

# **QUIZ ON AWARENESS OF HEARING-IMPAIRMENT FOR PARENTS**

**REG.No.M9517**

**AN INDEPENDENT PROJECT SUBMITTED AS PART FULFILLMENT OF FIRST YEAR M.Sc.  
(SPEECH AND HEARING) TO THE UNIVERSITY OF MYOSRE, MYSORE**

**ALL INDIA INSTITUTE OF SPEECH AND HEARING  
MYSORE 570 006  
MAY 1996**

DEDICATED TO

**Dad and Mom**

For you both have moulded me into what I am today

**Never to forget**

My Yesterday

My Today


My Tomorrow

- is all indebted to you

**CERTIFICATE**

This is to certify that the Independent Project entitled - **QUIZ ON AWARENESS OF HEARING-IMPAIRMENT - FOR PARENTS,** is a bonafied work in part fulfillment for the First Year M.Sc, in Speech and Hearing of the student with Reg. No. **M9517.**

Mysore  
May 1996

  
**Director**  
All India Institute of  
Speech and Hearing  
Mysore 6

**CERTIFICATE**

This is to certify that the Independent Project entitled - **QUIZ ON AWARENESS OF HEARING-IMPAIRMENT - FOR PARENTS,** has been prepared under my supervision and guidance.

Mysore  
May 1996



**GUIDE**

Dr. (Miss) S. Nikam.

## DECLARATION

This Independent Project entitled - **QUIZ ON AWARENESS OF HEARING-IMPAIRMENT - FOR PARENTS**, is the result of my own study undertaken under the guidance of Dr. (Miss) S. Nikam,. Professor and Head of the Department of Audiology, All India Institute of Speech and Hearing, Mysore, and has not been submitted earlier at any University for any other Diploma or Degree.

Mysore  
May 1996

Reg. No.9517

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To my brothers (R, S, S, A)

"I wonder if you all know how important you all are to me, it's great to know that I can always count on you all to care and understand".

To my Pallu,

Thanks for being there for me,  
when I needed you,  
I know not what of have done,  
to deserve you.

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"Every cloud has a Silver lining". You all  
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**CHAPTER I**  
**INTRODUCTION**

Man has been bestowed with wonderful gifts from nature. The gift of thinking, the gift of speech, the gift of smelling and last but not the least, the gift of hearing.

This hearing apparatus of man not only enables him/her to listen to others but to monitor ones own speech. Thereby using the speech system and hearing apparatus, man has established a system of communication. "The ability to speak and the precious gift of language is peculiar to man, and it is this wonderful faculty, which, by enabling him to speak and to listen to others' thoughts and ideas, has made him supreme in the kingdom of living creates" - Sir Terranc Cawthorne, (1956).

Our ideas, thoughts and feelings are communicated to others by verbal and nonverbal means although the former is more commonly used. Thereby if the hearing sense is affected, communication by speech is affected and the chain of interrelationship continued. Hence, the hearing-impaired will have to depend on other modes of communication.

**"Prevention is better than cure".** If one has to prevent, one should have an awareness of the impinging harm. It is the common-man who is ignorant of this, especially the parents of the normal hearing children. Parents of the hearing-impaired fail to realize that conditions such as otitis media - characterized by ear discharge, or a fall from a height can further damage their child's hearing. There is a need for increasing awareness regarding the fact that a child who has not fully developed speech, if acquires hearing loss, their speech is likely to be affected. Infact even deafness acquired postlingually can lead to speech regression.

The question that now arises is "if ones child has hearing loss since birth (Congenital), what can one do about it?" The rule of thumb is to start off immediately with the rehabilitation of the hearing-impaired child. Although compensatory normalcy cannot be established, one can fit them with a compensatory aid, in order to ease their lives.

The parents of the normal hearing children, appear to have little information on hearing aid and its usage. However, the question often arises as to how many parents of

the hearing-impaired know what a hearing aid is all about. A study was done by Blair (1981) on the awareness of parents of hearing-impaired about a hearing aid. Results indicated that 61% of the parents of hearing-impaired had little information on hearing aid usage.

Those days have gone, when any disability was considered as a curse from God for ones sins. With development in science, this attitude has changed. Nevertheless, in our country there is a prejudice that "the hearing-impaired cannot do well academically, or be integrated into a normal classroom'. It has been found that parents of normal hearing children object to a hearing-impaired child being integrated into a normal classroom. They feel the hearing-impaired child may distract, disturb other children. As audiologists, we know that the above statements are to be negated. Nevertheless, it draws our attention to the fact that there is a need to spread awareness on these lives for both parents of normal hearing and parents of the hearing-impaired children.

This project is an attempt to highlight on a few important factors, namely -

- 1) The awareness of parents of normal hearing and parents of hearing-impaired on different aspects of hearing loss its causes, rehabilitation, and attitudes of parents towards the hearing-impaired.
- 2) To increase the awareness of parents (of normal hearing and hearing-impaired) on the causes of hearing loss, rehabilitation and attitudes towards the hearing-impaired.

A need for this study can be justified on the basis of the points given below :

- 1) The role of parental and family involvement in effective management cannot be over stressed. Parents form the backbone of many a successful program (Heber and Garner, 1970; Greenstein, et al. 1970; McConnel and Horton, 1970; Green, 1976 and Quigley, 1977).

Becker (1976) analysing the personality characteristics of parents of deaf children who detected the handicap early and who did it later, proposed that "in addition to being desirable for the child's development early detection... also helps the parents to adjust move realistically to the hearing loss and its implication for the functioning of the

family". Thereby indicating a need to spread awareness on causes of hearing loss.

2) There have been reports in literature on the lines that the hearing-impaired generally have problems using their hearing aids and that parents contribute to their lack of success (Fellend, 1975; Gregory, 1976; Karrchmer and Kienuin, 1977). It has been suggested that either directly or indirectly, the parents of hearing-impaired have not understood the use of hearing aids and do not give the kind of support necessary to motivate their children to use amplification appropriately.

Blair et al. (1981) found that 50% of parents of hearing-impaired had little or no information about their child's hearing loss and 61% of parents of hearing-impaired had little or no information on hearing aid use.

Thereby indicating the need to study the awareness that exists on these lines and to improve the awareness.

3) A belief that exists even today, is that the hearing-impaired cannot be mainstreamed. Nober et al. (1980)

have stated that qualified deaf high school graduates can continue their education successfully as mainstreamed college or university students in a regular institution provided it offered special services to the deaf students and the academic community.

Hence, with every right to academic facilities they are deprived of it due to negativistic attitudes on the part of parents of normal hearing children. As individuals of the field of rehabilitation there arises a need to increase awareness on mainstreaming the hearing-impaired children.

4) There have been Indian studies (Roopa, 1993) on the "survey of Awareness on Hearing-Impairment". However, these studies focused on comparing professionals. There has been no study comparing parents of normal hearing children with parents of hearing-impaired thereby indicating the need for the present study.

**CHAPTER II**  
**METHODOLOGY**

The methodology can be broadly divided into 3 categories, viz.

- a) Preparation of a questionnaire
- b) Selection of subjects
- c) Test administration

**Preparation of the questionnaire**

In order to find the awareness, a simple but valid questionnaire had to be prepared. It includes questions that covered information which the public ought to be aware of. The questions were classified into three main categories, namely -

- i) Causes of hearing loss
- ii) Rehabilitation of the hearing-impaired
- iii) Attitude towards the hearing-impaired.

**Requisites of the questionnaire**

The questions were prepared such that -

- i) they do not incorporate technical terms

ii) should be answerable in Yes/No fashion or by multiple choice

iii) should not be ambiguous

These questions were then handed over to five professionals and five post-graduate students in speech and hearing, for appropriateness of the questions, whether there were any ambiguities, suggestions were given in respect of questions. Their suggestions had been taken into consideration and the final questionnaire was prepared.

**Following are the questions under each category :**

**1) Causes of hearing loss:**

This was broadly classified as congenital and acquired. Under congenital, genetic causes were included. Under acquired conditions of hearing loss were included questions such as slap on the face, viral and bacterial diseases.

The questions served the purpose of spreading awareness for prevention of hearing loss. The questionnaire is given in the appendix. The questions included under causes are listed below:



- |   |        |
|---|--------|
| 1. A child is born with hearing loss, could there be a family history of hearing loss?  | Yes/No |
| 2. A pregnant woman has been exposed to X-rays, can has child be born with hearing-loss?  | Yes/No |
| 3. A pregnant woman has taken drugs for diseases such as tuberculosis), can the child have hearing loss?  | Yes/No |
| 4. Injury to the newborn child due to forceps delivery breech delivery etc. can cause hearing loss?   | Yes/No |
| 5. Viral or bacterial infections (such as mumps) can cause hearing loss in an infant?   | Yes/No |
| 6. Is fluid from the ear (a condition called otitis media) an indication for hearing loss?  | Yes/No |
| 7. A child is born with hearing loss. He/She should be protected from conditions that could worsen their hearing (such as further ear infections, intake of drugs that could lead to hearing loss). | Yes/No |
| 8. An individual gets a slap on his/her face or has had a fall (eg, tree, motorbike) can he/she get hearing loss?   | Yes/No |
| 9. Loud sounds like crackers, can damage the hearing of normal hearing person.  | Yes/No |

## **2) Rehabilitation of the hearing-impaired**

The hearing-impaired, have lost their ability to hear, yet they have the ability to learn. Thereby, they are entitled for proper educational facilities. Good schooling either in a special school or in a normal school can help build their future. Depending on their educational

abilities and aptitudes they can enter professional courses too.

In order to check, if people are aware of the above mentioned facts, the following questions were framed:

1. Hearing loss can be detected at better by a professional (Audiologist) Yes/No
2. A child is deaf, do you think there are devices (other than a hearing aid/that can help a deaf child) Yes/No
3. The pocket type hearing aid worn most commonly by the hearing-impaired in India ranges in cost from
  - a) Rs.300-Rs.400
  - b) Rs.600-Rs.650
  - c) Rs.1500-Rs.2500
4. The more severe hearing loss, more powerful is the hearing aid required. Yes/No
5. A hearing aid must be worn :
  - a) Throughout the day
  - b) Throughout the day except cutule sleeping and bathing
  - c) Only when you need to hear
6. A hearing aid user has to wear the hearing aid
  - a) Throughout his life
  - b) Use it for sometime and discard it
  - c) Use it till they get an aid that can benefit them
7. A hearing-impaired child should be given training in speech and language if he/she is to begin to speak. Yes/No
8. A hearing-impaired should be trained to hear verbal (speech sounds) and non-verbal sounds (such as door knock, vehicle sounds). Yes/No

- |   |        |
|---|--------|
| 9. The hearing aid should be given for servicing once in a year.  | Yes/No |
| 10. Along with a trained personnel (speech therapist) parents play an important role in teaching the hearing-impaired to speak. | Yes/No |

**3) Attitudes towards the hearing-impaired**

Attitudes are the reactions towards a person in a given situation. If a person is not normal, people react in different ways, some may have sympathy, some have empathy and some may show rejection. A positive attitude is what they need. An encouragement to help them to grow and make their independent contributions to the society. Depending on their exposure or experience with the hearing-impaired people have certain attitudes.

The following set of questions were directed to probe into the attitudes of the parents of the hearing-impaired and normal hearing children:

- |  |        |
|--|--------|
| 1. A hearing-impaired child can be admitted to a school for normal hearing children. | Yes/No |
| 2. Your child has a friend who is hearing-impaired, you will -                       | Yes/No |
| a) Let your child play and study with the hearing-impaired child.                    |        |

- b) Limit your child's interactions.
3. A hearing-impaired child is admitted to a school for normal hearing child. The hearing-impaired child will -
- a) Disturb other child of the same class
  - b) Will not perform well in studies.
  - c) Could perform well in studies.
4. If a child is hearing-impaired do you think he can make use of higher educational facilities? Yes/No
5. Are there schools especially meant for the hearing-impaired. Yes/No

### **Selection of Subjects**

Two groups were taken as subjects i.e. the parents of normal hearing children and parents of the hearing-impaired. The number of subjects in each group were fifteen each. A random selection of parents were done in both the groups, so as to facilitate a fairly good representation of the population. However, the subjects due to closeness were selected from different areas of Mysore City.

### **Test Administration**

The questions were prepared, the subjects were selected. The next step was that of data collection for analysis. The questionnaires were distributed personally to

the subjects. Since the answers are just on Yes/No format or multiple choice, the whole process of answering took not more than thirty minutes. After the questionnaires were obtained back scoring was done as follows. Every right answers was scored '1' and every wrong answer was scored zero. The above statement about the accuracy of the answers holds good only for categories like causes and rehabilitation. For attitudes - it was purely subjective but score one was given to every positive attitude and zero was scored for a negative attitude.

Since the categories were clear in the questionnaires, total scores for each category were taken for both groups of subjects:

Eg.	Causes	Rehabilitation	Attitudes
Scores of parents of hearing-impaired	9/9	10/10	3/5

The mean for each group under each category was calculated. It was then converted into percentage.

**Statistical analysis used in the study is as follows:**

- i) The mean helped in comparing the average performance of the groups with each others.
- ii) The scatter of scores had been found by the range and standard deviation of the scores.

## CHAPTER III

### RESULTS

From the response of the subjects to the questionnaire, the following results were obtained. The results have been given under each category namely : causes of hearing loss, rehabilitation and attitudes.

#### 1) Causes:

Table-1 gives the mean and percentage values for causes of hearing-impairment among parents of normal hearing and hearing-impaired children, along with the standard deviations from the mean and range.

	Parents of hearing-impaired children	Parents of normal hearing children
Mean	6.6	6.1
Percentage	73.33%	67.77%
Standard Deviation	1.68	1.37
Range	3-9	3-9

The above results on awareness on causes of hearing loss indicate the following :

- i) Parents of the hearing-impaired children had greater awareness than parents of normal hearing children on causes of hearing loss, the difference, however, was only 0-5.
- ii) In general, it was seen that questions on genetic causes of hearing loss and inuterine causes of hearing loss yielded poor scores as compared to other common causes for hearing loss - such as otitis media and viral infections.
- iii) The scatter of scores about the mean was greater for parents of hearing-impaired children than for parents of normal hearing children showing a greater variability of scores in the formal group.
- iv) The range across which the scores were scattered was same for both the groups.

Thus, in Public Education Programs more attention has to be given towards spread of awareness on the genetic and inuerine causes of hearing-impairment. Along with this, the spread of awareness should be for both parents of the hearing-impaired and parents of normal hearing children.

## 2) Rehabilitation:

Table-2 gives mean and percentage values of the awareness on rehabilitation of hearing-impaired among parents of normal hearing and hearing-impaired children with the standard deviations from the mean.

---

	Parents of hearing-impaired children	Parents of normal hearing children
Mean	8.3	7.3
Percentage	83%	73%
Standard Deviation	3.62	1.70
Range	6-10	3-10

---

### The above results indicate the following:

- i) The parents of the hearing-impaired had greater awareness than parents of normal hearing children on the rehabilitation of the hearing-impaired.
- ii) In general, both the groups had greater awareness or rehabilitation of the hearing-impaired than on causes of hearing loss as indicated by the higher mean score obtained by both groups.



- iii) The parents of the normal hearing children were not aware of the availability of other devices for the hearing-impaired such as the frequency modulated systems and group amplification devices.
- iv) Among the parents of the hearing impaired awareness on the availability of other types of aids for the hearing-impaired was low.
- v) Among parents of normal hearing children only 8 of the 20 parents, were aware of the approximate cost of a hearing aid.
- vi) The standard deviation from mean was greater for parents of hearing-impaired than for parents of normal hearing children.
- vii) The range was greater for parents of normal hearing children than for the parents of the hearing-impaired in children.

The reason for better performance in this category could be due to the location of the Institute in Mysore and its extensive Public Education Programs.

### 3) Attitudes:

Table-3 gives mean and percentage values for attitudes towards the hearing-impaired among parents of normal hearing and hearing-impaired children with standard deviation from mean.

Table-3 Attitudes towards the hearing-impaired.

	Parents of hearing-impaired children	Parents of normal hearing children
Mean	4.65	4.3
Percentage	93%	86%
Standard Deviation	2.0	0.50
Range	3-5	2-5

The above results gives us information on the following aspects -

- i) The highest scores were got for this category indicating a positive attitude towards the hearing-impaired children by both the groups.
- ii) Parents of the hearing-impaired had a greater positive attitude than parents of normal hearing children.

- iii) Among the parents of the hearing-impaired, five of the twenty parents, had indicated towards limiting their child's interaction with a hearing-impaired child.
- iv) On the other hand, the parents of the normal hearing children had reservations on the hearing-impaired child's academic capabilities.
- v) The standard deviation from mean was greater for parents of normal hearing children.
- vi) The range of scores was greater for parents of the normal hearing children than for parents of hearing-impaired children.

Nevertheless both the groups have a positive attitude towards the hearing-impaired, that needs to be reinforced by extensive Public Education Programs.

These results indicate that the awareness on causes of hearing loss are limited and has to be enhanced. Regarding rehabilitation and attitudes, the awareness has to be reinforced.

This implies that much more has to be done by way of Public Education Programs to help the public have better information regarding causes of hearing loss, the potential of the hearing-impaired and aural rehabilitation.

## CHAPTER IV

### DISCUSSION

On the whole this questionnaire has helped in giving valuable information regarding awareness on three main aspects of hearing loss namely-causes of hearing loss, rehabilitation of the hearing-impaired and attitudes towards the hearing-impaired.

Regarding the awareness on causes of hearing loss, the parents of the hearing-impaired had greater awareness than parents of the normal hearing children. On average, 60% of parents of hearing-impaired had awareness on causes of hearing loss. This finding is in accordance with reports in literature (Blair, 1981) wherein it was found that only 50% of parents of hearing-impaired had knowledge about their child's hearing loss and causes of hearing loss. Among both the groups the awareness on genetic and in utero causes of hearing-impairment was low. This could be the reason for poor performance and no significant difference between the performance of the two groups. Another reason for near equal performance between two groups could be because the parents of the hearing-impaired had greater awareness on the acquired causes of hearing loss. However, the performance

of parents of the hearing-impaired children matched with the parents of normal hearing children on awareness on congenital causes of hearing loss.

Regarding the awareness on rehabilitation of the hearing-impaired, the parents of the hard-of-hearing performed superior to parents of normal hearing children. However the parents of the hard-of-hearing scored less on questions regarding the types of hearing aid and hearing aid maintenance. This is in accordance with study by Fellend et al. (1975), wherein they reported that parents of hard-of-hearing have either directly or indirectly not understood the use of a hearing aid. One reason for the poor performance of parents of hearing-impaired children on questions regarding the types of hearing aid could be because they tended to answer the questions with respect to their child's hearing aid. The reason believed good performance by parents of normal hearing children could be because of their placement in Mysore city. The parents of normal hearing children had little awareness on the different kinds of hearing aids used by the hearing-impaired. Their awareness was restricted to the body level hearing aid. This could be because of the fact that in one country more of body level hearing aids are used compared to other types of hearing aids.

Regarding, the attitude of parents of hearing-impaired children and normal hearing children, both the groups had a positive attitude towards the hearing-impaired. Although high scores were got, 100% scores were not got in either group. The parents of the hearing-impaired children did not want to integrate their child with regard to the social and academic problems that could be faced by hearing-impaired child. On the other hand the parents of the normal hearing children had doubt regarding the academic performances of the hearing-impaired child. The parents of normal hearing children had no reservations about their child's interaction with the hearing-impaired children. Thereby the results indicated towards the doubts regarding their academic performance. These findings support other studies in literature, that though the qualified deaf children can continue their education successfully often they are deprived it owing to the negativistic attitudes of parents of normal hearing children.

This questionnaire has thus served two purposes. On the one hand, it has served the purpose of determining the awareness that already exists and also to spread awareness among the public. Hence, the questionnaire can also be used

as a public education pamphlets along with other materials for public education.

The subjects also opined that the questions had helped in gaining more information about hearing-impairment. Hence there is a need for more number of such programs to be conducted among the general public.



## SUMMARY AND CONCLUSION

A questionnaire was prepared to determine the awareness on hearing-impairment. The questionnaire was given to 20 parents of normal hearing and 20 parents of hearing-impaired children. Results indicated that this questionnaire is useful in assessing the awareness of hearing-impairment and can be used as a public education pamphlet.

The results obtained indicate that -

- i) The awareness on causes of hearing-impairment, was greater among parents of hearing-impaired children, when compared to parents of normal hearing children. However, the difference was not significant.
- ii) Both groups of parents are well aware of the rehabilitation of the hearing-impaired and it needs to be reinforced.
- iii) Both groups of parents have a positive attitude towards the hearing-impaired, which will help in integrating the hearing-impaired children.

## SUGGESTIONS FOR FURTHER RESEARCH

There are some areas of hearing aid use on which there is not much information till date. These could be studied in order to supplement existing knowledge some of these are given below:

- 1) A hearing-impaired person usually uses his hearing aid life-long. It is a known fact that the hearing-impaired are more aware that the hearing-impaired are more aware of the handicaps of hearing loss than the rest of the population. However, no research has been done on awareness and performance of hearing-impaired individuals after particular period of hearing aid use. This could be studied by determining the awareness on hearing aid use on individuals who have used a hearing aid for a period of 5 years and compare their performance as against those who have use a hearing aid for 10 years and 5 years. It is to be ascertained if refresher programs are indicated in the care and maintenance.
- 2) A hearing aid requires proper care and maintenance if it has to maintain a good performance throughout its life. Many a times, a hearing aid user discontinues using a

hearing aid owing to the breakdown of the device, due to its improper maintenance and use. The awareness of hearing aid users with respect to care and maintenance of their hearing aids would be a prospective topic for research.

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## APPENDIX

Dear parents,

We have taken up a study on "QUIZ on Awareness of hearing-impaired for parents". Questions putforth are under 3 broad headings - Causes of hearing loss, Rehabilitation aspects, attitudes of parents to the hearing-impaired. You are hereby requested to co-operate, and put a tick on the appropriate choice.

1. A child is born with hearing loss, could there be a family history of hearing loss Yes/No
2. A pregnant woman has been exposed to x-rays, can her child be born with hearing loss? Yes/No
3. A pregnant woman has taken drugs for diseases (such as tuberculosis), can her child have hearing loss? Yes/No
4. Injuries to the newborn child due to forceps delivery, breech delivery etc. can cause hearing loss. Yes/No
5. Viral or bacterial infections (such as mumps) can cause hearing loss in an infant. Yes/No
6. Is fluid from the ear (a condition called otitis media) an indication for hearing loss? Yes/No
7. A child is born with hearing loss. He/she should be protected from conditions that could worsen their hearing (such as further ear infections, intake of drugs that could lead to hearing loss). Yes/No
8. An individual gets a slap on his/her face or has had a fall (eg. tree, motorbike) can he/she get hearing loss. Yes/No
9. Loud sounds like crackers can damage the hearing of a normal hearing person. Yes/No
10. Hearing loss can be detected at birth by a professional (Audiologist) Yes/No

11. A child is deaf, do you think there are other devices (other than a hearing aid) that can help a deaf child? Yes/No
12. The pocket type hearing aid worn most commonly by the hearing-impaired (in India) range in cost from
- (i) Rs.300-400
  - (ii) Rs.600-650
  - (iii) Rs.1500-2500
13. The more severe the hearing loss, more powerful is the hearing aid required. Yes/No
14. A hearing aid must be worn:
- a) Throughout the day
  - b) Throughout the day except while sleeping and bathing
  - c) Only when you need to hear.
15. A hearing aid user has to wear the hearing aid:
- a) Throughout his life
  - b) Use it for sometime and discard it.
  - c) Use it till they get an aid that can benefit them.
16. A hearing-impaired child should be given training in speech and language if he/she is to begin to speak. Yes/No
17. A hearing-impaired child should be trained to hear verbal (speech sounds) and non-verbal sounds (such as door knock, vehicle sounds). Yes/No
18. The hearing aid should be given for servicing once in a year. Yes/No
19. Along with a trained personnel (Speech therapist), parents play an important role in teaching the hearing-impaired to speak. Yes/No
20. A hearing-impaired child can be admitted to a school for normal hearing children. Yes/No
21. Your child has a friend who is hearing-impaired, you will:
- a) Let your child play and study with the hearing-impaired child.
  - b) Limit your child's interactions.

22. A hearing-impaired child is admitted to a school for normal hearing child.  
He/she will:

- a) Disturb other child of the same class.
- b) Will not perform well in studies.
- c) Could perform well in studies.

23. If a child is hearing-impaired do you think he can still make use of higher educational facilities?

Yes/No

24. Are these schools specially meant for the hearing-impaired?

Yes/No

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