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Impact of hearing loss in the lives of geriatric individuals

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ABSTRACT

Background: Hearing loss in old age is a vexing problem and millions of people worldwide are suffering from it. The aim of this study is to identify the problems which geriatric individuals with hearing loss experience and to help them to overcome their disability and its effects on social engagement and interpersonal relationship.

Methods: The study was conducted in a tertiary care hospital and is based on prospective study. The data collection was done in the form of confrontational interview.

Results: According to our study individuals suffering from moderate hearing loss have difficulty in communicating with friends, relatives and even strangers. They even face problems in travelling. They feel disoriented during conversation and tend to miss out parts of conversation. They tend to use their visual signals more than hearing for example while watching television they try to focus and interpret more by the video than by listening to the audio. People suffering from mild to moderate hearing loss try to ignore the disability and request people to repeat statements but inadvertently still miss out the conversation and the try to ignore the handicap.

Conclusions: Age related hearing loss known as presbycusis and it is one of the most prevalent conditions in old age and millions of people worldwide are afflicted. It is one of the leading cause of overall diminution of physical and mental performance in old age. It is often neglected and remains undetected for long in geriatric population due to gradual progression.

Keywords: Hearing loss, Geriatric individuals, Difficulties, Remedies

INTRODUCTION

Elderly individuals with hearing loss, have various constraints in their daily lives ranging from difficulties in communicating with family members and other associates, thus missing out on pertinent public announcements. Hearing loss is the most common sensory deficit in the elderly and it is becoming a severe social and health problem. The brain's reality of how meaning is attached to the world is eclipsed by degraded hearing. The dilemma of central presbycusis for seniors is not just about the lack of sound or difficulty with communication; it is also about the effects of systematic changes from aging and hearing loss on the brain². A study conducted by Velia Cardin in University College,

London states that aging and hearing loss result in atrophy of cortical auditory regions.³

The ability to interpret and locate the sound source deteriorates in both ears of elderly patients with presbycusis with a mild-to-moderate hearing loss in the high-frequency range. This study focuses on the identification of the day to day problems of patients with presbycusis from their perspective and to counsel them on modalities to overcome the same.

The goal of hearing rehabilitation in adults is to help them overcome their hearing difficulty and its effects on communication, environmental awareness, interpersonal relationships, and social engagement. Rehabilitation in presbycusis involves provision of hearing aids and communicating in slow well pronounced speech. Most importantly, hearing rehabilitation should result in the reduction of the psychological effects of hearing loss, such as communication stress, anger, depression, and the feeling of isolation.

METHODS

The study was conducted in Dr DY Patil Medical College and Hospital Pune, India, from June 2018 to Mar 2019. It is prospective in design and was conducted amongst the elderly patients attending the outpatient department and also among admitted patients in the hospital. After obtaining permission from the ethical committee, patients above the age of sixty years who admitted having hearing loss were randomly selected and asked to narrate their day to day problems they faced due to the hearing impairment and then leading questions were presented as per a pre-prepared questionnaire and the data collected was collated.

Inclusion and exclusion criteria: The data was collected from fifty patients between the ages of 60 years to 80 years. Patients with acute illnesses or those who refused to co-operate were excluded from the study.

After the data was collected those who were not using any hearing aids were counselled on the advantages of using a hearing aid, and about the types of hearing aids presently available in the market.

Statistical tool used to analyse the data

No statistical tool was used to analyse the data. The data collection was done in the form of confrontational interview. The study was conducted in a tertiary care hospital and is based on prospective study.

RESULTS

Of the fifty persons included in our study there were 9 patients in the age group of 60-65 years, 11 persons were in the age group of 65-70 years, 13 were between 70-75 years and remaining were between 75-80 years (Figure 1). According to our study individuals in the age group of 60-70 years have mild to moderate hearing loss and individuals in age group of 70-80 years have moderate to severe type of hearing loss.

According to our study males have higher chances of hearing loss than females. Males tend to work more in noisy environment in comparison to females due to which they have higher chances of hearing loss (Figure 2). If the working environment has a high decibel of ambient noise, some of the persons working in such areas can suffer damage to the hair cells within the cochlea which can result in hearing loss.

29 persons suffering from moderate to severe hearing loss expressed difficulty in communicating with relatives and friends. Because of their inability to hear 9 persons said that they even had quarrels with family members because they felt they were being deliberately kept out of conversations. 12 of the elderly individuals stated that when they increased the volume of electronic audio-video devices at home it was objected to by younger members of the family (Figure 3). Due to which 8 of them said that they tend to use their visual signals more and focus and interpret more by the video than by listening to the audio. While travelling alone 23 of them mentioned of inability to hear announcements made about arrival and departure and were anxious till the journey was over. Another problem 19 persons with very severe uncorrected hearing loss experienced was they felt their environment was very silent and this led to a feeling of being isolated and depression. 7 persons said that their social circles diminished because of this and they became introverts. They feel disoriented during conversations as they tend to miss out pertinent parts of the conversation. This leads to disuse of cognitive faculties and leads to memory loss. In our study 14 individuals complained of progressively increasing memory loss ever since their acuity of hearing diminished. Another pertinent issue was since 8 of our patients were old and malnourished and they felt that their hearing deteriorated with poor nourishment (Figure

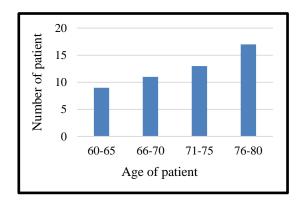


Figure 1: Age wise incidence of hearing loss.

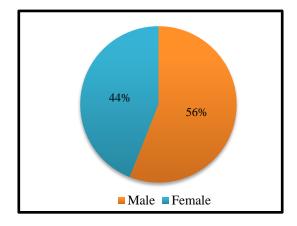


Figure 2: Distribution of hearing loss according to sex.

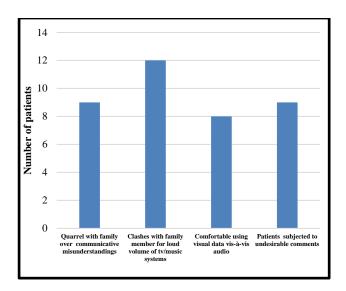


Figure 3: Number of people who faced social difficulty due to hearing loss.

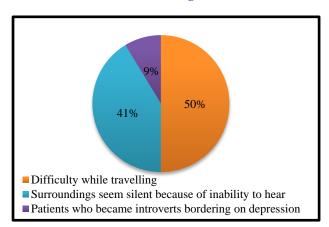


Figure 4: Number of people who faced difficulty during travelling.

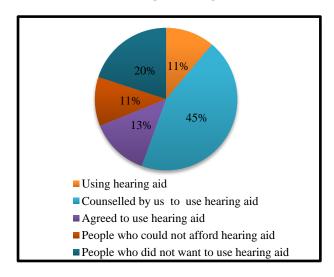


Figure 5: Usage of hearing aid by patients.

People suffering from mild to moderate hearing loss try to ignore the disability and request people to repeat statements but inadvertently still miss out the conversation during meetings and the try to ignore the fact of handicap.

9 patients said that sometimes strangers pass undesirable comments due to their disability. Participants were counselled how to ignore insensitive remarks and to focus on how to overcome their day to day problems by increasing their attention span and to seriously consider using a hearing aid consistent with their financial status. Some of the participants who were reluctant to use a hearing aid were counselled on the advantages of using the newer digital hearing aids.

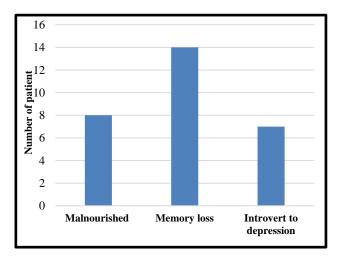


Figure 6: Patients with negative impact in health due to hearing loss.

10 of the persons in our study were already using hearing aids, others were counselled to use and 7 persons agreed to use the same but 18 patients refused and 10 patients were willing to use hearing aids but could not afford to buy.

DISCUSSION

Hearing impairment is a serious but grossly neglected condition in India. The country also suffers a huge economic impact due to lost productivity, higher unemployment, and lower wages for the hearing impaired. The real issue in India is the woeful inadequacy of facilities of any type for the deaf. However, despite good intentions, the lack of services and facilities continues to plague the hearing handicapped community.

Presbycusis is the decrease in acuity of hearing due to aging. A hearing loss arises due to naturally occurring degradation of the inner ear structures and is not medically correctable. Presbycusis is generally a slowly progressive hearing loss that affects both ears. It is the loss of clarity that leads people to report perceiving others as mumbling or lacking proper enunciation. These problems are more evident when background noise is present and noise further masks speech sounds.

For older adults with hearing loss, sound and speech without clarity can become confusing, difficult to interpret, uncomfortable or stressful. The brain's reality of how meaning is attached to the world is eclipsed by degraded hearing. The dilemma of central presbycusis for seniors is not just about the lack of sound or difficulty with communication; it is also about the effects of systematic changes from aging and hearing loss on the brain.

In our study 14 individuals complained of progressively increasing memory loss ever since their acuity of hearing diminished. Modern research confirms that even mild hearing loss is a primary culprit in accelerating the reduction of the whole and regional brain size by approximately six to seven years. There is also a commensurate decrease in cognitive function. Cognitive function is very important to brain reality because it refers to the processes that involve thinking, knowing, remembering, judging, and problem-solving. This and other studies show that central presbycusis can be a contributing factor to memory loss.

Corna in their article "Corrected and uncorrected hearing impairment in older Canadians" stated that in the North America, around 10% of the population suffer from hearing loss with the highest prevalence rates among aged population such as those aged 65 and above and is more prevalent in males which is consistent with our study where 56% of the study group selected randomly were males. Aging is one of the most important causes of hearing loss. Elderly population relies on special senses to compensate for other age-related disabilities and also for slowed re-action time. In addition, age-related decline in the ability of mental concentration and memory also contributes to their difficulty in understanding speech. Hearing loss is the number one communicative disorder in the elderly population.

Age-related hearing loss had more symptoms of depression; 7 patients in our study also complained of becoming introverts and depressed with inability to hear and communicate with other people; the greater the hearing loss, the greater the risk of having depressive symptoms. The findings suggest that treatment of age-related hearing loss, which is under recognized and undertreated among all elderly, could be one way to head off late-life depression. The researchers found that individuals with mild hearing loss were almost twice as likely to have clinically significant symptoms of depression than those with normal hearing. Individuals with severe hearing loss had over four times the odds of having depressive symptoms.

Dror et al in their article on hearing loss have opined that hearing loss is a common disorder that has a multifactorial origin, including environmental factors, genetics and nutritional deficiencies. Therefore, nutritional intervention studies may have a preventive potential, especially when hearing loss is associated with

age. Worsening of the situation is highlighted by the fact that hearing loss has reached the fourth position in conditions affecting geriatric individual. Individuals in our study were malnourished and had hearing loss which increased with poor nourishment.

In spite of the importance of hearing in everyday life, hearing loss is often an unrecognized and undertreated health disorder. Even among people with hearing impairment, there may be a tendency to underreport hearing-related difficulties.

One of the advantages of this study is that quality of life, hearing handicap, and difficulties with communication were determined by self-report from the participant. Although hearing loss certainly affects the individual, it is likely that family member and other individuals dealing with the hearing-impaired person experience as much, or possibly more, frustration as a result of communication difficulties. 29 individuals in our study complained of difficulty in communicating with other persons including relatives, 8 of whom confessed to have had quarrels due to inability to hear and 12 patients complained that younger relatives chided them when they increased the volume of electronic audio/video equipment. It also is possible that individuals living with the hearing-impaired person may be more objective about reporting the impact of hearing loss on communication. When investigating the quality of life of people with hearing loss, it may be informative to evaluate the impact of hearing loss on the family as well as the individual. Some international studies investigating effectiveness of hearing aids are adding questions specifically for the partner of the person with the hearing aid.

Hearing loss is a common chronic condition affecting older adults, and it is important for us to understand its impact on quality of life. These findings highlight the need for improved methods of identifying individuals with age-related hearing loss and improving services for providing hearing aids, assistive listening devices, and auditory rehabilitation. Identifying individuals with hearing loss and supplying appropriate hearing aids or other listening devices and teaching coping strategies may have a positive impact on quality of life for older people.

Studies have shown that even a mild untreated hearing loss can have adverse effects on an individual's social, psychological, cognitive, and overall health. Individuals with normal hearing often assume that simply saying something louder or turning up the volume will enable a hard-of-hearing elder to hear. Volume is not necessarily the issue; difficulties with sound and word discrimination may be involved. The need to repeat or experiencing non sequitur responses adds to negative perceptions of older adults with hearing loss as being slow. Internalizing these stereotypes and the resultant negative self-perception certainly contributes to emotional sequelae of hearing loss.

Adults who have early-onset hearing loss report that while there are negative aspects of hearing loss, they've incorporated them into their personalities. They develop ways to cope with and manage hearing loss in their daily lives. It may be somewhat different for older adults who experience hearing loss at a later stage. These individuals have already developed a personality that does not incorporate hearing loss. They are accustomed to life as hearing individuals. Hearing loss may trigger an identity crisis, and reactive depression may occur.

Older adults who are hard of hearing often report that when their hearing loss causes communication problems, it can result in difficulty thinking or concentrating. This results in inattentiveness, distraction, and boredom. The most serious consequence is withdrawal or abandoning participation. The resultant self-talk is predictable: "I can't participate, so I might as well pack it in. I can't contribute, so what good am I?"

Older adults with hearing loss face many of the same fears that anyone with a disability encounter. They worry about loss of significant relationships or jobs or about being perceived as incompetent. Communication breakdown problems may show up in physical symptoms such as tension, exhaustion, and psychological symptoms. Inability to hear and discern message and meaning can result in feelings of shame, humiliation, and inadequacy. It can be highly embarrassing to be unable to behave according to applicable social rules. The feeling of shame linked to hearing loss stems from older adults inadvertently reacting in inappropriate and socially unacceptable ways, such as responding to a misunderstood question in an unexpected way.

A recent review concludes that hearing aids should be prescribed to improve the hearing which improves the health-related quality of life by reducing the psychological, emotional, and social effects of hearing loss. Evidence indicates that hearing loss has a negative impact on health-related quality of life especially with respect to the social and emotional aspects of communication. Use of hearing aids can ameliorate these communication problems and increase health-related quality of life. Addressing these challenges will increase the likelihood that we meet the hearing health care needs of an aging population and improve the potential for individuals with hearing problems to remain healthy, engaged, participating members of their families and community.

Hearing aids can be effective in treating presbycusis, depending on the type and severity of the hearing loss. Now days, hearing aids come in a variety of shapes and sizes, including traditional behind the ear, in the canal, completely in the canal, and open fit models. ¹¹

CONCLUSION

There is widespread belief that hearing loss is a benign result of aging. However, the latest research reveals that untreated hearing loss can have significant negative consequences on an individual's physical, mental, and social health. Hearing impairment may be perceived by older people as a social stigma and they may help fail to seek help for fear of being labelled as handicapped. Many of them believe it as an inevitable and irremediable part of aging. Paranoid tendencies may be accentuated and the individual may become anxiety ridden or depressed. Relationship with family and friends may become strained like they may not hear door bells, safety alarms, telephone rings etc. due to which their physical safety and indeed their ability to live independently may be jeopardized. Hearing impairment can lead to deleterious effects on communication of people. The person may not be able to understand the conversation which can lead to negative effects on a person's understandings of their own personal management. Adequate reception of message is paramount to successful communication. This may lead to non-compliance with drugs and other therapeutic interventions. This person may have difficulty in monitoring their own speech which subsequently deteriorates worsens the overall communication problem. As a result some of the older generation may prefer to withdraw from solid interaction. With the advent of very advanced digital hearing aids persons with hearing impairment need to be counselled to use them and overcome their handicaps due to hearing loss.

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Ethical approval: The study was approved by the

Institutional Ethics Committee

REFERENCES

- 1. Ciorba A, Pastore A. The impact of hearing loss on the quality of life of elderly adults. Clin Interven Aging. 2012;7:159-63.
- Dennis C. Central Presbycusis Counselling. Hear J. 2018;71:44-5.
- 3. Cardin V. Effects of aging and adult-onset hearing loss on cortical auditory regions. Frontiers in Neuroscience. 2016;10:199.
- Varshney S. Deafness in India. Indian J Otorhinolaryngol. 2016;22:73-6.
- 5. Corna LM, Corrected and uncorrected hearing impairment in older canadians, Gerontology. 2009;55:468-76.
- 6. Dror AA, Avraham KB. Hearing loss: mechanisms revealed by genetics and cell biology. Ann Rev Genetics. 2009:43:411–37.
- 7. Lehane CM, Dammeyer J, Elsass P. Sensory loss and its consequences for couples' psychosocial and relational wellbeing: an integrative review. Aging Mental Health. 2016;7:1-11.

- 8. Noble W. Extending the 101 to significant others and to non-hearing-aid-based interventions. Int J Audiol. 2002;41:27-9.
- 9. Dewane C. Hearing loss in older adults-Its Effect on Mental Health. Social Work Today. 2010;3:2-16.
- 10. Kathleen E, Margaret I. Hearing loss in an aging american population. Ann Rev Public Health. 2014;35:139-52.
- 11. Sprinz GM, Riechelmann H. Current trends in treating hearing loss in elderly people. Gerentology. 2010;56:351–8.

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