



ORIGINAL RESEARCH PAPER

Physical Education

COMPARISON OF MOTOR CREATIVITY AND KINESTHETIC PERCEPTION AMONG HEARING IMPAIRED VISUALLY IMPAIRED AND ORTHOPEDICALLY IMPAIRED PERSONS

KEY WORDS: Motor Creativity, Kinesthetic Perception, Hearing Impaired, Visually Impaired, Orthopedically Impaired etc.

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ABSTRACT

An attempt has been made to investigate the Motor Creativity and Kinesthetic Perception among hearing impaired, visually impaired and orthopedically impaired (individuals having orthopedically defects in upper limbs) persons and compares them in respects to the variables. Forty subjects of each category namely hearing impaired, visually impaired and orthopedically impaired students were selected within the age range of twelve to eighteen years for the study. Motor Creativity was measured by Motor Creativity Test battery formulated by Prof. A. K. Bhattacharyya and Dr. M. C. Ghosh and Kinesthetic Perception was measured by Distance Perception Jump Test. The data were analyzed through the statistic of Analysis of Variance (ANOVA). The results indicate that the hearing impaired persons were superior in motor creativity and kinesthetic perception than visually impaired and orthopedically impaired persons. Again orthopedically impaired persons had higher score than visually impaired persons in respect to motor creativity and kinesthetic perception.

Introduction

Motor Creativity is the ability to produce both varied and unique motor response to a stimulus. It is a combined expression of vital and innovative thinking and motor ability through creative movement. Motor creativity is considered as the movement production of a novel motor pattern in order to overcome a predefined problem or a bodily movement (Dehlavi, 1980).

Perception is the ability to process stimuli in a meaningful manner to organize and interpret sensory stimuli, ability to make judgment about and attach meaning to incoming stimuli and ability to ascribe meaning to sensory information of all kinds (auditory, visual, kinesthetic stimuli etc.). Kinesthetic perception is the ability to perceive the position, effort and movement of the parts of the body or the entire body during muscular activity. It sometimes refers to as the 'Sixth Sense'.

This sense brings body awareness for different movements (Fae, 1992). With the help of this sense, we get information to change the body position as well as relationships of parts in space. E.g. - movements in swimming. In the beginning the swimmers do not know how to float in the water but kinesthetic sense through training help them to analyze the movements and to perform the stroke accurately.

Statement of the problem

The problem of the study was to investigate the motor creativity and kinesthetic perception among the hearing impaired, visually impaired and orthopedically impaired persons and also compare them in respects to the variables.

Delimitations

1. The study was delimited to the boys and girls of twelve to eighteen years old.
2. The subjects were selected from the different schools of West Bengal.

Limitations

1. The subjects were of special population. So, there may be any snag during communication with the subjects. It was beyond of the investigator's control.
2. The subjects were from different socio-economic status, different mode of living as well as have different personality characters. Hence uniform response might not be occurred which were another limitation of the study.
3. During test taken, same response might not be obtained from all the subjects. It was also the limitation of this study.

Significance of the Study

1. This study will provide descriptive information about the motor creativity and kinesthetic perception among the differently abled persons.

2. The result of this study will also have great significance in identifying the areas which can be easily developed.
3. This study will serve as a guideline to the teachers.
4. The findings of this study might give some clues to the concerned authorities in better understanding of the differently abled students.
5. This study may also help in framing the educational programme as an integral part of the curriculum for the differently abled persons.

Procedure

Selection of Subjects

1. Forty students of each category namely hearing impaired, visually impaired and orthopedically impaired (having problems in upper limbs) students respectively were chosen randomly from different special schools in West Bengal for the present study.
2. The age range was twelve to eighteen years.

Selection of Variables

In order to assess this study, the following variables were selected:-

- i. Motor Creativity
- ii. Kinesthetic Perception

Criterion Measures

1. To assess Motor Creativity, students were tested on Motor Creativity Test battery formulated by Prof. A. K. Bhattacharyya and Dr. M. C. Ghosh.
2. Kinesthetic Perception was measured by Distance Perception Jump Test.

Statistical Analysis

Comparison among physically disabled persons in respect of motor creativity and kinesthetic perception were obtained through the statistic of Analysis of Variance (ANOVA).

Level of Significance

For testing hypothesis the level of significance was set at 0.05 level.

Presentation And Analysis Of Data

Table 1: Mean And Standard Deviation Of Motor Creativity And Kinesthetic Perception Among Hearing Impaired Visually Impaired And Orthopedically Impaired Students

| Variables | Hearing Impaired Students | | Visually Impaired Students | | Orthopedically Impaired Students | |
|------------------|---------------------------|-------|----------------------------|-------|----------------------------------|-------|
| | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| Motor Creativity | 75.87 | 7.107 | 36.37 | 4.650 | 59.37 | 5.650 |

| | | | | | | |
|------------------------|------|-------|-------|-------|-------|-------|
| Kinesthetic Perception | 6.57 | 2.406 | 16.97 | 4.463 | 10.12 | 3.988 |
|------------------------|------|-------|-------|-------|-------|-------|

From table - 1 it was observed that Hearing Impaired students were superior in motor creativity and kinesthetic perception than visually impaired and orthopedically impaired students. Again Orthopedically Impaired students had superior superiority to visually impaired students in respect to motor creativity and kinesthetic perception.

Table 2: Analysis Of Variance On Motor Creativity Among Hearing Impaired Visually Impaired And Orthopedically Impaired Students

| Source of Variance | df | Sum of Square | Mean of Square | F-value |
|--------------------|-----|---------------|----------------|----------|
| Between Groups | 2 | 70.400 | 3.061 | 10.609 * |
| Within Groups | 117 | 9.600 | 0.100 | |
| Total | 119 | 80.00 | | |

* Significant at 0.05 level of Confidence

Tabulated $F_{.05} (2, 117) = 3.07$

In analyzing Table - 2 calculated value of 'F' is greater than tabulated value of 'F'. So, null hypothesis is rejected. For analyzing the data, Post - Hoc LSD test was employed to find out which group is better in respect to motor creativity.

Table 3: post - Hoc Mean Comparison On Motor Creativity Among Hearing Impaired Visually Impaired And Orthopedically Impaired Students

| Status | Hearing Impaired Students | Visually Impaired Students | Orthopedically Impaired Students | Critical Difference at 5% level |
|--------|---------------------------|----------------------------|----------------------------------|---------------------------------|
| Mean | 75.875 | 36.375 | 59.375 | 5.472 |

From Table - 3 there was a significant difference among all variables. The table showed that visually impaired students had highest in motor creativity than hearing impaired and orthopedically impaired students. Again hearing impaired students were superior to orthopedically impaired students in respect to motor creativity.

POST - HOC MEAN COMPARISON ON MOTOR CREATIVITY AMONG HEARING IMPAIRED VISUALLY IMPAIRED AND ORTHOPEDICALLY IMPAIRED STUDENTS

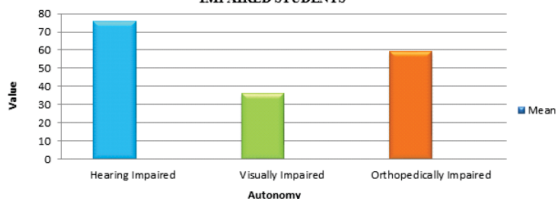


Fig- 1 Post - hoc mean comparison on motor creativity among hearing impaired visually impaired and orthopedically impaired students

Table 4: analysis Of Variance On Kinesthetic Perception Among Hearing Impaired Visually Impaired And Orthopedically Impaired Students

| Source of Variance | df | Sum of Square | Mean of Square | F-value |
|--------------------|-----|---------------|----------------|---------|
| Between Groups | 2 | 45.443 | 2.840 | 8.465 * |
| Within Groups | 117 | 34.557 | 0.336 | |
| Total | 119 | 80.000 | | |

* Significant at 0.05 level of Confidence

Tabulated $F_{.05} (2, 117) = 3.07$

In analyzing Table - 4 calculated value of 'F' is greater than tabulated value of 'F'. So, null hypothesis is rejected. For analyzing the data, post - hoc lsd test was employed to find out which group is better in respect to kinesthetic perception.

Table 5: post - Hoc Mean Comparison On Kinesthetic Perception Among Hearing Impaired Visually Impaired And Orthopedically Impaired Students

| Status | Hearing Impaired Students | Visually Impaired Students | Orthopedically Impaired Students | Critical Difference at 5% level |
|--------|---------------------------|----------------------------|----------------------------------|---------------------------------|
| Mean | 6.57 | 16.97 | 10.12 | 1.783 |

From Table 5 it was observed that visually impaired students had highest kinesthetic perception than hearing impaired and orthopedically impaired students. Again hearing impaired students were superior to orthopedically impaired students in respect to kinesthetic perception.

POST - HOC MEAN COMPARISON ON KINESTHETIC PERCEPTION AMONG HEARING IMPAIRED VISUALLY IMPAIRED AND ORTHOPEDICALLY IMPAIRED STUDENTS

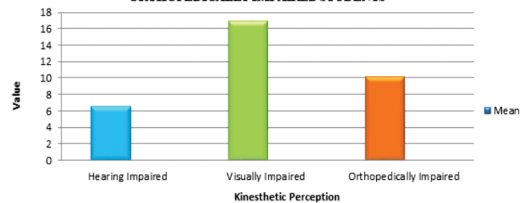


Fig- 2 Post - hoc mean comparison on kinesthetic perception among hearing impaired, visually impaired and orthopedically impaired students.

DISCUSSION OF THE FINDINGS

The obtained data on the subjects through application of statistical technique revealed that in respect to motor creativity and kinesthetic perception, hearing impaired students had better than orthopedically impaired and visually impaired students. Again orthopedically impaired students were superior to visually impaired students in respect to motor creativity and kinesthetic perception.

Visually Impaired students cannot see and cannot participate as others. Due to lack in physical ability, visually impaired persons suffer from inferiority complex and react most on the happening of an incidence than hearing impaired and orthopedically impaired persons. So, their Kinesthetic Perception is also less than others.

Orthopedically challenged subjects (defect in upper portion) were less than hearing impaired students in relation to motor creativity. That might be due to the fact that disability has a deep rooted depressive effect on the orthopedically challenged persons which provoke them to confine within themselves. Thus they were less exposed to physical activities or game situation and kinesthetic perception.

On the other hand, hearing impaired subjects only cannot hear. They become more efficient in performing the tasks and show highest motor creativity and kinesthetic perception than visually impaired and orthopedically impaired students.

CONCLUSION

From the above findings, it can be concluded that hearing impaired students had better than orthopedically impaired and visually impaired students in respect to motor creativity and kinesthetic perception. Again orthopedically impaired students were superior to visually impaired students in respect to motor creativity and kinesthetic perception. During teaching, teacher should keep in mind about such psychological facts which help the students for better educational achievement. In society, normal people should also keep in mind about such psychological trait of the differently abled persons for their better living.

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