

EDUCATION TO THE HEARING IMPAIRED AND ITS MANAGEMENT: AN ANALYSIS

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INTRODUCTION:

Hearing impaired children have difficulty of hearing either in one ear or both or may not hear at all. Common people generally call them like ‘deaf’, ‘hard of hearing’, ‘deaf-mute’, ‘deafened’, ‘partially hearing’ and partially deaf. Alice Strong said, “The child who is born with little or no hearing, or who has suffered the loss early in infancy before speech and language patterns are acquired is said to be deaf. One who is born with normal hearing and reaches the age where he can produce and comprehend speech but subsequently loses his hearing is described as deafened. The hard of hearing are those with reduced hearing acuity either since birth or acquired at any time during life”. Hearing impairment, normally the following terms are used: (a) Hearing impairment, (b) Hearing disability and (c) Hearing handicap. In the present analysis, the impairment may cause a defect in the hearing due to heredity or environmental factors or both. Because we know, of the impairment, reduces the functional potential of the individual and restricts him/her in the performance of activities of normal children. In this way the disability arises out of impairment. A handicap is restriction imposed upon, or, acquired by the child, which affects the efficiency of child’s day-to-day life. For understanding the above three terms, like impairment, disability and handicap, we may take the help of the following example. A defect in ear drum is impairment. The impairment in the ear drum distorts the process of sound vibration and restricts the normal process of transfer of the message to the middle ear. This distortion has created a disability in hearing and because of this; the child can not enjoy the normal process of hearing sounds. This types of impairment him/her in listening to the sounds.

OBJECTIVES OF THE STUDY:

For critically analysis the hearing impairments, the investigator framed the following objectives:

- To overview the concept and types of hearing impaired children;
- To know the characteristics of hearing impaired;

- To study the identification process of the hearing impaired;
- To analyse the causes of hearing impairment;
- To know the management of education of the hearing impaired.

METHODOLOGY OF THE STUDY:

We know there are different types of methodology for any study. Here the historical method of research/study is used. In the present study and the approach is qualitative in nature. The work has been conducted in the following ways:

- Collection of primary and secondary sources
- Detailed of the reliable and valid sources
- Comparison of different sources
- Making generalization from the sources.

SOURCES OF THE DATA:

Here two Types of data were collected. These were:

- I. Primary sources of Data: Interviewed with the hearing impaired.
- II. Secondary Sources of Data: Different types of books of special education.

DISCUSSION THE OBJECTIVES:

CONCEPT AND TYPES OF HEARING IMPAIRED: Hearing is an auditory perception of sound. The perceived sounds are transmitted by the ear to the nervous system. If there is a defect in hearing mechanisms there is a problem in perception. Any type of impairment in auditory perception causes a hearing impairment. Hearing impairment reduces our knowledge of the world around us. A hearing impairment adversely affects the child's performance in learning. To define the concept of hearing impairment, we need to understand the terms used in it:

- ✓ Hearing impairment;
- ✓ Hearing disability;
- ✓ Hearing handicap

Hearing impairment means the degree of hearing loss or impairment in hearing ability. The term hearing impairment covers both deaf and hard of hearing children. Impairment may be defined as a defect in the hearing due to hereditary and/or environmental factors. Owing to this impairment, the child cannot use his/her hearing for ordinary purposes. Thus, disability arises out of impairment. Because of this, the child cannot enjoy the normal process of hearing sounds. This handicaps a child in hearing.

According to **Federal Register, USA (1977)**, “Deaf means a hearing impairment which is so severe that the child is impaired in processing linguistic information through hearing, with or without amplification, which adversely affects educational performance”.

According to some professionals, the total inability to hear is deafness. But on the other hand, partial impairment in hearing is known as hard of hearing. ‘Hard of hearing’ means a hearing impairment, whether permanent or fluctuating, which adversely affects a child’s educational performance but which is not included under the definition of deaf. Some group of experts have defined hearing impairment under two sub-groups:

- I. **Pre lingual Deaf:** Pre lingual deaf child is one who is born with little or no hearing. His/her hearing impairment is marked before speech and language patterns and acquired.
- II. **Post lingual Deaf:** Post lingual deaf child is he who becomes deaf owing to environmental forces. His/her hearing impairment is marked after he/she has attained speech and language pattern.

The hearing impaired children constitute the majority in the physically handicapped group. The conference of executives of American schools for the deaf has classified them in the following way:

1. **The Deaf:** Those in whom the sense of hearing is non-functional for the ordinary purpose of life. This general group is made up of two distinct classes based entirely on the time the loss of hearing occurred. These include:
 - a) **The congenitally deaf:** Those who were born deaf.
 - b) **The adventitiously deaf:** those who were born with normal hearing but in whom the sense of hearing became non-functional later through illness or accident.
2. **The hard of hearing:** those in whom the sense of hearing, although defective, is functional with or without a hearing aid.

Being dissatisfied with the aforesaid definitions and classifications of loss of hearing, the medical professionals have classified it into five categories. These are given in the table below:

Table-1: Types and levels of hearing loss

Sl. No.	Category	Level of hearing loss in decibels	Educational placement	Special need
1.	Mild	20-30 dB	Required modification in sitting arrangements in Integrated Education for Disabled, IED	Hearing aids.
2.	Marginal	30-40 dB	Auditory training and speech therapies in IED	Hearing aid, speech therapy.
3.	Moderate	40-60 dB	Amplification of auditory material and increased use of visual aids in IED	Adaption of instructional and Methodologies. More visual cues.
4.	Severe	60-75 dB	Special class limited integration	Special attention in learning and speech. Use of special techniques.
5.	Profound	75 and above	Special day school difficult to integrate into academic areas.	Intensive special instructor.

Source: Education of the Exceptional Children, B.K.Shaw, p119

CHARACTERISTICS OF HEARING IMPAIRED:

The hearing loss imposes certain limitations on individual. The nature and severity of these limitations depend upon the type and degree of the hearing loss or handicapped. These limitations cause certain changes in the behaviour of the hearing impairment. The following are some important characteristics of the hearing impaired.

- a) **Well not adjusted in social:** Deaf children find it more difficult to adjust to environment and they have personality such as withdrawal, submissiveness, temper-tantrums. They are jealous to others. They have difficulty in communicating with others. In general, the hearing loss child is puzzled and unhappy in social situations, because he cannot understand what other people are saying.
- b) **Personal and social developmental problem:** Children with hearing loss show some problems in their personal and social development. For them language creates a barrier for normal communication with

other children. This type of barrier obviously plays an important role in the personal and social development of these children. They felt dependence on others and lead to some of inferiority or guilt.

- c) **Personality problem:** Hearing loosed children have some personality problems which have been revealed in certain findings. Partial hearing loss may create less personality problem than the totally deaf children. Partially deaf child gets more frustrated as they try to reach the level of the normal, where as the totally deaf child feels reconciled to his/her face. This type of situations creates different personality problems of the hearing impaired.
- d) **Less academic achievement:** the different studies have revealed that these children are academically inferior to normal as it depends upon language skills.
- e) **Linguistic difficulties:** Language acquisition is difficult for the deaf and dumb child because language is an auditory vocal process. The following are some of the important language characteristics of the hearing impaired children:
- ✓ They possess a high pitched voice with slow and laboured speech;
 - ✓ Distorted or prolonged vowels;
 - ✓ Abnormal rhythm and temporal patterns;
 - ✓ Excessive nasality;
 - ✓ Misarticulating and improper consonant production;
 - ✓ Monotonous voice;
 - ✓ Very limited vocabulary;
 - ✓ Lack of comprehension of complex words, words with multiple meaning concept;
 - ✓ Difficulty in understanding complex structure of language;
 - ✓ Lack of exposure and experience to understand different situations and meaning according to context;
 - ✓ Lack of ability to verbalize abstract feeling like hope, happiness, etc.;
 - ✓ Face problem in sentence construction.
- f) **Psychological characteristics:** Hearing impaired child has some behavioural problems. The child develops an inferiority complex and find himself/herself helpless in adapting to circumstances that require verbal communication. This type of feeling may develop into a poor concept of self which damages his/her healthy growth and development of his/her personality.
- g) **Abnormal emotional behaviour:** A young hearing impaired child shows abnormal emotional behaviour. He/she may have tantrums to call attention to himself/herself or his/her needs. He/she may develop

tensions and resistance owing to lack of comprehension. He is frequently obstinate and has a tendency to tease. He/she gets irritated when he/she cannot make himself understood and he/she may explode with self-vexation.

- h) **Low mental ability:** An auditory defect is liable to cause strain to the impaired child. It also causes universal mental and muscular fatigue. He/she has to learn language in a very laborious manner. In this and in several ways an obstacle is put in the way of his/her intellectual development.

THE CAUSES OF HEARING IMPAIRMENT:

The causes of hearing impaired may be analysed under the following heads:

- a) **Prenatal causes:** It is the period from which the child's growth starts. At this time the probable causes may be:
- The defect in germ plasma, the fertilisation of eggs, implantation and division of cells may affect the growth and development of embryo and foetus. Even infectious diseases like Rubella (German measles), influenza and mumps also affect hearing positively.
 - Some relevant studies have evidenced that an overdose of strong drugs like Streptomycin, quinine and L.S.D are associated with hearing impairment.
 - Maternal malnutrition and unhealthy living conditions such as industrial places also cause learning problems in growing child.
 - Marriage among close blood relatives is observed to produce more hearing-impaired children than other types of parents.
 - Medical scholars have observed that brain fever, the improper growth of the brain or auditory system and brain tumour are some of the neurological causes of hearing-impairment.
- b) **Peri natal cause:** The experiences faced during birth may cause hearing problems. These causes are like this:
- Full time delivery followed by anoxia i.e., lack of oxygen problems;
 - Use of forceps in delivery;
 - Instrumental delivery;
 - Premature delivery followed immediately by jaundice;
 - Use of anaesthetic agents in delivery etc.

- c) **Post natal causes:** The cause of hearing impairment at this stage may be the following:
- Due to infectious diseases like mumps, whooping cough, toxic drugs and faulty development cause hearing impairment.
 - Accidents, severe burns, toxic drugs and faulty development cause hearing impairment.
 - Emotional depression and traumas cause hearing problems that are known as psychological psychogenic problems.
 - Environmental factors like exposure to consistent and continuous high intensity sound cause loss of hearing.
- d) **Sensory Neural Hearing Loss:** Abnormalities in the inner ear or the auditory nerve result in loss of hearing which is rarely amenable to medical or surgical therapy. Use of hearing aids for amplification of sound have also been found to be of limited help, since the sound is conducted properly and the difficulty lies in analysing or perceiving it properly.
- e) **Psychogenic Hearing Loss:** In psychogenic hearing loss, the cause of disorder is psychological. The child often presents greatly exaggerated symptoms of hearing loss. There is often a history of ear infection, which appears to act as a shock organ for localization of the psychic symptom. Often, under stress, the child may unconsciously develop hearing loss as an escape from what according to him is an intolerable situation. It may be rather difficult to distinguish between organic defects and psychogenic losses.
- f) **Etiologic Hearing Defects:** We know, language is a means of communication and it develops in the social content. So the environmental conditions at home, school and play group are very closely related to the language development. We have found very clearly from the language development by children in the orphanage as compared with that shown by children from good families and well-equipped school.

IDENTIFICATION PROCESS OF THE HEARING IMPAIRED:

Today, the early identification of hearing impairment is not difficult. Now owing to advances in technology, it has become easier. There is now every possibility of early identification of mild and moderate cases of hearing impairment. The following are some important and valuable techniques for identifying hearing impaired child.

1. **Development Scale:** To identify hearing-impaired children, it is required to assess their developmental statuses. It helps to establish the child's current status with regard to sensory motor development. In this case 'Bailey Scales of Infant Development' is very much useable. This scale provides a basis for early

diagnosis and corrective action in case of retarded development. Use this scale the auditory impairment can be detected easily.

2. **Medical Examination:** With this technique a general medical history of the child is taken. The functioning and dysfunctioning of various organs related to audition are investigated. A physician wants to study the presence of any auditory deformities having a bearing on the personality disorders.
3. **Neuro-psychological Tests:** An important psychological testing is the assessment of neurological functions. A fair number of hearing-impaired children have additional preceptor-motor deficits due to brain damage or cerebral dysfunction. During assessment the clinician must always be alert for certain signs that may be found in such children. Every signs may be present in any one child.
4. **Case Study:** The case history is usually obtained by a psychiatric social worker from the child or a close relation. The following information should be concluded for the purpose:
 - Identifying data i.e., name, address, age etc.
 - Statement of the presenting problem i.e., symptoms, competent etc.,
 - Health history i.e., illness, serious disease, surgical operations etc.,
 - Developmental history,
 - Family history.
5. **Systematic Observation:** Systematic observation is first developed in connection with studies of young children. This method is an extremely useful one in the assessment of the hearing impaired. For identification, some observable behaviours displayed by such children are as follows:
 - Frequent ear eggs;
 - Turning head on one side to hear better;
 - Unable to follow directions;
 - Requests for repeating instructions, questions, etc.
 - Focusing specially on speaker's lip;
 - Hesitates to participate in group discussions;
 - Displays restlessness and inattention;
 - Displays speech difficulty;
 - Have poor stock in vocabulary;
 - Display over acting or withdrawal behaviour.

MANAGEMENT OF EDUCATION OF THE HEARING IMPAIRED:

Education of the hearing impaired children should aim at eliminating or minimizing their defect besides imparting them practical and academic instruction. This could be done by giving them regular hearing exercises through electric apparatus, keeping them in association with hearing children and encouraging them to understand spoken words. Following some educational facilities which should be provided as hearing impaired need special arrangements:

1. **Method of Teaching:** Following are the three principle methods that have been employed for the teaching of deaf/hearing impaired children.
 - a) **The Manual Method:** according to this method symbolic hand gestures and finger spelling are used for communication. This method thus utilizes natural signs or gestures and gross bodily movements to express ideas.
 - b) **The Oral Method:** It helps in teaching the deaf to speak and read by means of lip movement. It bases communication upon the ability to read speech.
 - c) **The Combined Method:** Most of the institutions for the education of hearing impaired children use this method which combines both, the manual and the oral.
2. **The Specialized Apparatus:** Modern educational technology has invented several amplifying instruments for the education of deaf and hard of hearing children. These instruments surprisingly facilitated hearing and learning processes of deaf children. It has been found that the speaking vocabularies of deaf children improve considerably with the use of amplifiers and other electrical hearing aids.
3. **Speech Training/Reading:** This technique involves the use of speech and speech-reading. Speech-reading is the art of understanding a speaker without hearing by watching the movements of lips and tongue and other facial expressions. Teaching speech-reading to a hearing impaired child involves great labour, patience and fact on the part of both teachers and parents. The teacher should stand in front of these children and speak clearly not by hiding his lips or face. It will help them to learn not through hearing but from the signs and gestures, wrinkles and expressions on the face and forehead which they see children supplement their defective auditory by watching lip movements and facial expressions. The teacher should keep his hands away from his face, so that the lips and the facial expressions can be visible.
4. **Vocational Training:** Besides other formal education, suitable vocational education/training is also helpful for such children. Groht stresses that auditory handicapped children would prove better and more

successful workers in industry if they were given appropriate vocational education coupled with language training at their educational institutions.

5. **Use of Hearing-aid:** The hearing aid is the most important tool in the training and education of a hearing-impaired child. It should be selected according to the pattern of hearing loss and must be used effectively during all the child's waking hours. As it is a delicate and complicated instrument it must be handled carefully and maintained properly to get the best result from it.
6. **Auditory Training:** Auditory training helps a child for the perception of various speech sounds. It makes a child able to distinguish one voice from another. It provides a thorough understanding of the principles of hearing rehabilitation, testing of hearing educational diagnosis, lip reading and speech development.
7. **Nursery Education:** Integrating the hearing-impaired child with the formal educational set up designed for normal hearing children, it is vital for the hearing impaired child to fit into an informal education system like nursery education. Nursery education is of immense help them. It provides a very useful setting for the assessment of the child's need. It increases self confidence and paves the way for the hearing impaired child's successful integration into regular school.
8. **Classroom Arrangement:** The children with hearing impairment should be seated near the for improved listening. The teacher may use a reasonable level of pitch while speaking. The teacher should avoid speaking too fast. While reading from the text books, the teacher's lip should be visible to the children so that they may be able to supplement listening by lip reading. In the same way, when speaking while writing on the blackboard, the teachers should face the students. Teacher may avoid moving when speaking for the same reason. Friends and peers should be encouraged to interact with these children and help each other in learning. Additional visuals aids individually or in groups may be used for supplementing general teaching input.
9. **Parents Responsibility:** The parents are supposed to play the role of a key person in the successful implementation of this programme. The work of integration does not mean putting hearing impaired children into ordinary school. So the successful integration of hearing impaired children may be impossible, unless parents share the responsibility for their children. In order to make the parents interested in this case, a range of different forms of skilled support is needed. The parents may encouraged the child:
 - To speak to the deaf or partially-hearing child as often as possible;
 - To speak clearly;
 - To check on the working condition of the hearing aid;

- To check the thickness of the ear mould.

10. **Role of School and Teacher:** Integration of the hearing impaired child in a regular classroom, it is necessary to orient administrators, head of school, teaching and non-teaching staff members and children in the school. Effort should be made by everybody to extend to the hearing impaired child all possible help and cooperation, so that he adjusts himself without any difficulty to the new circumstances. The teachers will have to modify their style of teaching and adopt an attitude that will help the hearing impaired child to understand class instruction and adjust himself to the new environment. The school and teachers can do the following:

- The teacher should encourage such children to ask questions so that they keep pace with the class;
- The teacher should give more attention to such children in general class;
- They should be encouraged to participate in class discussion;
- As these children become easily fatigued, they should not be engaged for a long time;
- Teacher should encourage the children and appreciate their attempts at speech and not indulge in nagging or criticism;
- The teacher should organise entire programme according to their needs and abilities;
- There is some degree of rejection by his class-mates. Teacher should create the situation where there will be free participation among their class mates;
- Teacher should create climate where there will be no such unhealthy competition.
- To allow such children to sit in the first row of the class and the distance between the teacher's table and first row should not be exceeded to ten feet;
- To write the important words on the black board during teaching;
- To use more visual aids for better understanding of the children;
- To keep background noise level low in the classroom;
- To call such children by name;
- To speak full sentences during teaching;
- Too much gestures should not be used by the teacher;
- To use projector at the time of need;
- To ask question to such children like others;
- To provide more visual clues;
- To explain clearly the meaning of technical words;

- To follow role playing and dramatization method of teaching;
- To use holistic method for teaching language skills;
- Teacher should help the hearing impaired children for their proper adjustment with their fellow students.

CONCLUSIONS:

It is a fact of experience that great progress has been made in the education of the hearing impaired. During recent days that progress has been accelerated with the aid of medicine, psychology and electronics. As a result, we better understand the types of impairment and its impact on the child. We are better able to measure a hearing loss and to bring the spoken word to children, who were formerly without it and we have to upgrade the quality of research work, teacher education programme, classroom instruction and pupil achievement. To achieve success to the programme of education of the hearing impaired we should take necessary steps in integrating education of the hearing impaired with the normal children.

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