

## **HEARING IMPAIRMENT**

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Hearing impairment is the inability of an individual to hear sounds adequately. This may be due to improper development, damage or disease to any part of the hearing mechanism. Hearing is a prerequisite for the development of normal speech & language. A child learns to speak by hearing the speech of others in the family and surroundings.

### **Hearing loss and deafness**

Hearing loss is defined as diminished acuity to sounds which would otherwise be heard normally. The terms hearing impaired or hard of hearing are usually reserved for people who have relative inability to hear sound in the speech frequencies

A person who is not able to hear as well as someone with normal hearing – hearing thresholds of 25 dB or better in both ears – is said to have hearing loss. Hearing loss may be mild, moderate, severe, or profound. It can affect one ear or both ears, and leads to difficulty in hearing conversational speech or loud sounds.

'Hard of hearing' refers to people with hearing loss ranging from mild to severe. People who are hard of hearing usually communicate through spoken language and can benefit from hearing aids, cochlear implants, and other assistive devices as well as captioning. People with more significant hearing losses may benefit from cochlear implants.

'Deaf' people mostly have profound hearing loss, which implies very little or no hearing. They often use sign language for communication.

Some of the common characteristics of hearing impaired commonly found in classrooms include the following:

- Difficulty following verbal directions
- Difficulty with oral expression
- Some difficulties with social/emotional or interpersonal skills
- Will often have a degree of language delay
- Often follows and rarely leads

- Will usually exhibit some form of articulation difficulty
- Can become easily frustrated if their needs are not met — which may lead to some behavioral difficulties
- Sometimes the use of hearing aids leads to embarrassment and fear of rejection from peers

## **IDENTIFICATION OF CHILDREN WITH HEARING IMPAIRMENTS**

**Observation:-** Systematic observation of behavior by parents, peer group, neighbors, teacher and administrator can point out the problem of hearing impaired children.

**Case Study:-** Case study is a research methodology, typically seen in social and life sciences. There is no one definition of case study research.<sup>1</sup> However, very simply... 'a case study can be defined as an intensive study about a person, a group of people or a unit, which is aimed to generalize over several units'. A case study has also been described as an intensive, systematic investigation of a single individual, group, community or some other unit in which the researcher examines in-depth data relating to several variables. Case study helps in finding the actual level of hearing loss to such children.

**Medical Examination:-** actual level of degree of hearing can only be understood after proper medical examination. Examiner takes brief history of such children also.

**Development Status:-** Early childhood development is multidimensional, encompassing several aspects of a child's well-being: physical, social, emotional and mental. Healthy development generally takes place in a series of predictable and common stages: As they grow older and their brain matures, children learn increasingly complex skills and become progressively more independent. However, children can develop at different paces and may reach developmental milestones at different times. What is considered normal child development also varies across cultures and environments, since expectations and parenting strategies may differ not only among countries but also among cultural, ethnic or religious groups within the same country.

**Neuropsychological Testing:-** Neuropsychological tests are specifically designed tasks that are used to measure a psychological function known to be linked to a particular brain structure or pathway. Tests are used for research into brain function and in a clinical setting for the diagnosis of deficits.

### **Behavioural Characteristics to Identify Children with Hearing Impairment**

- Possible Sign of a Hearing Impairment
- Turning head to position ear in the direction of the speaker
- Favoring one ear over another

- Using a loud voice when speaking
- Mispronouncing words (such as misarticulation of certain speech sounds or omitting certain consonant sounds)
- Asking for information to be repeated frequently
- Not responding when addressed
- Difficulty with following directions or instructions
- Seeming distracted and/or confused
- Appearing to be inattentive, restless, tired or daydreaming
- Distracted easily by visual or auditory stimuli
- Lack of, or delayed development of speech and language
- Intently watching faces during conversation
- Giving incorrect answers to questions
- Not startled by loud noises
- Preferring to be by themselves (i.e., playing alone rather than with a group, or withdrawing from social situations)
- Problems hearing environmental sounds (i.e., doorbell, telephone ringing, people calling and/or talking to the student from behind)
- Sitting close to the sound source (i.e., TV, radio, and/or turning up the volume)

## 8.7 EDUCATIONAL PROGRAMMES FOR HEARING IMPAIRED CHILDREN

The following techniques can be applied for the education of hearing disabled children:

1. **Communication Techniques:** The hearing impaired child cannot learn and assimilate the learning materials in the storage of his long-term memory. For effective learning the techniques could be:

(i) **Lip Reading:** It means that the hard of hearing student is trained to understand the meaning of spoken material concentrating upon movements of the lips of the speaker. But there are some shortcomings of this technique such as:

- (a) A deaf child can understand only about the 25% of the spoken material, especially when the speed of spoken words is very fast.
- (b) The articulation manner of some of the alphabets in Hindi has less differentiation such as ba (ब) ma (म), pa (प) and ta (त) etc.
- (c) The child's attention is distracted, when he tries to read lips, then he cannot pay attention to the spoken words.

(ii) **Sign Language** is a technique having certain specific signs for alphabets and words which facilitate the hearing impaired individual to understand the language. These signs for different languages are available.

(iii) **Cued Speech:** This technique consists of the use of some nonverbal cues alongwith the lip reading of the speaker. The speaker or some other person makes gestures with hand similar to the kind the language or words spoken to the impaired persons. The words and sentences used are clear and short to enable the disabled child to understand their meaning. It is also important that the spoken material should be easy and meaningful.

(iv) **Auditory Training:** This training is an integral part of educational audiology which is a fast developing technique to meet the educational needs of hearing disabled children. The purpose is to save the residual hearing ability of the individual and to check its further

deterioration. Through this technique the disabled person is trained to listen to and discriminate between different sounds. In this training the words are spoken into the ear or a tube is used to simplify the sounds. In this training the vacuum-tube hearing aid and the transistor type hearing aids are generally used. Modern technological measures have advented many improved hearing aids for the disabled children.

(v) **Use of Hearing Aids:** Hearing aids are a part of the treatment in the sense that these help children to learn and carry on their academic activities. Use of headphones or amplifiers helps the disabled to listen to and participate in communication.

2. **Educational Technology:** The following measures can be useful for the education of the hearing disabled children:

(i) **Use of Appropriate Teaching Aids:** Such as figures, pictures, signs, cued words, models and maps etc.

(ii) **To Ask Question to the Disabled Child** to get the idea whether he is grasping/comprehending the learning material or not, and to know about his difficulty if any, instantly.

(iii) **To Provide Helper or Note Taker** to child who may help the child by taking short notes of the learning materials.

(iv) **Provision for the Appointment of a Specialist** who may be a full time or a part time worker.

(v) **Checking and Observing the Dialogue and Learning of the Disabled** to know their difficulty and/or extent of improvement as a result of training.

(vi) **Computer Assisted Instruction:** This measure can be of great help in assisting hearing disabled children to learn and perform academic activities. Computer may successfully be used in testing disability and for rehabilitating the disabled. Many researchers like *Lewitt* and *Goldberg* etc. have successfully used this technique for the education of these handicapped children.

(vii) **The Rochestor Institute of Science and Technology** has developed many useful technical programmes for the education of deaf children. Many more programmes of the kind can be developed and standardized for the hearing handicapped individuals who have varying degree of impairment.

3. **Provision for Education Facilities:** Keeping in view different personal and educational needs of the hearing disabled children, the following provisions may be adopted:

- (i) To make the appropriate hearing aids available for the children.
- (ii) To give them proper training for using the aid and taking care that of.
- (iii) To make the facilities for auditory training available in the school.
- (iv) Facility of Resource room and Resource teacher.
- (v) Provision for speech and reading training.
- (vi) Proper classroom management keeping in view the special needs of these disabled children.
- (vii) Positive and encouraging attitude of the teacher.
- (viii) Permissive, empathic and supporting environment of the school.
- (ix) Provision for Nursery Education: To get better socialization opportunities, to develop self-confidence and learn communication skills, and moreover learn not to consider handicap as a disability which cannot be overcome, and to acquire skills to cope better with the difficulty.
- (x) Cooperation and participation of parents to help the child to get the maximum benefits of mainstream education; to have positive attitude, realistic expectations, and barrier-free social adjustment.
- (xi) To make the following assisting aids available:
  - A combined form of telephone, typewriter and computer like instrument.
  - A number of video tapes.
  - Films strips and slides for learning and acquiring variety of information.
  - A variety of captioned programmes to be screened out on T.V.
  - Group hearing aids, for example, having an amplifier.
  - Hearing aid vests
  - Phonic ear
  - Overhead projector to be used by the teacher.

4. **Segregated Schools:** Under this provision the auditory handicapped are segregated from the benefit of general education and fulfill their educational needs in special institutions, taught by specially trained teachers. But this can be only for the severely and profoundly

handicapped. The children with mild disability can get education in regular schools using requisite hearing aids. The deaf and the children having handicap right from the time of birth may be benefitted by special school instruction programmes.

5. **Special Classes:** The children who have been having normal hearing ability before the development of disability, have achieved certain level of language development; and the children suffering from moderate level of impairment can get education in the classes especially meant for this disability. Their need for special class/classes is only with respect to specific purposes, otherwise with the use of assisting devices and positive attitude of teacher they are quite capable of having education in regular school system. It is also otherwise useful for the students.

6. **Progression:** The main objective of special educational provision for hearing disabled children is to bring back to the general pattern of education to get advantage to learn and grow with other normal children. It is felt that the profoundly disabled and deaf children may not be capable of getting general classroom educational experiences but they enjoy the company of average children in the classes like Fine arts, craft and arts and physical training/exercise classes. With the implementation of such system the disabled children may interact with other normal children, may gain self-confidence and develop better communication skills.

7. **Educational and Vocational Guidance:** Because of their more specific personal and educational needs hearing disabled children need more educational and vocational guidance services. Society intends to help them to acquire training suitable to their interests, aptitude and above all their capability, so that they can be rehabilitated in some adequately satisfactory employment. Such provisions may make the disabled self-sufficient, self-reliant and at the same time it may lessen the liabilities of the society in general. Guidance and counselling services must specifically be given importance to help these children to develop their ability and capabilities to the optimum level through suitable educational techniques, to provide them some occupational training and consequently induction to some occupation of their choice and satisfaction. The occupational skills they can develop may include the work of electrician, carpentry, cooking and catering, printing and proof reading, arts and crafts and accountancy management etc.

8. **A Step Forward towards Inclusive Education:** All

educational provisions or programmes may they be in the form of special classes, segregated schools, integrated programmes or occupational education and placement—point out the importance and need of inclusion of these and other exceptional children in mainstream system of education which is a scientific approach useful for the disabled as well as the normal children's education and development. This approach is beneficial in its intent and programmes which provide opportunities for better learning and teaching, better retention and retrieval, and better use of acquired skills in functioning of routine activities and social adjustment. This approach emphasizes the use of following measures for hearing disabled children:

- (i) Provision for the development of sign language specifying its utility and application.
- (ii) Verbal skills of self-expression should be given weightage and speech-training should be provided.
- (iii) More stress should be laid on learning of first language as it is always convenient for young children to learn and express better in their mother tongue.
- (iv) Some autonomy to learn and experience things should be provided. Imposition should be minimized as far as possible.
- (v) Principle of 'complete communication' should be given preference as is prevalent in countries like USA. This model is just like a combined effort to learn signs and language together. It is called a '*Bimodal Communication Technique*'.
- (vi) Suitable adaptations in the general curricula should be made.
- (vii) Supportive and cooperative learning methods should be applied with possible modifications.
- (viii) Evaluation and achievement in examination should be given secondary importance. First and foremost significance should be given to the point that how far the child has succeeded in acquiring adequate learning skills.
- (ix) Training in language learning and perceptual processes should be made an important part of time table. The differentiation and clarity in the sounds of different alphabets make the acquisition of learning material more understandable and comprehensive.
- (x) Use of multi sense modalities in learning and teaching should be preferred.

- (xi) Disabled children should be given due recognition in the class and their participation in the class activities should be commended.

## 8.8 ROLE OF TEACHER

The role of teacher is more important in the mainstreamed class of hearing impaired children. He should have the following competencies and teaching skills to teach such children:

1. He should be well versed in modern teaching techniques.
2. He should be a model for good speech and hearing.
3. He should be able to understand normal language and speech development and the ability to diagnose and correct error made by the children.
4. He should know the components of hearing aids and how to operate and use them effectively.
5. He should know special techniques to teach children receptive, expressive language and speech through the multisensory approach.
6. He should be able to interpret diagnostic reports to parents and regular teachers.
7. He should be able to give proper guidance to parents.
8. He should have the knowledge of community resources: medical, educational, vocational and psychiatric.

The regular teacher may at one time or another have hard of hearing children in his class. He has an important role to play in managing such children in the class. For example:

1. There are behavioural characteristics or symptoms of hearing impairments. The teacher should refer suspected cases or advise parents to consult the specialist doctors for medical treatment.
2. The teacher should attend short term training or orientation course so that he will know the implications of their handicap, understand their educational needs and make necessary adjustments so that such children feel at home in the class.
3. He should develop a positive attitude and show love and affection towards such children,
4. He should arrange seats for them in the front row of the room preferably on one side, so that they get a better view

- of both the teacher and the classmates.
5. He should keep the auditory and visual distracters to a minimum. It should be remembered that environmental noises are also a problem for the child with a hearing aid.
  6. The teacher should try to maintain a distance of about six feet between himself and the child in order to optimize the child's opportunities to speech listening.
  7. The teacher should see that the hearing impaired child uses the hearing aid regularly and that the hearing aid is in perfect condition.
  8. New vocabulary should be introduced both orally and in writing.
  9. The teacher should make every effort to use visual aids in the instructional process.
  10. The teacher should follow the teaching strategies and adapt the curriculum to the needs of the hearing-impaired child.
  11. He should give opportunity to the hearing-impaired child to participate in various co-curricular activities in the class depending on his abilities and interest.
  12. If the regular teacher has difficulty in managing or teaching the child in the class, he should consult the resource teacher and act accordingly.

Providing education and training to the hearing impaired children is a challenge not only to the regular classroom teacher but to special teachers as well. A consistent attempt, monitoring and feedback on the performance of hearing impaired children are needed. The parents and community have also great role to play in accepting such children. Integrated education and the resource room teacher plan are positive steps in bringing hearing impaired to the mainstream. The teacher should deal such children sympathetically and provide adequate positive reinforcement to them.

### QUESTIONS FOR REVISION

1. Describe the meaning and types of hearing impairment. How can hearing impairment be identified?
2. Discuss the problems/difficulties of hearing disabled children. What measures would you suggest to address the educational needs of the hearing disabled children?

## References

<https://www.who.int/news-room/fact-sheets/detail/deafness-and-hearing-loss>