocular cue - vision in which each eye is used separately. By using the eyes in this way, as opposed by binocular vision, the field of view is increased, while depth perception is limited.

Disability: The result of an impairment that may be physical, mental, developmental, or some combination of these. A disability may be present from birth, or occur during a person's lifetime.

In the present study, an effort was made to look into the one such human performance factor, the depth perception of physically able and differently able students of higher secondary school level. Past literature shows that, there are not too many studies done to compare depth perception level of male and female students. But some studies are conducted in the field of sports.

A study was conducted by E.K. Skordilis et al. (2006) [2]. The purpose of study was to examine differences in depth perception of students classified according to their locomotor skills. Analysis showed that the motor – impaired group scored significantly lower than the non-impaired group on depth perception.

Manuel Sillero Quintana et al. (2007) [3] To evaluate visual abilities in 473 players of the Spanish Basketball Federation over a 5 year period. When scores were compared by sex and age, significant difference on certain visual measures were observed.

Jasbir Singh (2011) [6]. To compare the level of depth perception among, Archers at different distances. It is concluded that no difference were found in the depth perception among archers at different distances.

Objective

To find out the difference of Depth Perceptions level between male and female students at higher secondary school level.
Hypothesis
The present study was based on the hypothesis that, there will be significant differences in depth perception level between male and female students.

Method and Procedure
The survey type study was designed with a main objective to compare depth perception of male and female students of higher secondary school level.

Sample: Total forty students (20-males and 20 females) were selected randomly as sample for present study. The table no.1 depict the name of institute, number and gender of subjects who were selected as sample for present study.

Table 1:

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name of Institute</th>
<th>No. of Subject</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>M</td>
</tr>
<tr>
<td>1</td>
<td>Senior Secondary Model School Punjabi University Patiala</td>
<td>40</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>40</strong></td>
<td></td>
</tr>
</tbody>
</table>

The age of all subjects ranged between 16 to 20 years.

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.

Test Administration: To collect relevant data total three trials were given to every individual. Lowest score form three trials was considered for final evaluation of depth perception level.

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 2: Comparative Table of Depth Perception of Male and Female Students

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Subject</th>
<th>Mean</th>
<th>S.D</th>
<th>df</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Male</td>
<td>2.7</td>
<td>4.24</td>
<td>18</td>
<td>1.64</td>
</tr>
<tr>
<td>2</td>
<td>Female</td>
<td>8.5</td>
<td>10.27</td>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>

*Level of significance 0.05 to 0.05 (18) = 2.101

The calculated t-value (1.64) is less than tabulated t-value (2.101) at 0.05 level. So it indicates that there has been an insignificant difference in depth perception level between male and female students.

Discussion of Findings
The present study was based on the hypothesis that there exist significant differences between depth perception male and female students at higher secondary school level. But the hypothesis is totally rejected. According to the result obtained it is established that there exist an insignificant differences between depth perception level of male and female students at higher secondary school level. 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 depth perception level of male and female students at higher secondary school level.

References