# PRACTICAL IMPLICATIONS FOR STUDENTS WITH HEARING IMPAIRMENT IN MAINSTREAM SCHOOLS IN KARACHI

**Rubina Masum[1], Khalid Jamil Rawat[2], Javed Iqbal Kashani [3], Muhabat Khan[4]**

Hamdard University Karachi, PAKISTAN.

rubinamasum@gmail.com[1]; khalidastro@hotmail.com[2]; kashan79@hotmail.co.uk[3], personalkhan76@hotmail.com[4]

## ABSTRACT

*The longitudinal case study investigates the impact of hearing impairment on the learning experience of students in inclusive education. The participants of the study were students with hearing impairment (N=2) who were studying in an English-medium school located in Karachi. The data was gathered through observations and unstructured interviews. The study employs grounded theory for interpreting and analyzing the data related to the experiences of students with hearing impairment. The results of the study present students' perception of their own learning, attitude of the teachers towards them and the absence of infrastructural provisions to cater for their special needs in the mainstream schools. The study recommends teachers' training programs for creating a more enriching learning experience for the students with hearing impairment and the involvement of the administrative staff in providing optimal learning environment and infrastructural provisions. Moreover, recommendations are made for investigating the adverse effects of other disabilities on student' learning in the mainstream educational institutions.*

**Keywords:** Hearing Impairment, Mainstream, Special Needs, Grounded Theory; Individual Education Plan

## INTRODUCTION

According to a report published on the 'Right of Free and Compulsory Education in Pakistan' [1]**,**the article 25-A of 18th constitutional amendment guarantees the right to free and compulsory education to the Pakistanis. The said report eulogizes this piece of legislation by stating,"[A] positive change is the insertion of Article 25-A in the constitution of Pakistan that guarantees the right to free and compulsory education to all children of age 5 to 16 years in Pakistan". In spite of the claim made**,** the provision of education is quite inaccessible for most of the Pakistanis**,** and especially forthestudents with special needs. Now the preferred trend is towards teaching special children in the mainstream while taking their special needs into consideration. The current practice encourages mainstream or inclusive education for children with specialneeds because it offers added benefits to the society at large.

The National Policy of Special Education in Pakistanwas planned to look after the welfare and special educational needsof the students in custom-built environment[2]. Previous studies indicated that inclusive programs might be more beneficial for such students. However, despite the moderate interest shown in this area, the plight of the students with disabilities in general remained fairly deplorable. The difficulties faced by a person who is in a wheel chair in the context of Pakistan [3]. According to the author of there is absolute absence of any provisions made for the physically handicapped ranging from cinemas to the educational institutions. There are several other instances that reveal acute apathy with regards to the dealing with special children/adults. In the absence of any rigorous policy towards these issues, many a times, special individuals have to suffer. For instance, in the year 2015, the

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visually-impaired adults were mal-treated by the police. During a period of security high alert in Karachi,a studentwas denied entry in a mainstream school,for the reason that she was on a wheel chair which was considered to be a safety hazard by the school guards.

There have been several other incidents that mostly occurred because of the indifferent attitude of the concerned departments towards the situation of the individuals with special needs. Due to which students along with their parents have to deal with similar issues inside or outside the classroom on a daily basis. In view of all obstacles even if students manage to get admission in the mainstream school, they may still not be able to fully benefitted, since they may require additional individual educational plan to maximize their full potential. The absence of infrastructural facilities in educational institutions restricts mobility for students with physical disabilities [4].

Furthermore, disability "results from the interaction between persons with impairments and attitudinal and environmental barriers that hinders their full and effective participation in society on an equal basis with others" [5].The umbrella term 'special children/adults with disabilities' is sub-divided into mentally challenged, hearing and speech impaired, visual impaired and physically deformed. Approximately 7.4% students have hearing impairment which occurs congenitally or is acquired later after birth;Human ear has evolved to hear 50 decibel (dB) sound within a comfortable zone; any sound which is above 85 dB can be damaging for the ear in the long run. Similarly, 120dB causes discomfort whereas 140 dB is considered to be within the threshold of pain for human ear."Deafness means a hearing impairment that is so severe that the child is impaired in processing linguistic information through hearing, with or without amplification that adversely affects a child's educational performance. Hard of hearing means a hearing impairment that is so severe that the child is impaired in processing linguistic information through hearing, with or without amplification that may not adversely affects a child's educational performance" [6].

Apart from speech-impairment, children/ adults with hearing impairment fail to develop an overall effective personality that may result in social isolation. Just like all the other three impairments (mental impairment, visual impaired and physical deformed), hearing impairment also adversely affects a child's language development through hindering the linguistic input which is considered essential for overall language development.Language development is considered essential for inter/intra personal skills. In the absence of linguistic input,infants/children fail to develop language skills which may as well result in speech impairment, which in return hampers the development of social skills.

Hearing impaired children are not only at risk for delayed language development and communication skills**,** but arealso more prone to develop behavioral problems as compared to the normal hearing children of the same age group. However, it is quite likely for this impairment to evade the notice of the family members,thus avoiding an early detection, for mostoften partial hearing-impairment is identified by the Montessori or primary school teachers.

Hearing impairment can be broadly divided into sensorineural hearing impairment (damage to the inner ear), conductive hearing impairment (damage to the outer and middle ear)**,** and mixed hearing impairment (damage to both the inner the outer ear). The fourth type of hearing impairment results from the damage to the nerves or nuclei of the central nervous system, either in the pathways to the brain or in the brain itself. Treatment for each type of hearing impairment depends on the extent of thedamage to any specific location in the ear.

One effective way of treating sensorineural hearing impairment is with the help of hearing aids**,** which proves to be less detrimental for educational performance. However, hearing aids tend to amplify all sounds irrespective of the preference of the hearer, as a result due adjustment to the hearing aids and the training of the care giver/teacher is mandatory. Owing to the specific nature of the hearing impairment, students require individual education plans to compensate for the linguistic input. “An IEP [Individual Education Plan] is a written plan describing the special education program and/or services required by a particular student. It identifies learning expectations that are modified from or alternative to the expectations given in the curriculum policy document for the appropriate grade and subject or course, and/or any accommodations and special education services needed to assist the student in achieving his or her learning expectations” [7].

## REVIEW OF RELATED LITERATURE

Hearing Impairment has been effectively measured since 1964 with the advent of Hearing Handicap Scale designed by Fairbanks and Glorig [8]**. S**everal refined versions of the scale have been designed as well. Hearing Measurement Scale allows an extensive interview with the patient suffering from sensorineural hearing loss [9]. The scale is comprised of 42 items. Previous studies have reported the repercussions of hearing impairment on educational, behavioral, cognitive, psychological and social personalitydomains of children/adults. The receptive and expressive language skills and behaviour of 122 children (67 boys and 53 girls) with hearing loss was compared with 63 children (37 boys and 26 girls) who had normal hearing [10]. Moreover, the mean age of both groups was 8 years and the children came from eight districts in Southern England. They measured behavioural problems by using Strengths and Difficulties Questionnaire (SDQ). Furthermore, the behavioural problems of 41 pre-lingual deaf Dutch boys, age range 6-11 years**,** by using Child Behaviour Checklist (CBCL)**,** and compared them to a large group of normal hearing children of the same age group [11]. Both studies concluded that the children with hearing loss had higher levels of behavioural issues against children with normal hearing.

Apart from affecting language and communication skills, behaviour, social outcomes and academic performance, hearing loss is also found to be a cause of physical stress.The effects of hearing loss on subjective reports of fatigue have been demonstrated in theschool age children using the Pediatric Quality of Life Inventory (PedsQL) Multidimensional Fatigue Scale [12]. The study sample included 10 children with hearing loss with an average age of 10.3 years and 10 age matched children with normal hearing. Their results showed that subjective fatigue is increased in school age children with hearing loss compared with children with normal hearing. These studies have demonstrated the subjective responses based on reports from parents, teachers, and audiologists. Although the sample size is comparatively small for effective generalizations, still these studies have contributed towards comprehending hearing impairment from several angles. In a similar vein a test of 70 items was applied to 15 hearing and 15 deaf students of grade VIII which concluded that “poor facilities such as science labs and traditional teaching methods”, are the probable cause of poor performance of hearing impaired children [13].

In order to fully conceptualize the adverse effects of hearing impairment, previous studies have attempted to include children who are age-matched. Similarly other factors like speech and language development, type and degree of hearing loss, ages of intervention, hearing aid fitting and cochlear implantation, mode of communication and daily listening environments were also considered due to their influence on individual child performance.Although most of these studies have assessed the impact of hearing loss on child speech and language development, school and behaviour performance, there is still a dearth of research to assess the implications of hearing impairment for the learning experience of children/adults by employing grounded theory (GT henceforth).

## METHODOLOGY

The design of the research draws uponGTwhich was originally developed by Barney Glaser and Anselm Strauss in 1967. According to them the theories should emerge which are 'grounded' in the data; it was a move away from an experiment which is executed with the goal of verifying, falsifying, or establishing the validity of a hypothesis**.**Furthermore,"A theory is a set of concepts that are integrated through a series of relational statements" [14]. GT pertains to a qualitative research methodology that facilitates contextualized theory/theories to emerge from the acquired data. GT research relates to a systematic yet flexible process to collect data, code the data, make connections and see what theory/theories are generated or are built from the data.Two participants,who were enrolled for Advanced Level (1 male, & 1 female) programsat Saint Patrick's High School, wereselected for the study. Both participants were adults and were using hearing aids during educational sessions. The average age of the participants was 18.2 years. Opportunity sampling technique was used since it is rare for hearing-impaired children to take admission in the mainstream schools. Informed consent was obtained from both participants.

### Instruments and Methods

Classroom observations were carried out for the first month of the study. Twelve unstructured in depth interviews of the participants were conducted over a period of six months.The process of data collection started by making observation of the students' response and reactions in different academic situations which ranged from the interactions of students with peers and teachers. Meanwhile note-taking was carried out which was revised periodically as new data was added. After a period of one month**,**students were interviewed individually. Meanwhile comparison "within the participant" and "between the two participants" was made consistently**,** which not only helped the theory to emerge but also refined it. The comparison also facilitated the coding process which is considered to be an essential part of the GT. The method involved the progressive identification and integration of categories of meaning fromdata which was acquired from the four participants in various sessions. This procedure encompassed both the process of category identification and integration (as method) and its product (as theory).

The collected data was used to identify, refine and integrate categorieswhich groupedevents, processes, occurrences that sharedcentral features or characteristics with one another and eventually leading to the emergenceof theory.In the earlier stages of the data analysis descriptive coding was employed which gradually developed into categories till the time the data was saturated and no further categories emerged.Overall, the entire process was comprised of data collection, note-taking, coding and memoingwhich had been occurring parallel to data collection. Later on, the process of sorting commenced when all categories were saturated followed by writing of the results.Since GT is essentially a process which is context-based**,** thus the categories depicted the valid details of how participants felt during their learning experience.

With the help of GT categories were identified at a higher level of abstraction; the categories interpreted the instances of the phenomena. For example, initially references to diverse activities such as audio-visual aids, visibility of teachers and seating arrangement was categorized as 'infrastructural/administrative issues' if they appear to pose some difficulty for the students with hearing-impairment in terms of academic success.

By employing the methodology of GT the following categories were identified:

1. The major concerns of thestudents with hearing-impairment wasregarding their mal-adjustment in the mainstream schools.
2. Indifference to the need of making seating arrangement of the students with hearing impairment within the audible range to the teacher.
3. Students spend more time adapting themselves to fit in the social circle of other students (than to focus on academics).
4. Mainstream students react differently towards them (from an encouraging behavior to ridiculing them).
5. Seating arrangement of the students within audible range to the teacher.
6. Less involvement during group work.
7. Lack of facilitation to cater for the individual needs of the students with hearing impairment.
8. Feelings of isolation.
9. The indifferent attitude of staff towards the students with hearing impairment
10. Lack of facilitation by the teachers to cater for the individual needs of the students with hearing impairment.
11. Limited wait-time if a question is asked by students with Hearing impairment.
12. Impediments faced by the special needs students desirous of studying in the mainstream schools.
13. Visibility of the audio-visual aids determined their involvement in the class.
14. Problems faced in the school compound during recess time.
15. Lack of extra need-based classes to match up with the peers.
16. Absence of the trained staff to provide optimal environment to the students who use hearing aids.

The above mentioned categories were abstracted from the concepts generated from the data through abstraction and the constant comparison of the instances of the concepts. The process of generating categories from the concepts is termed as axial coding by the founders of the grounded theory, and is preceded by the step of open coding that breaks open the data into concepts.

These sixteen categories were further subsumed under four analytic categories: Interpersonal relations; Attitude (of the staff); Perception (of the students with hearing impairment); and comfort-zone (Administrative/ infrastructural inadequacies). The detail of each category follows:

**Interpersonal relations**

i. The major concerns of the students with hearing-impairment was regarding their mal-adjustment with other students

ii. Students spend more time adapting themselves to fit in the social circle of other students (than to focus on academics)

iii. Mainstream students react differently towards them (from an encouraging behavior to ridiculing them)

iv. Less involvement during group work

**Attitude (of the staff):**

i. The indifferent attitude of staff towards the students with hearing impairment

ii. Lack of facilitation by the teachers to cater for the individual needs of the students with hearing impairment

iii. Limited wait-time if a question is asked by students with Hearing impairment

iv. Indifference to the need of making seating arrangement of the students with hearing impairment within the audible range to the teacher

**Perception (of Students with Hearing Impairment)**

i. Impediments faced by the special needs students desirous of studying in the mainstream schools

ii. Visibility of the audio-visual aids determined their involvement in the class

iii. Feelings of isolation

iv. Problems faced in the school compound during recess time

**Comfort-Zone (Administrative/Infrastructural inadequacies)**

i. Lack of facilitation to cater for the individual needs of the students with hearing impairment

ii. Lack of extra need-based classes to match up with the peers

iii. Absence of the trained staff to provide optimal environment to the students who use hearing aids

iv. Seating arrangement of the students within audible range to the teacher

In the final step of the coding process, termed as the selective coding, the core category was determined. The core category was found to be the Challenges faced by the hearing impaired in the mainstream schooling experience. It was found that the four categories including: Interpersonal relations; Attitude (of the staff); Perception (of students with hearing impairment) and comfort-zone (Administrative/infrastructural inadequacies), are essentially related to the core category, "The challenges faced by the hearing impaired students in the mainstream schooling."The emergent theory was summed up as: The extent of productive experience of the students with hearing impairment in the mainstream schools. According to the criteria suggested by Glaser the theory was apt to the situation; and that it worked by making students with hearing impairment share their experience and propose ways to improvise their situation by making necessary changes.

## DISCUSSION

GT was chosen as a research methodology because it provides an explanatory framework to understand the phenomenon under investigation.Since the research has been carried out over a longer span of time and students were interviewed in both formal and informal setting they were able to express their experience with diverse moods which helped to identify the core as well as analytical categories. GT moves back and forth which helps the researcher to dig deep into the originating causes of their reactions.Both descriptive and analytic categories in GT are based upon the identification of 'relations of similarity and difference' in the data thus there is a higher probability factors to extract the valid response [15].

Due to the nature of unstructured interviews there were fewer demand characteristics on the part of the researcher. The longitudinal nature of the research also allowed the students with hearing impairment to open up. Once the interview had to be cancelled due to a school function, on the next meeting the female studentremarked that 'I was wanted to talk about my test result, why didn't you turn up' Which indicated that by providing a keen ear the researcher was able share the major mechanism at work.

By looking at the core and analytical categories it can be assumed that administrative/infrastructural inadequacies are at the heart of all issues. If these problems are dealt with some sensitivity on the part of the school authorities the overall results can be far better. It would not only reflect in the attitude of the teachers but would transmit these vibes to other students as well. Eventually the whole framework can assist students with hearing impairment who can become more stable-minded, and involved in academic activities.

The findings of the research have highlighted the significance of longitudinal and in-depth research to assess the problems faced by the students in the mainstream classrooms. However, due to their special needs additional help is mandatory. The current scenario necessitates the involvement of other stakeholders. The Cambridge International Examinations (CIE) has been providing educational services in Pakistan very effectively for the past three decades. CIE conducts workshops, seminars and video conferencing for the professional grooming of teachers. If similar workshops could be conducted for dealing with children with any kind of impairment then it can create general awareness among teachers to effectively handle such children in the mainstream schools. Such measures can effectively fill-in the vacuum caused by poor educational services extended by the state-run schools. Apart from coaching facility further research may document whether children with hearing impairment have any other medical co-morbidities which can be the cause of their reactions towards the academic situation.

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