

# Exploring Communication Barriers Experienced by Medical Providers in Management of Patients with Hearing Impairment

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**Abstract:** This study aimed at exploring communication barriers experienced by medical providers in management of patients with hearing impairment. Specifically, the study aimed at exploring the experiences of medical providers in management of patients with hearing impairment; determining approaches and methods used by medical providers in management of patients with hearing impairment and identifying the roles of medical providers in management of patients with hearing impairment. The qualitative study used purposive sampling to select the study area and study participants. The methods of data collection used were individual interviews, observation, and a focus group discussion which involved forty (40) participants. The study findings revealed that medical providers experience difficulties when they manage patients with hearing impairment due to communication barrier. Despite the obvious barrier, the medical service providers still find strategies to communicate with hearing impaired patients. The attitude and perception of the medical providers towards hearing impaired patients are grounded in the fact that they have become resilient to the problem. The methods and approaches used by medical providers in management of patients with hearing impairment imply that medical service providers still have little awareness of the culture and the way hearing impaired people communicate and this is due to the fact that medical providers have no basic knowledge on communication skills with such patients from their medical school. The study recommends that more efforts be done by the Ministry of Health and Social Welfare to train more medical interpreters to address the lack of knowledge on sign language for medical providers. It further recommends that there should be an additional plan to train nurses and doctors on the basic knowledge of sign language because the lack of such knowledge has impact on the health outcome of the patients with hearing impairment.

**Keywords:** Hearing Impairment, Medical Providers, Communication barriers, Health System.

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## I. INTRODUCTION

Hearing impairment generally refers to people with any degree of hearing loss, from either mild or profound, in inclusion of those who are deaf and are difficult/hard to hear and it is one of the most common health conditions in the world (WHO, 2000). Despite the fact that the prevalence of hearing impairment has not yet been studied fully, the WHO global report by Newton & Shah (2013) reported that hearing impairment (HI) was the most common sensory loss worldwide, affecting 250 million people. It is estimated that globally, the prevalence of hearing loss is 1.4% (Shukla *et al.*, 2019).

There is increased prevalence of hearing impairment is in sub-Saharan Africa than in developed countries. WHO

estimated the prevalence which is defined as hearing loss greater than 35dB for adult to be 15.7% in sub-Saharan Africa compared to 4.9% in developed countries, and for children aged between (5-14) years is 1.9% while in developed countries is 0.4% (Reed *et al.*, 2020).

The United Republic of Tanzania is estimated to have nearly 10% of its people with disability including either permanent or temporary hearing impairment. According to the national census report of 2012 which is the latest, the deaf or hearing-impaired communities constituted around 1.9% (2%) of the total disability group in Tanzania mainland (this is if the hearing and communication difficulty are combined).

A weak communication is not only frustrating to the patient but may also destruct the ability of medical providers to reach a speedy diagnosis and proper management plan, with adverse clinical effects. Problems in communication may emerge in several areas independent of the medical provider's skills in communication, e.g. limited time available, patients unable to give a proper history due to dysfunction or cognitive impairment, dysphasia, and last but by no means least, those with hearing impairment (Hommes *et al.*, 2018).

This study sought to explore the experiences of medical providers in management of patients with hearing impairment so as to increase the realization on how to improve communication skills when managing these patients with challenges of communication and hence improve quality of health.

In management of diseases, a medical provider must have not only the scientific knowledge and technical abilities, but also an understanding of human nature. A patient is not just a group of symptoms, harmed organs and distracted feelings, but a complete form of a descent king (McKinney *et al.*, 2021). The patient is a human being, at the same time stressed and hopeful, who is looking for relief, help and trust. The significance of an intimate relationship between patient and a medical provider can never be overstated since in most cases, precise diagnoses, as well as a compelling treatment, depend straightforward on the quality of this relationship (M McKee *et al.*, 2015).

For medical providers, communication is an art which is ideally obtained and created with practice. Coelho *et al.* (2019) suggest that more interventions to progress communication are still needed. There is proof that changing medical provider's behavior and communication skills can be achieved with training. However, for the medical providers to learn, they need to be aware that there is a problem and therefore a need to improve.

➤ *The Study was Guided by the Following Specific Objectives;*

- To explore the challenges and conditions faced by medical providers in management of patients with hearing impairment.
- To determine approaches and methods used by medical providers in management of patients with hearing impairment.
- To identify the roles of medical providers in management of patients with hearing impairment.

## II. THEORETICAL PERSPECTIVES AND METHODS

➤ *Theoretical Framework*

This is a philosophical theory which explains the assessment and the critique view of power structures and the roots of sociology (Ruler, 2018). It has mainly four components which are people, message, context, and effective listening. In this context, the people who will be

reflected under the theory are medical service providers and hearing-impaired patients; the message involves medication and diagnosis information given to patients with hearing impairment. The context for the purposes of this study is hospital (health centre), and effective listening are the listening skills required for medical health service providers to patients with hearing impairment. The critical theory finds the analytical description of sociology, history, communication, philosophy, and feminist theory. The communication theory relies on the nature of communication phenomenon and the interrelationship between argumentation and the analysis of the key events, processes, and commitments.

The communication theory and a part of critical theory reflect the empirical, conceptual or practical communication questions. The theory applies to the hearing-impaired patients when receiving social services whereby the major challenge which they face is the inability to communicate and the difficulties they face when they meet with people who are not able to use sign language. The major challenge which is faced by the healthcare providers during service provision to the hearing-impaired patients is the communication barrier because neither of the sides can understand each other when both of them are of different realm between the use of sign language and the normal language (Chang *et al.*, 2020).

Communication theory explains the to and fro nature of information between the two sides which relies mainly on three models which are linear model, interaction model and transaction model. Linear model involves one direction communication which is not suggested for the health provision services and administering of hearing-impaired patients. Medical care involves the contribution of two sides which are the health service provider and the patient. Interaction communication model involves the bidirectional communication between two sides whereby each side depends on the other. The later model is suggested for the healthcare services because the patient and the health provider share the experience and the health condition to be administered. The transaction model explains the communication by the influence of third part. In this case, it is the sign language interpreter who makes communication between the hearing-impaired patient and the healthcare provider successful (Yabe, 2020; Guttman *et al.*, 2021).

The theory is of great advantage in this study because it shows the necessity and the forms of communication between the hearing-impaired patient and the healthcare provider. It gives an insight on what should be done or be practiced in hospitals in order to simplify communication between health service providers and hearing-impaired patients. External input; it includes health system.

➤ *Empirical Literature Review*

Medical providers face various challenges which sometimes hinder their performance during the provision of health services to the hearing-impaired patients. The difficulties faced by the medical providers include those associated with communication particularly sign language

interpretation, understanding of the patients and the challenge associated with prognosis of patient's disorders (Newton & Shah, 2013).

Coelho *et al.* (2019) conducted a study on development and validation of the protocol for the evaluation of voice in patients with hearing impairment which involved a sample size of 221 respondents. This cross-sectional quantitative study made a survey in various hospitals to obtain development and validation of services between the service providers and the hearing-impaired patients. Evaluation by an expert committee and a pilot test established content validity. Reliability measures showed excellent test-retest reproducibility for the majority of the parameters.

McKee *et al.* (2015) conducted a cross-sectional study on the emergency department utilization among Deaf American Sign Language users. The study involved 46 participants enrolled by using non-probability sampling which adopted the purposive sampling technique to obtain the desired sample which was used in the study.

Hearing impairment is more of a social phenomenon than pathological problem, so it is important to eliminate all communication barriers to promote socialization. Notwithstanding this contention, it is reported that most healthcare providers treat hearing impairment as a pathological case, not just a patient who needs to be treated with a disease unrelated to disability (Ferguson-Coleman *et al.*, 2014). Scholars further report that due to time constraints, some medical service providers may not try their best to communicate with hearing impaired patients, and some may think that they cannot communicate with these people, but they should always make efforts by using different kind of strategies (*ibid.*).

It is important to have a comfortable environment before applying basic rules to improve communication with the hearing-impaired person. Accordingly, it is important to consider the different methods they use for comprehension, such as lip reading, sign language and hearing aids (Grote & Izagaren, 2020). For example, only under ideal conditions is lip reading completely effective. There are usually some obstacles such as a mustache, poor lighting, position, and location errors of the speaker, speaking too fast, foreign accents, homophones (mama, papa, etc.), and insufficient information about the recipient's usual vocabulary.

### III. RESEARCH METHODOLOGY

#### ➤ Area of the Study

This study was conducted in Dar es Salaam city council, which is also named as Ilala district, specifically at Amana referral hospital in Dar es Salaam, Tanzania. The study area was chosen due to its higher population density whereby according to the 2021 census, Dar es Salaam was approximated to be populated by 4,364,541 citizens. Amana Hospital was chosen as the area for conducting the study due to its big number of outpatients records (OPD) whereby it is approximated to record about 800-1200 outpatients per day (IMC, 2018). Moreover, Amana hospital is the referral

hospital for other hospitals of the city; therefore, the chances of obtaining the concrete and valid data were high due to the number of patients specifically those with hearing impairment. The same applies to the issue of obtaining an equitable number of health service providers who meet with those patients. The Figure 3.1 shows the location of the study area.

#### ➤ Research Design

An exploratory study design was used for the current research. Data was collected from the medical officers (MO), and nurse officers (NO). An exploratory study design was selected in this study since the research problem had few/no early studies to refer to; thus, the researcher was able to gain insight and familiarity for further studies.

#### ➤ Targeted Population

In this study, the target population included medical officers (MO) and nurse officers. A target population is a group of individuals with one or more common characteristics. Researchers hope to obtain information about the study from these common characteristics (Coelho *et al.*, 2019). Hearing impaired patients were excluded because the study focused on obtaining the communication barriers faced by health service providers.

#### ➤ Sample and Sampling Procedure

##### • Sample Size

A sample is a relatively small group of interviewees/representatives selected from a population for research purposes. The sample for this study was selected from Amana referral hospital since it is the only referral hospital which receives the biggest number of patients as a regional referral hospital in Dar es Salaam. It is reported that the hospital receives about 800-1200 patients per day. However, an interview was done to the participants until the required saturation point was attained. In this study, the saturation point reached was 40 participants who were involved to give the required information based on the interview guide.

##### • Sampling Procedure

In order to ensure the sample is representative, this study employed purposive sampling to select the hospital and purposive sampling was also used to select the medical service providers to be interviewed. The researcher used previous knowledge of the population to judge whether a particular sample was representative along with specific purpose of the research study (Rogers *et al.*, 2018). The sampling procedure which involved purposive sampling was based on the experience of medical service providers, the place of work and the ability/willingness to participate in the study.

#### ➤ Data Collection Method and Instruments

This research primarily used qualitative data collection methods that use in-depth interviews (IDI), observations, and focus group discussion (FGD) to collect information and provide structured data. The aim for multiple data collection methods was to search for information from

different sources and find different types of information sources for the current study. Each data collection method will be described below.

#### ➤ *Data Analysis and Organization*

Data analysis process was done by considering each specific objective to answer the study questions. The analysis procedures were similar to all study objectives; they involved thematic and content analysis. Thematic analysis involved the process of obtaining themes from the raw data. The first process of data analysis involved transcription of verbatim and collecting the main ideas from the transcript whereby a prepared code book of analysis helped to obtain the main themes of the study and the specific content of the participant.

#### ➤ *Ethical Consideration*

Ethical clearance to conduct this research was granted from the Deputy Vice-Chancellor's office of the University of Dar es salaam-Research which was revised by the Ethics and Review Committee of the college, while permission to collect data from the study area was granted by the District Medical Officer (DMO) of Ilala Municipal.

#### ➤ *AI Usage Declaration*

AI was used for proofreading and Language editing.

### IV. RESULTS AND DISCUSSION OF THE FINDINGS

#### ➤ *Challenges and Conditions Faced by Medical Providers in Management of Patients with Hearing Impairment*

##### • *Environmental Constraint*

Working environment influences barrier in communication between medical providers and hearing-impaired patients. This includes all necessary conditions which are required to be set for better service provision to hearing-impaired individuals when they visit health facilities.

##### • *Absence of Posters and Visual Alarms for Hearing Impaired Patients*

Hearing impaired individuals have their own way of communication which is different from a normal hearing person. For patients, it becomes difficult for them to understand medical prescriptions and diagnosis procedures when they visit health facilities. For this reason, there is a need for hospitals and health centers to improve the infrastructures which will be supportive to all kinds of disabled patients including hearing impaired patients. The following words were quoted from one of the medical experts from Amana RRH:

*“For the case of health service provision to the clients with hearing impairment, it is very challenging because the working environment is not supportive to simplify communication with that kind of people. For example, there is not any designed poster or explanatory cards which will at least help the patient to communicate with the medical practitioners, nor are there alarm sensors for laboratory*

*indications for impaired people; we need changes for this.”* (Female/Nurse/ IDI/ARRH/June 2022).

##### • *Absence of Guiding Communication Materials Such as Diagrams, Charts, Pictures for Impaired Patients*

The study also explored other communication means which could be helpful to patients with hearing impairment and would help health service providers to reach them readily by finding other alternatives which have been used in other parts of the world; for example, the use of diagrams, charts and pictures, to support the clients understand by reading images and obtaining the contraindications and directions through diagrams (Abou-Abdallah & Lamyman, 2021). The following were recorded from the nurse officer of ARRH:

*“Considering the needs of hearing-impaired patients and simplifying communication between our medical providers and the clients, we set the budget for charts, pictures and diagrams which will be special for hearing impaired patients, but because of budget constraints in each fiscal year, we have never implemented our plan, and it has always remained a challenge to the hospital and the patients. Indeed, most of the patients with hearing handicap are suffering with two conditions: the first is the feeling of being oppressed due to poor sign language interpreters (they are absent) and lack of proper and supportive infrastructures for them.”* (Male/NO/IDI/ ARRH/June 2022).

##### • *Lack of Knowledge Among the Patients and Medical Providers on Sign Language*

It was also revealed that hearing impairment can be acquired either from birth, or acquired due to various reasons such as accidents, severe infections, and side effects of medication. It was also found that hearing impairment can be complete or partial depending on the severity of the defect. Their knowledge clearly reflected their understanding of the barriers which medical providers may face when communicating with patient with such a condition. Here, the main concern was on the understanding of the concept of hearing impairment and its impact on communication.

##### • *Difficult Working Condition Due to Lack of Experience*

The study further found that medical provider's responsibilities in management of patients with hearing impairment is difficult. The medical providers are not able to demonstrate full history taking skills which leads to a lot of tension and frustration when there is overcrowding of patients. There is a constant failure to accomplish the task of providing proper care for the hearing-impaired patients. The study which was conducted by Reeves & Kokoruwe (2005) also obtained the results similar to this study whereby difficult working conditions proved to decrease the efficiency of service provision and the satisfaction of health services among hearing impaired patients.

##### • *Communication Barrier*

Lack of knowledge on the sign language to the medical providers and absence of interpreters increases a barrier to

communication with the patients with hearing impairment. This leads to consuming long time with one patient. The study found that medical providers take longer time with patient with hearing impairment and leads to partial management of the patient due to lack of knowledge on sign language.

- *Translator with Other Responsibilities Not Available Full Time (Few Translator Available)*

Another challenge which acts as a communication barrier between the medical providers and hearing-impaired patients is the absence of interpreters and the present ones being assigned other responsibilities. Therefore, the shortage of sign language interpreters increases the hardship in working environments within the realm of providing better services to the hearing-impaired patients. At Amana hospital, one sign language interpreter is required per forty patients, which gives an approximate of thirty (30) language interpreters, but the hospital has only one language interpreter who takes the burden of more than 1000 patients at a time in addition to having other responsibilities. The following was spoken by the participant during the interview:

*“We have shortage of interpreters. As you can see, the whole institution with more than 300 workers has only one interpreter who is also medical personnel, she is a nurse and also a social welfare officer and she is the one that helps the whole institution.”* (Female/Nurse/IDI/Amana/June 2022)

During the study it was also observed that many of the patients with hearing impairment attending for medical check-ups are escorted by their relatives, family members or colleagues to at least to support them in expressing their problems to the doctors. This simplifies the communication, but there still remains a challenge because the feelings about the health problem are always within the patient him/herself.

- *Approaches and Methods Used by Medical Providers in Management of Patients with Hearing Impairment*

- *Involvement of Patient's Relatives*

Usually, patients with hearing impairment attend hospitals with a family member who understands them and can give interpretation to the health care providers. A family member could be a parent, child or even a friend sometimes. Since the medical service providers are unable to communicate with the patient, the most common method they use is to get assistance from the relative. During the interview, the participants reported that the patients come with relatives who understands them but do not necessarily know the exact health problem of the patient. In this way, medical service providers can get an overview of what the patient is suffering from.

- *Whole Body/Part Clinical Checkup and Analysis*

The findings showed that medical service providers guess what the patient might be suffering from. This is done by observing where the patient touches and then investigate everything that they think could be the problem.

- *Guess Work*

Some of the participants described the approach they use to communicate with patients with hearing impairment as a guess work. Some of the participants reported that having a patient with hearing impairment is like “hitting in the bush”, the phrase which is mostly used by the health service providers during the provision of health services when the prognosis and a single clinical diagnosis cannot determine the problem.

- *Communicate by Writing*

Participants explained that in a situation where a patient has knowledge to read and write, the medical providers take some piece of papers and start to write and the patients reply by writing back on the papers, then the medical providers transfer that information to the patients' file. However, they also reported that using such method will need more time and that it is not easy to ask many details of the patient's condition. A conversation which takes 40 minutes with a normal hearing patient could take double the time when conducted with a patient with hearing impairment writing on a piece of paper.

*“For sure, it is very challenging to diagnose a deaf patient. I remember one day I was just lucky because the patient came to me with his mother, she was able to notice the area, which is sick, of which it was the stomach. The problem came when the child touched his stomach, but the stomach is big with many things and as a doctor it is necessary to know which side, when it started, characteristics of the pain and so forth. Therefore, we conducted a thorough check-up regarding the stomach because it was like we were guessing.”* (Male/AMO/IDI/Amana/June 2022)

- *The Roles of Medical Providers in Management of Patients with Hearing Impairment*

- *Medical Service Providers as Sign Language Interpreters*

At Amana RRH, there are more than 300 health workers and only one medical interpreter is available who has been working there for one year. It is difficult for the available interpreter who has also other duties (social worker) to be able to attend patients satisfactorily. The study found that medical providers have little or no knowledge on sign language and there is a limitation of the interpreter's availability.

- *Structuring Environment*

Generally, structural environment is the environment which has been modified or adjusted to remove a significant number of obstacles and provide enough means to facilitate a given task. Communication with a patient with hearing impairment requires an adjusted environment which can facilitate communication.

- *Valuing them Equally*

The researcher was interested to find out how medical service providers perceive the patients with hearing

impairment. Accordingly, most of the participants reported that they consider patients with hearing impairment as people who need to be given care, or as a pathology which needs to be fixed. Considering the rights of every patient in the hospital, it is the role of medical providers to treat them equally.

- *Fixing Immediate Conditions*

Health care providers considered hearing impaired patients as patients with a condition which needs to be fixed. Some of the participants reported that when they see patients with a communication problem, they refer the patient to a specialist even when patients present with complains other than hearing issues.

- *Hard Work*

It is the role of medical service providers to make sure that all patients are serviced, and the health services are accessible and satisfactory to all patients. There is a scarcity of work force in various hospitals with an inclusion of Amana hospital and there is no numerate specialized medical experts with the treatment of hearing-impaired patients. The only way to manage all of the responsibilities governing the medical workers is hard working.

- *Creating Necessary Conditions for Patients Satisfaction*

Patients' satisfaction is a priority of all health service providers, particularly those of Amana hospital. Patients' satisfaction increases the assurance of patients' treatment and recovery, hence many patients may not readily recover due to unsatisfactory health service. Among of the groups which do not usually get satisfied with the health services provided in the hospitals are physical impaired patients, hearing impaired patients included.

*“We have tried our level best and are still continuing to make sure that the patients who are coming into our health facility are satisfied with the services which will be provided. This is for both the normal patients and the disabled patients including the hearing-impaired patients. Patients' satisfaction increases hope and trust of the patient to the health service providers.”* (Male/AMO/FGD/Amana/June 2022)

- *Discussion on the Challenges and Conditions Faced by Medical Providers in Management of Patients with Hearing Impairment*

The first objective aimed at examining the challenges and conditions of medical providers in management of patients with hearing impairment and the ability to communicate with such patients and also taking history of the patient in order to make the correct diagnosis. The findings have shown that medical service providers experience difficulties and frustration when dealing with patients with hearing impairment; this is due to the fact that it is difficult to identify a patient's problem easily. The findings are consistent with other studies such as that by Convery *et al.* (2020) who found that health care workers experience difficulties in treating patients with hearing impairment and it needs more effort and it is a frustrating and tiresome work.

Despite the difficulties medical providers face in communicating with hearing impaired patients, they use different strategies of communication with the patients, such as using relatives and writing notes. When these forms of communication fail, they try different modes until they get some of the patient's problems. This kind of readiness to find other forms of communication was also revealed in another study by (Powell *et al.*, 2019).

At the OPD clinic in Amana hospital, patients with hearing impairment are given a stamp on their files which identify them as deaf or hearing-impaired patients; this allows medical providers to arrange for the communication process or consultation and fast-track them in other departments. This finding is similar to the study conducted by Panzer *et al.*, (2020), where patients identification as a deaf was used at the reception. This helps medical service providers to plan the interaction with the patient with hearing impairment. This also helps to plan with other health care team members and find interpreter if available.

The analysis of this study shows that health care providers do not have any knowledge on sign language and this is consistent with the study by Reeves & Kokoruwe (2005) which reported that there are only few medical service providers who know sign language and therefore, communication usually depends on the relatives or interpreters. The study has found that medical providers are willing to learn about sign language in order to reduce their dependency on the interpreter. In this case, it will be possible for the medical service providers to serve the patient easily even in absence of the interpreter. When the medical providers learn sign language interpretation, there will be medical personnel who are also sign language interpreters; this will increase confidentiality for the medical providers to serve the patients with hearing impairment. This is also supported by James *et al.*, (2022) who argues that the most important improvement in health service for hearing impaired patients is not just an interpreter, but a highly certified medical interpreter.

Amana RRH health care providers have adopted different approaches to facilitate better communication with patients with hearing impairment. They use involvement of the family members, writing notes, use of whole body/part check-up and use of interpreters when available and when one method fails, they use another approach. This process of involving different approaches to communicate with hearing impaired patients was also found in a study by Baylor *et al.* (2019), For example, health care providers write notes to their patients despite knowing that this method may consume more time and it depends on the literacy level of the client. In fact (Gregory *et al.*, 2020), in his study found that the most common approach used by medical providers is writing notes to their hearing impaired clients. Also, the involvement of the family member has its impact on the privacy of the patient's condition while the way of investigating everything may cause patients unnecessary trauma and coast of the investigations. The use of photos, diagrams, videos and pictures was found in a study by (Orrie & Motsuhi, 2018) to explain different procedures to their

patients of hearing impairment, however in this study there was no such methods used by the health care providers and were not aware of the fact that they could use such approaches.

Perceptions are the ways an individual regards, understands or interprets something which affects individual's attitudes and beliefs and hence affect how they behave. The findings from this study have shown that medical service providers at Amana RRH perceive hearing impaired patient as people with pathology or a condition which needs to be fixed. This type of care is known as segregated care and it was also found in the study by Henn *et al.* (2021).

Another finding from this study has shown that health care providers from Amana RRH believe that they treat patients with hearing impairment as other hearing patients, but from the way they act, it shows that they give them extra attention and care. This finding was also observed in another study by Dewhurst *et al.* (2014) who argues that medical service providers understand that patients with hearing impairment require some adjustment in communication to provide care and get equitable care. Furthermore, the empathy that medical service providers show to patients with hearing impairment as observed in this study makes the environment for such patients much better.

## V. CONCLUSION

The findings in this study as with other studies show that medical providers experience difficulties when attending patients with hearing impairment due to communication barrier. Despite the obvious barrier, the medical providers still find strategies to communicate with hearing impaired patients. The attitude and perception of the medical provider are grounded in the fact that they have become resilient to the problem. The methods and approaches used by medical providers in management of patients with hearing impairment imply that medical providers still have little awareness of the culture and the way that hearing impaired communicate and this is due to the fact that medical providers have no basic knowledge on the communication skills with such patients from their medical school.

## RECOMMENDATIONS

- More efforts should be done by the ministry of health and social welfare to train more medical interpreters to address the lack of knowledge on the sign language for medical providers.
- There should be an additional plan to train nurses and doctors to have basic knowledge on sign language and an understanding of how lack of such knowledge has impact on the health outcome of the patients with hearing impairment.

### ➤ Declaration

We declare not having conflict of interest with any part, financially of non-financial interest.

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