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# Indian Streams Research Journal

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## A COMPARATIVE STUDY ON THE SECONDARY TEACHERS KNOWLEDGE ABOUT THE CAUSES OF HEARING IMPAIRMENT IN KAKDWIP, WEST BENGAL



**Palash Dutta<sup>1</sup>, Saikat Das<sup>2</sup>, Buddhadeb Giri<sup>3</sup>, Kishore Kumar Saha<sup>4</sup> and Pavan Prajapati<sup>5</sup>**

<sup>1</sup>Lecturer, Speech And Hearing, Ali Yavar Jung National Institute For The Hearing Handicapped, Eastern Regional Centre, Kolkata.

<sup>2</sup>Lecturer, Education, Ali Yavar Jung National Institute For The Hearing Handicapped, Eastern Regional Centre, Kolkata.

<sup>3</sup>Graduate Trainee In Bachelor In Education, Sede (Hi), Nsou

<sup>4</sup>Teacher Supervisor, Ali Yavar Jung National Institute For The Hearing Handicapped, Eastern Regional Centre, Kolkata.

<sup>5</sup>Graduate Trainee In Audiology And Speech Pathology, Ali Yavar Jung National Institute For The Hearing Handicapped, Eastern Regional Centre, Kolkata.

### ABSTRACT :

A person who is not able to hear as well as someone with normal hearing thresholds of 25dB 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. "Hard of hearing" refers to people with hearing loss ranging from mild to severe. They usually communicate through spoken language and can benefit from hearing aid, captioning and assistive

listening devices. People with more significant losses may benefit from cochlear implants. A hearing loss occurs when there is poor development, injury, infection or degeneration in any part of hearing system. A hearing loss can be partial or total, temporary or permanent in one ear or both ears. A unilateral loss often goes unnoticed but may have still significant educational ramifications. The need of the study was that teachers are able to contribute to change in education.

The aim of the study was, to compare secondary teacher's knowledge between male and female, graduate and post graduate and between below 5 years experiences and above 5years experience teachers knowledge about the causes of hearing impairment. The main area of the researchers study was prenatal, natal and post natal causes of hearing impairment.

The scoring was done, every participant will get one mark for each right answer and zero marks for each wrong answer.

The result was found that female teachers was more knowledge than the male teachers, post graduate teachers was more knowledge than the graduate teachers and 5years experience teachers was more knowledge than the below 5years experience teachers about the causes of hearing impairment.

**KEYWORD:** hearing impairment, prenatal, natal, post natal

## **INTRODUCTION:**

Hearing and deafness: A person who is not able to hear as well as someone with normal hearing- hearing thresholds of 25dB 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. They usually communicate through spoken language and can benefit from hearing aid, captioning and assistive listening devices. People with more significant 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. A hearing loss occurs when there is poor development, injury, infection or degeneration in any part of hearing system. A hearing loss can be partial or total, temporary or permanent in one ear (unilateral/monaural) or both ears (bilateral/binaural). A unilateral loss often goes unnoticed but may have still significant educational ramifications. Regardless of the cause, hearing loss falls into the following categories depending on the part of ear that's affected.

**Conductive hearing loss-** When the structures in the outer ear and middle ear do not work properly, their ability to conduct sound vibrations to the inner ear is affected. Conductive hearing loss can cause build-up of wax in the external auditory canal ,a punctured eardrum or any infection often in middle ear and outer ear. The tiny bone can immobilized and loss their ability to vibrate. Conductive hearing loss can often be surgically or medically corrected.

**Sensori-neural hearing loss-** When the inner ear does not properly process the sound vibrations, messages can't be passed on normally to the brain this is called sensori-neural hearing loss. It can result from genetic defects, a severe infection such as mumps or meningitis ,a head injury, certain medicines, abnormal growth in the ear, aging or even from a very loud noise that damage the cochlea. This type of hearing loss usually cannot be reversed by medical or surgical means and is therefore permanent.

**Mixed hearing loss-** When a combination of Conductive and Sensorineural hearing losses occur is

called mixed hearing loss. Degree of hearing loss: The degree of hearing loss refers to the severity of loss. The table below shows one of the more commonly used classification systems. The numbers are representative of the patient's hearing loss range in decibel.

Degree of hearing loss	Hearing loss in dB HL
Normal	-10 to 15
Minimal	16 to 25
Mild	26 to 40
Moderate	41 to 55
Moderately severe	56 to 70
Severe	71 to 90
Profound	90 above

#### **Educational impact of hearing loss:-**

- Delayed speech and language development
- Poor attention skills
- Difficulty in following direction
- Delayed social skills
- Difficulty in localizing sound
- Poor recognition skills
- Problems with phonetic awareness
- Decreased background knowledge
- Problem with phonetic awareness, which can result in reading delays
- Poor organizational skills
- Fatigue

#### **Role of regular teachers for helping students with hearing impairment:-**

- Regular school teacher, primary duty is to send every child with hearing impairment to school.
- They should create such environment by which hearing impaired children and normal children can play and communicate with each other.
- They should place a disabled child in such place by which disabled student can hear and observe the teacher clearly and teacher also observe them clearly.
- They should determine the aspect of hearing problem and try to solve the problem carefully.
- They should give extra time except school hours if necessary.

#### **Educational Adaptations and Strategies:-**

Teachers need to make special considerations when teaching hearing-impaired children. Much of the consideration involves common sense that sharpens through close collaboration with the student, the student's family, and the speech language pathologist (SLP). The student and student's family can certainly offer the teacher support on a daily basis through constructive criticism of what is or isn't working for the child in the classroom. The following are suggestions by Hall, Oyer, & Haas (2001) for teaching hearing-impaired children:

- Ensure the child has an optimal hearing and listening environment in the classroom.
- There should be minimal distance between the teacher and the child to facilitate lip-reading.
- Face the child during all oral communication.



- Ensure there is good lighting to reinforce clear sight of visual aids.
- Don't exaggerate pronunciation as this will deter understanding.
- Use as much visual information as possible to reinforce auditory information provided.
- Keep environmental noise to a minimum to keep from interfering with listening devices and
- Teachers should frequently check to see that the listening devices are working properly.

Teachers need to be sensitive to the social, academic, and emotional challenges a child with hearing loss has in any given day. Extra energy is required in interpreting information through lip-reading that would otherwise be simply heard by children without a hearing loss. There are extra steps in processing audio information that a hard of hearing student needs to take in order to fully comprehend. The student with a hearing device will use more energy in having to concentrate on sound from a direct source like a teacher while blocking out environmental noise like the humming of lights or air conditioners. A student with hearing loss will therefore expend much more energy coping than a student without hearing loss.

Teachers need to be sensitive to the reality that there is usually more than one visual thing happening at one time like a teacher talking while expecting students to take notes of the lecture. Expecting a hearing impaired student to read lips and take notes at the same time is not realistic. The main notes could be provided to that student beforehand so that the student can focus on lip reading the lecture. Volunteer note takers could be assigned to support hearing impaired students in the higher grades or university where note taking is done on a daily basis. Many hard of hearing students will also be required to take more work home to prepare themselves for class material to be covered the next day.

Hall, Oyer, and Haas (2001) suggest that teachers support hard of hearing students by frequently checking to ensure the child understands information provided in class. They provided an alternative suggestion in assigning a hearing peer to assist the hearing impaired child to be an active participant in school activities for those times the teacher is preoccupied with other students. Another suggestion was for the teacher to "learn to read" the child's facial expressions in order to have feedback about his/her understanding of material presented. This particular suggestion takes some time as the teacher gets to know the student better. In cases when the student doesn't understand what was said, rephrasing with additional words relevant to what you want to say can provide cues to aid speech comprehension. "When rephrasing, use words central to the main idea of the communication. For example, if you are saying, "You can get your coat from your locker now," and the student doesn't understand, you could say, "Everyone is getting ready for the bus; you can get your coat from your locker now" (Kaveravek, 2002).

Schools haven't extensively addressed environmental noise in the classroom despite research revealing classroom acoustics as a problem. "Too many classrooms have been found to be excessively noisy and not appropriate for the learning of a hearing-impaired child using amplification" (Ross, Brackett, & Maxon, 1991; Crandell, & Smaldino, 1996). Background noise proves to have the greatest effects on the hearing ability of children with mild hearing losses (Anderson, 1999). Therefore, teachers need to be acutely aware of their teaching environment and adapt accordingly if possible. Adaptations can start with basic things like ensuring heating and air conditioning systems, fans, and lights are all working properly to alleviate unnecessary vibrations or hums in the class (Kaderavek, 2002). Anything the teacher can use to absorb noise in the classroom becomes an asset for a hearing-impaired child.

Teachers need to maintain close communication with the SLP in order to receive guidance and consultation that can help in increasing the child's success in the classroom. "The teacher should be fully informed about a hearing-impaired child's performance standards and potential" in order to

develop a program with realistic goals for the child to achieve (Hall, Oyer, & Haas, 2001,).

Hearing impaired students face many challenges in our audio saturated world. Educators need to be aware and sensitive to those challenges when developing school programs. Ignorance of these challenges only leads to frustration for the hearing impaired student that could lead to classroom management problems for the teacher. Environmental noise is one of those challenges that schools need to address more seriously because it interferes so much with support for hearing-impaired students.

Teacher awareness comes from maintaining close communication with the student, the parents, the SLP, and community agencies. This communication is imperative in developing proper support services for the child.

Overall, there has been substantial progress in assistive technology and support services that offer hearing impaired people and organizations a much wider range of options to choose from when designing therapeutic goals to facilitate their lives.

The need of the study was that teachers are able to contribute to change in education. "Changing teachers" attitudes to allow educational change depend upon some transformation in teachers' beliefs, knowledge, attitudes and practices. This knowledge then has an impact on classroom activities which, in turn, have an effect on the successful implementation of a change in practice. It is important to investigate teacher's knowledge and skills.

The aim of the study was, to compare secondary teacher's knowledge between male and female about the causes of hearing impairment, to compare secondary teacher's knowledge between below 5 years experiences about the causes hearing impairment, To compare secondary teachers knowledge between the graduate and post graduate about the causes hearing impairment. There are three hypotheses postulated.

1. There will be a significant difference in knowledge between regular secondary male and female teachers about the causes of hearing impairment in KAKDWIP.
2. There will be significant difference in knowledge between regular secondary graduate and post graduate teachers about the causes of hearing impairment in KAKDWIP.
3. There will be a significant difference in knowledge between regular secondary below 5years experience and above 5 years experience teachers about the causes of hearing impairment in KAKDWIP.

#### **METHODOLOGY:-**

**Sampling:-** For this study 30 regular teachers have taken purposively from 6 different regular schools in KAKDWIP as sample.

#### **Selection criteria:-**

30 teachers have taken from regular schools that fulfill the following criteria:

- 15 male teachers and 15 female teachers.
- 15 teachers passed only graduation and 15 teachers passed postgraduation.
- 15 teachers having experience above 5 years and 15 teachers having experience below 5 years.

#### **DESIGN OF THE STUDY:-**

##### **Selection of area:-**

The main area of the researchers study was the causes of hearing impairment. The main area was divided into three following part:-

- Pre natal causes of hearing impairment
- Natal causes of hearing impairment
- Post natal causes of hearing impairment

#### DEVELOPMENT OF THE TOOL:-

Among these three areas, at first the researchers develop total thirty questions where ten questions from each area (prenatal, natal and postnatal causes of hearing loss).

Then the researchers sent those questions to the five expert teachers of our institute for judgment they advised the research to modify some question. Finally, 15 questions among those 30 questions have selected for the final tools.

#### Schedule of data collection:-

**Day 1:** The researchers went to the three schools with his permission later that was given by his institute and researchers gave it to the head master.

The head master asked the researcher about the topic of his project. Then the headmaster had taken the researcher to the staffroom and told the teacher to give their responses on his project tools. The researcher has selected purposively 5 teachers including male and female. Some of them are either graduate or post graduate. And some of them are either 5 years experience or below 5 years experience.

**Day 2:** The researcher went to those schools and visited to the headmasters and collected his data from the selected teachers.

**Day 3:** The researchers went to rest of the three schools and similarly selected the teachers.

**Day 4:** The researcher went to those schools and visited to the headmasters and collected his data from the selected teachers.

Thus, the data collection process was completed successfully as given above

#### SCORING:-

In the questionnaire every questions contain one mark. Every participant will get one mark for each right answer and zero marks for each wrong answer.

#### RESULTS:-

**Table 1 (shows the knowledge of the teacher based on gender)**

TEACHERS	PRENATAL	NATAL	POSTNATAL
Male	52	32	49.33
Female	69.33	42.66	66.66

**Table 2 (shows the knowledge of the teacher based on qualification)**

TEACHERS	PRENATAL	NATAL	POSTNATAL
Graduate	53.33	38.66	58.66
Post graduate	65.33	36	57.33



**Table 3 (shows the knowledge of the teacher based on experience)**

TEACHERS		PRENATAL	NATAL	POSTNATAL
Experience below 5 years	5	62..66	36	60
Experience above 5 years	5	62.66	37.33	58.66

**DISCUSSION:-**

Table 1 Show that, female teachers have more knowledge about prenatal, natal and postnatal causes of hearing impairment compare to male teachers.

Table 2 Show that, postgraduate teachers have more knowledge prenatal causes of hearing impairment compare to graduate teachers.

Table 3 Shows that, above 5 years experience teachers and below 5 years experience teachers have same knowledge about the prenatal causes of hearing impairment.

And above 5 years experience teachers have slightly more knowledge about the natal causes of hearing impairment compare to below 5 years experience teachers.

And above 5 years experience teachers have slightly more knowledge about the postnatal causes of hearing impairment compare to below 5 years experience teachers.

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**Palash Dutta**

Lecturer, Speech And Hearing, Ali Yavar Jung National Institute For The Hearing Handicapped, Eastern Regional Centre, Kolkata.

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