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Academic achievement of hearing impaired, visually impaired and orthopaedically impaired higher secondary school students of Kashmir, J&K.

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Abstract
The study was undertaken to compare the academic achievement of hearing impaired, visually impaired and orthopaedically impaired higher secondary school students of Kashmir, J&K. The sample for the study was N=240 (80hearing impaired, 80 visually impaired, 80 orthopaedically impaired) higher secondary schools by using purposive sampling technique. Aggregate marks obtained by the students in 10th & 11th classes were taken as the index of academic achievement. The analysis of the data shows that the hearing impaired higher secondary school students have the lowest level of academic achievement, 92.5% have below average academic achievement followed by the orthopaedically impaired; 81.25% students have below average academic achievement. The visually impaired show that 8.75% students have above average academic achievement, 28.75% have average academic achievement and 62.5% have below average academic achievement.

Keywords: academic achievement; hearing impaired; visually impaired; orthopaedically impaired

Introduction

Academic achievement occupies a very important place in education therefore it is more pressing for the students to have high academic achievement. Besides its relevance for an individual, academic achievement is of utmost importance for the wealth and prosperity of a nation. Academic achievement is considered as a key criterion to judge one's total potentialities and capabilities. The term achievement refers to the degree or the level of success attainted in some specific school tasks especially scholastic performance, in this sense academic achievement means the attained ability to perform school tasks, which can be general or specific to a given subject matter. Academic achievement could be defined as self-perception and self-evaluation of one's objective academic success. Academic achievement generally indicates the learning outcomes of pupil.

Academic achievement is not a uni-dimensional but a multi-dimensional phenomenon depending upon a number of factors like school environment, home environment, parental education etc. which in turn determines the failure and the success of the students.

Trow (1956) [11] defined academic achievement as "knowledge attaining ability or degree of competence in school tasks usually measured by standardized tests and expressed in a grade or units based on pupils' performance".

Good (1959) [5] refers to academic achievement as, "The knowledge obtained or skills developed in the school subjects usually designed by test scores or marks assigned by the teacher".

Academic achievement is a multifaceted construct that comprises different domains of learning; the cognitive domain, the affective domain and the psychomotor domain as such its field is very wide-ranging and covers a broad variety of educational outcomes, which involves acquisition of knowledge, acquisition of emotions and acquisition of skills.

Among the many criteria that indicate academic achievement, there are some general indicators such as procedural and declarative knowledge acquired in an educational system, curricular-based criteria such as grades or performance on an educational achievement test, and cumulative indicators of academic achievement such as educational degrees and certificates. Academic achievement is measured by the GPA (grade point average) or by standardized assessments.

Disability is an umbrella term, covering impairments, activity limitations and participation restrictions, impairment is a problem in body function of structure; an activity limitation is a difficulty encountered by an individual in executing a task or action; while a participation restriction is a problem experienced by an individual in involvement in life situations (WHO). Census of India 2001 shows disability of 2.19%, NSSO 2002 shows disability of 1.80%, Census 2011 shows disability of 2.1%; an estimated 21 million suffering from disability [1]. According to the National Survey at least 10% of the population of the disabled is found in the general schools and they face a lot of difficulties due to their disabling condition

A person who is not able to hear as well as someone with normal hearing, (hearing thresholds of 25dB or more in both ears) is said to have hearing loss. Hearing loss may be mild, moderate, severe or profound. According to WHO, "Disabling

[1]Information and guidance booklet for persons with disabilities, published by rehabilitation council of India, New Delhi.

hearing loss refers to hearing loss greater than 40dB in the better ear in adults (15 years and above) and a hearing loss greater than 30dB in the better ear in children (0 to 14 years)". World Health Organization suggests that low visual acuity means vision between 20/70 and 20/400 with the best possible correction, or a visual field of 20 degrees or less. Blind means that the person has no vision at all. Blindness is defined as a visual acuity worse than 20/400 with the best possible correction, or a visual field of 10 degrees or less. In India where education is a fundamental right, education of visually impaired is still considered as a welfare activity. According to the report of World Intellectual Property Organization (WIPO 2008), there are about 39 million people across the globe that are blind, out of these India is a home for about 15 million.

Orthopaedically impaired are conditions of the skeletal system that restrict the person's movement. They are victims of disease or injuries which hinder the normal functioning of bones, muscles and joints and due to this malfunctioning, they are unable to move or work like normal persons. According to Kirk [2], "orthopaedically impaired are those who suffer from a defect that is accompanied by one or another type of deformity that inhibits the normal exercise of his or her muscles, joints or bones". Orthopaedic impaired children are those children who suffer from impairments of their muscle and skeletal and nervous system that may interfere with their normal functioning to adjust with their environment for their well-being adjustment and educational progress. According to Whitehouse Conference "The crippled child, in the orthopaedic sense is a child that has the defect which causes a deformity or an interference with normal functions of bones, muscles or joints. The condition may be congenital or due to disease or accident, it may be aggravated by neglect or by ignorance."

Objective

The objective of the study is to know whether hearing impaired, visually impaired and orthopaedically impaired higher secondary school students differ in their academic achievement.

Null Hypotheses

The following hypotheses were formulated for the present investigation:-

1. There is no significant difference between orthopaedically impaired and visually impaired secondary school students on *Academic achievement.*
2. There is no significant difference between hearing impaired and orthopaedically impaired secondary school students on *Academic achievement.*
3. There is no significant difference between visually impaired and hearing impaired secondary school students on *Academic achievement.*

Operational definition of variables

Academic Achievement is a measure of knowledge gained in formal education usually indicated by test scores, grade, grade points, average and degrees. Here, the achievement level of the student is judged by the marks that the students have scored in the annual examination.

Hearing Impaired- Disabling hearing loss refers to hearing loss greater than 40dB in the better ear in adults (15 years and above) and a hearing loss greater than 30dB in the better ear in children (0 to 14 years) WHO.

Visually Impaired-Low visual acuity means vision between 20/70 and 20/400 with the best possible correction, or a visual field of 20 degrees or less. WHO

Orthopaedically Impaired-The crippled child is one who has a defect or deformity which causes interference with normal functions of bones, muscles or joints.

Material and Method

This study was designed to compare hearing impaired, visually impaired and orthopaedically impaired higher secondary school students on academic achievement. As such, descriptive method of research was employed

Target Population

The study is designed to study academic achievement of adolescents studying in class X to XII i.e. Secondary and Higher Secondary School students [3] of Kashmir [4].

Sample

The sample for this study was collected from 97 higher secondary schools of Kashmir, J&K. The sample consisted of N=240 (80 hearing impaired 80 visually impaired 80 orthopaedically impaired) higher secondary school students taken by using purposive sampling technique.

Tool used

To measure the academic achievement, aggregate marks obtained by the subjects in 10th and 11th classes were taken as the index of academic achievement.

Statistical treatment

The data was analyzed by applying Mean, S. D. and "t" test.

[2] Kirk,S.A.,&GallagherJ.J.,(1979):- "EducatingExceptionalChildren",http://breakthroughs.education.illinois.edu /publications, Publisher : Houghton Mifflin, Boston, 1979.

[3] Different Stages of Education in the present study has been taken according to the Indian Education Commission (1964-66). According to Indian Education Commission (1964-66), School Education comprises of following stages: Primary Stage (I-VIII), Lower Primary (I-V), Upper Primary (VI-VIII), Secondary Stage (IX-X) and Higher Secondary Stage (XI-XII).Secondary school students are of ages fourteen to fifteen and higher secondary school students are of ages sixteen to seventeen years.

[4] (Jammu and Kashmir State came into existence in 1846, after the first Anglo-Sikh war of 1845-46, with Maharaja Ghulab Singh as its first ruler. Until then, there was no such distinct political entity. The State was not the personal creation of Ghulab Singh but was rather the outcome of an agreement between him and the representatives of the British East India Company.)Jammu & Kashmir consist of three divisions: Jammu, Kashmir & Ladakh.

Descriptive Analysis

Table 1: Distribution of physically challenged secondary school students on academic achievement (N=80 in each case)

Levels	Orthopaedically impaired(N=80)	Visually impaired(N=80)	Hearing impaired(N=80)
Above average academic achievement	1 (1.25%)	7 (8.75%)	*
Average academic achievement	14 (17.5%)	23 (28.75%)	6 (7.5%)
Below average academic achievement	65 (81.25%)	50 (62.5%)	74 (92.5%)

The table 01 shows the distribution of physically challenged viz. orthopaedically impaired, visually impaired and hearing impaired on academic achievement (N= 80 in each group).The hearing impaired have the least scores on academic achievement with only 7.5% having the average academic achievement and the majority 92.5% have below average academic achievement. The orthopaedically crippled shows that 1.25% have above average academic achievement 17.5% have the average academic achievement and 81.25% have below average academic achievement. The visually impaired shows that 8.75% have above average academic achievement, 28.75% have the average academic achievement and 62.5% have below average academic achievement. The above table clearly indicates that majority of the physically challenged have below average academic achievement thus the integrated school needs to relate with the special needs of these children and design both teaching and testing in accordance with their demands to make inclusion meaningful.

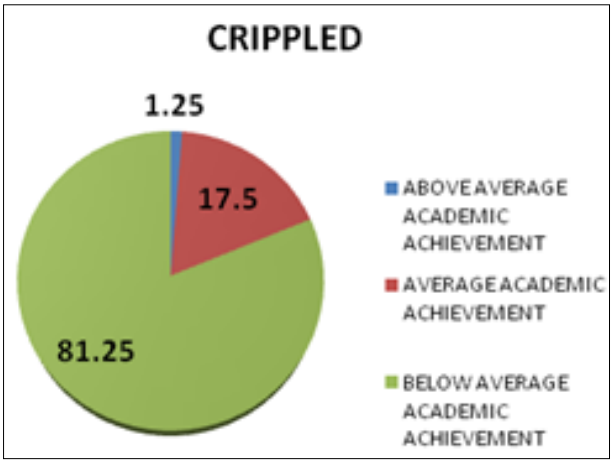

Fig 1

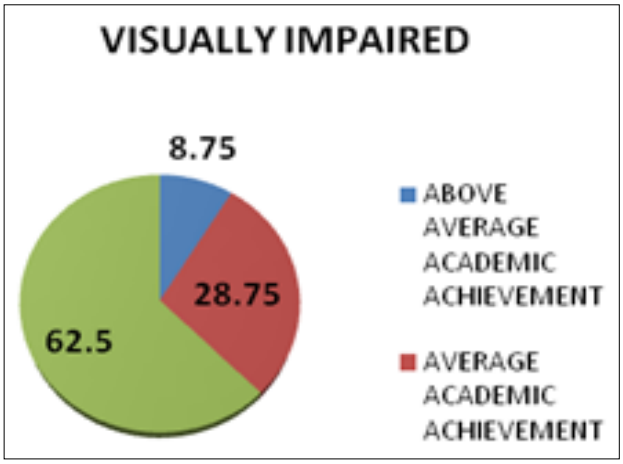

Fig 2

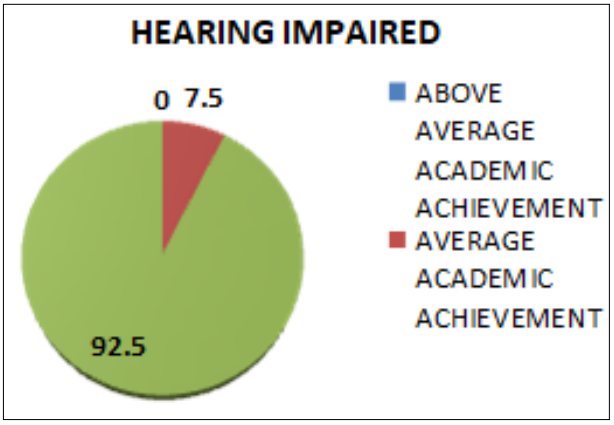

Fig 3

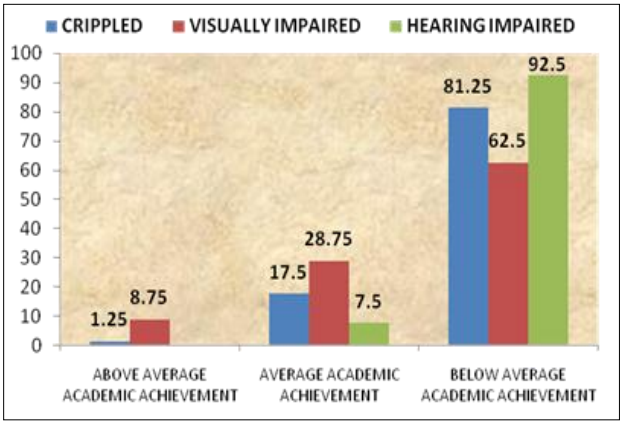

Fig 4

Inferential analysis

In order to prove the hypothesis whether they are accepted or rejected, the data was statistically analyzed by employing t-test.

Table 2: Showing the mean comparison of orthopaedically impaired and visually impaired secondary school students on academic achievement (N=80 in each group).

Group	N	Mean	S.D	t-value	Level of Significance
Orthopaedically Impaired	80	56.64	6.48	1.86	Not Significant
Visually Impaired	80	58.93	8.86		

The Table 02 shows the mean comparison of orthopaedically impaired and visually impaired secondary school students on academic achievement. The calculated t-value (1.866) is less than the tabulated t-value (1.98), which depicts that there is no significant difference between orthopaedically impaired and visually impaired secondary school students on academic achievement. A quick look at the means of the above table clearly shows that both crippled and visually impaired secondary school students have a lower level of academic achievement. Their disability acts as an impediment to attain the desired level of success. Thus from the confirmation of the results from the above table, the null hypothesis no.1 which reads as "*There is no significant difference between orthopaedically impaired and visually impaired secondary school students on academic achievement", stands accepted.*

Table 3: Showing the mean comparison of hearing impaired and orthopaedically impaired secondary school students on academic achievement (N=80 in each group).

Group	N	Mean	S.D	t-value	Level of Significance
Hearing Impaired	80	49.52	8.87	5.797	Significant at .01 level
Orthopaedically Impaired	80	56.64	6.48		

The Table 03 shows the mean comparison of hearing impaired and orthopaedically impaired normal secondary school students on academic achievement. The calculated t-value (5.797) exceeds the tabulated t-value (2.59) at 0.01 level of significance, which depicts that there is a significant difference between hearing impaired and orthopedically impaired secondary school students on academic achievement. A quick look at the means of the above table clearly shows that hearing-impaired secondary school students have a low level of academic achievement as compared to orthopedically impaired secondary school students. The hearing impairment restricts them to achieve the desired level of academic achievement. Thus from the confirmation of the results from the above table, the null hypothesis no.2 which reads as, "*There is no significant difference between hearing impaired and orthopaedically impaired secondary school students on academic achievement", stands rejected.*

Table 4: Showing the mean comparison of visually impaired and hearing impaired secondary school students on academic achievement (N=80 in each group).

Group	N	Mean	S.D	t-value	Level of Significance
Visually Impaired	80	58.93	8.86	6.713	Significant at .01 level
Hearing Impaired	80	49.52	8.87		

The Table 04 shows the mean comparison of visually impaired and hearing impaired normal secondary school students on academic achievement. The calculated t-value (6.713) exceeds the tabulated t-value (2.59) at 0.01 level of significance, which depicts that there is a significant difference between visually impaired and hearing impaired secondary school students on academic achievement. A quick look at the means of the above table clearly shows that hearing-impaired secondary school students have a lower level of academic achievement as compared to visually impaired secondary school students. The inability to hear instructions clearly makes the hearing impaired feel disconnected with the class. Thus from the confirmation of the results from the above table, the null hypothesis no.3 which reads as, "*There is no significant difference between hearing impaired and visually impaired secondary school students on academic achievement", stands rejected*

Findings

1. The two groups of students' viz. orthopaedically impaired and visually impaired secondary school students have not shown any significant difference in their academic achievement. This indicates that both the groups due to their special needs require special provision such that they can excel in academics.
2. The two groups of students' viz. visually impaired and hearing impaired secondary school students were compared on academic achievement and it was revealed that hearing impaired secondary school students have a lower level of academic achievement as compared to visually impaired secondary school students.
3. The two groups of students' viz. hearing impaired and orthopaedically impaired secondary school students were compared on academic achievement and it was revealed that hearing impaired secondary school students have a lower level of academic achievement as compared to orthopaedically impaired secondary school students. Their inability to listen properly makes then disconnected in the class and they have less communication with teachers and peers as a result they are not able to benefit much from classroom instructions.

Suggestions

The disability scenario in Jammu and Kashmir reveals that 99% disabled girls do not attend school which is a serious concern. They should be provided financial aids to cater to their special needs. Reservation should be implemented in letter and spirit. Disability awareness programmes should be organised at block levels with some incentives. Free wheel chairs, hearing aids, free medical checkup and other assistive devices should be made available to the disabled students such that their enrollment and retention is facilitated. Resource rooms in every district with IED staff can help retention of the specially abled students in school. Equality of educational opportunities should be provided to them and there should be special provisions in teaching and evaluation. The J&K

disability act of 1998 and J&K School Education Act of 2012 need to be implemented at grass root level.

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