DENIAL BY PATIENTS OF HEARING LOSS AND THEIR REJECTION OF HEARING HEALTH CARE: A REVIEW

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Abstract

Background: Some patients deny that they have a hearing impairment, which can lead to unmanaged hearing impairment. The purpose of this review is to provide insights into why some individuals deny they have a hearing loss and do not want any hearing health care. This paper suggests strategies for promoting acceptance among such patients.

Materials and Methods: The article is based on a synthesis of the clinical and scientific literature, as well as clinical experience related to the various aspects of why patients deny that they have a hearing loss and reject hearing health care. The cited literature was collected by using the PubMed database and the Google Scholar search engine using the terms 'denial,' 'hearing loss,' and 'hearing aids.'

Results: In addition to denying they have a hearing loss, some patients deny there is any impact of hearing loss and that they don't need hearing aids. Denial can present in a variety of forms, including implicit or explicit denial, and can range in severity from partial to complete denial. Reasons for denial include the stigma related to hearing loss and hearing aids, lack of trust in hearing health care providers, uncertainty of the benefits of hearing aids, and lack of confidence in making the required adaptations.

Conclusions: Patients with denial of hearing loss are unlikely to seek assistance from hearing health professionals or participate in studies related to their condition. Thus, outreach efforts are necessary to reach such individuals. To address denial, enrolment in aural rehabilitation support groups, guidance to significant communication partners, and several other strategies can be used. Additional studies will be beneficial in further exploring denial.

Keywords: Aging • Denial • Hearing Aids • Hearing Loss • Older Adults • Stigma

NEGACIÓN DE LA HIPOACUSIA POR PARTE DE LOS PACIENTES Y SU RECHAZO DE LAS ACTUACIONES PROPUESTAS PARA PERSONAS CON PROBLEMAS DE LA AUDICIÓN EN EL MARCO DE LA ATENCIÓN SANITARIA: REVISIÓN.

Resumen

Introducción: La negación de la pérdida auditiva por parte de los pacientes constituye uno de los posibles motivos por los cuales su audición no se trata. Esta revisión tiene como fin presentar por qué algunas personas se niegan a reconocer su pérdida auditiva y no quieren beneficiarse de la atención médica. El presente trabajo propone estrategias para promover la aceptación de la pérdida de la audición entre este tipo de pacientes.

Material y métodos: El artículo se basa en una síntesis bibliográfica de publicaciones clínicas y científicas, así como en las experiencias clínicas relacionadas con los distintos aspectos de la negación de la hipoacusia por parte de los pacientes y su rechazo de los cuidados médicos propuestos. Las publicaciones citadas han sido recogidas utilizando la base de datos PubMed y el buscador Google Scholar e introduciendo los términos “negación,” “pérdida de la audición” y “audífonos”.

Resultados: Algunos pacientes, aparte de negar el hecho de que sufran una pérdida auditiva, niegan también que esto de alguna manera los afecta y dicen que no necesitan auditófonos. La negación puede manifestarse de varias maneras, incluida la negación directa de la pérdida auditiva, o indirecta, cuando el paciente niega la dificultad en la comprensión del habla, y puede tener varios grados – desde negación parcial hasta negación completa. Causas de la negación incluyen el estigma asociado a la pérdida auditiva y a los auditófonos, falta de confianza en los proveedores de auditófonos, incertidumbre en cuanto a los beneficios de los auditófonos, así como baja autoestima en la adecuada adaptación.

Conclusiones: Los pacientes que niegan su hipoacusia lo más probable que no acudan a la ayuda médica y no participen en estudios relacionados con el estado de su audición. Por lo tanto, para llegar a estas personas, es necesario implementar medidas de concienciación a gran escala. Para prevenir la antes descrita negación por parte de las personas con pérdida auditiva, una de las estrategias que puede ser útil es unirse a grupos de apoyo que funcionan en el marco de la rehabilitación de la audición o dar consejos a personas que se comunican con ellas. Una investigación adicional será beneficiosa para profundizar el conocimiento sobre el fenómeno de la negación de la hipoacusia por parte de los pacientes.

Palabras clave: envejecimiento • negación • auditófonos • pérdida de la audición • adultos de edad avanzada • estigmatización
OTRZCZACIE TUOUCXORDCT AND OTRKAZ PACJENTOW OT POMOCZ, PREDLAJECTWY W RAKAKX SISTEMY ZDROVOCXANIA LICEAM
C NARUCZENIAIM SLUCHU – OBOZR

Abstrakc

Введение: Отрицание пациентами потерю слуха может быть одной из возможных причин, из-за которых их нарушения слуха не лечатся. Цель этого обзора – показать, почему некоторые люди отрицают свое нарушение слуха и не хотят воспользоваться медицинской помощью. В настоящей работе представлены методы популяризации принятия нарушений слуха среди таких пациентов.

Материал и метод: Статья основана на синтезе клинической и научной литературы, а также клиническом опыте, связанном с различными аспектами ситуации, в которых имеет место отрицание тугоухости пациентами и отказ от помощи, предлагаемой в рамках системы здравоохранения. Процессология литературная была собрана с помощью баз данных PubMed и поисковика Google Scholar, с использованием терминов «отрицание», «потеря слуха» и «слуховые аппараты».

Результаты: Некоторые пациенты не только отрицают свое нарушение слуха, но и отрицают, что это на них каким-то образом влияет, а также утверждают, что они не нуждаются в слуховых аппаратах. Отрицание может иметь различные формы, в том числе неосознанное отрицание нарушения слуха, так и осознанное, в этом случае пациент, например, отрицает схожесть с пониманием речи, а также может иметь различную степень – от частичного до полного отрицания. К причинам отрицания относится стигматизация, связанная с нарушением слуха и слуховым аппаратом, недоверие к поставщикам слуховых аппаратов, неуверенность в достоинствах слуховых аппаратов и отсутствие уверенности в себе и соответствующей адаптации.

Выводы: Пациенты, которые отрицают собственную тугоухость, вероятнее всего не обратятся за помощью к сотрудникам службы здравоохранения и не примут участия в исследованиях, касающихся состояния их слуха. В связи с этим, чтобы найти подход к таким лицам, необходима широкая информационная кампания. Чтобы противодействовать описанному отрицанию среди лиц с нарушениями слуха, из многочисленных стратегий может принести пользу запись в группы поддержки, действующие в рамках слуховой реабилитации, или передача указаний значимым людям в их окружении. Дальнейшие исследования явления отрицания пациентами своей тугоухости будут способствовать более тщательному изучению проблемы.

Ключевые слова: старение • отрицание • слуховые аппараты • потеря слуха • взрослые люди пожилого возраста • стигматизация

ZAPRZECZENIE NIEDOSLUCHU A ODRZUCANIE PRZEZ PACJENTÓW
DZIAŁAŃ PROPONOWANYCH W RAMACH OPIEKI ZDROWOTNEJ DLA OSÓB Z PROBLEMAMI SLUCHU – PRZEGŁAD

Streszczenie

Вступ: Запрещение утрату слуха через пациентов представляет одну из возможных причин, за счет которых их нарушения слуха не лечатся. Целью этого обзора является представление методов популяризации принятия нарушений слуха среди таких пациентов.

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Introduction

Denial is often apparent in mental illnesses, addictions, eating disorders, terminal illnesses such as cancer [3], and chronic conditions such as hearing loss [4]. The concept of denial has been explained by various authors in various ways depending on the specific context. It is helpful to review these various definitions to get an in-depth and well-rounded view of the concept of denial for clinical application of the concept to issues related to hearing loss and hearing aids. Freud [1] described denial as the refusal to accept the existence of a distressing condition. He thought of denial as one of the defence mechanisms used by the ego to shield it from perceived threats. Denial can also be a first step of the mourning process, followed by anger, bargaining, depression, and acceptance [2]. Denial allows the denier...
to deal with emotional stress, anxiety, fears, and painful thoughts by refusing to accept facts that are obvious to others. All these various definitions can be combined to form a uniform concept of denial (as shown in Figure 1) for improving hearing health care. The term “acceptance” in the figure is related to the acceptance of hearing loss or acceptance of related recommendations such as hearing aids. Acceptance of hearing loss specifically means that the patient agrees, following suggestions from family members or following the diagnosis of hearing loss by a clinician, that he or she suffers from hearing loss. Such individuals may deny the need for hearing aids and may not follow a recommendation for such a device. Acceptance of hearing aids means that the person agrees with a recommendation to obtain a hearing aid. Please note that, for easier comprehension, Figure 1 shows a highly simplified model of denial and related processes; for example, some individuals may reach the acceptance phase, but may then revert back to denial (as discussed later in this article).

Audiologists usually diagnose hearing loss using a calibrated audiometer [5] that presents a set of tones at various frequencies through headphones or insert earphones. The tones are calibrated based on the responses of young adults with normal hearing who do not have any family history of hearing loss, who are free from hazardous noise exposure history, and who do not have any ear-related conditions or diseases. The patient is expected to respond to the tones he or she is able to hear, including those that are barely audible. Thresholds are usually defined by noting the softest level at which the patient responds to the tones on at least 2 out of 3 trials [6]. A threshold of 0 dB HL represents the average level of the softest tones heard by young adults with normal hearing. Adults with thresholds of 25 dB HL or greater are diagnosed with hearing loss, although various investigators have used other criteria.

The prevalence of hearing loss increases with age. Hearing loss can have a negative impact on the individual, family, and the society [reviewed in 4]. Hearing aids are effective in improving life quality [7, 8]. Hearing aid use can improve psychosocial function even in the presence of a mild hearing loss [9]. Unfortunately, few adults seek treatment for hearing loss. In the U.S., among adults who are 70 years or older and who could benefit from hearing aids, fewer than 30% have ever used hearing aids and the percentage is even lower among adults aged 20 to 69 years [10]. According to the World Health Organization [11], the global annual cost of unaddressed hearing loss is in the range of $750 to 790 billion international dollars (a unit of currency defined by the World Bank).

Since a possible reason for unmanaged hearing impairment is denial, it is crucial for health professionals to address the issue of denial of hearing loss as effectively as possible through a complete understanding of this phenomenon. The purpose of this review is to examine the various aspects of denial of hearing loss and rejection of hearing health care in order to assist health professionals promote acceptance of hearing loss and hearing health care.

**Methods**

In most cases hearing loss is not life threatening. Thus, many individuals with hearing loss can continue to deny hearing loss and may never seek advice from health professionals or participate in research studies that are, or appear to be, related to denial of hearing loss. Therefore, for this review, related clinical and scientific articles were located through the PubMed database and Google Scholar search engine, using the terms ‘hearing loss’ and ‘hearing aids’ in addition to the term ‘denial’. By reviewing the abstracts, the search was narrowed to sources in English addressing denial. The references used in such studies were examined to locate additional publications related to the topic. Both qualitative and quantitative information from psychological, social, and audiological perspectives on denial of hearing loss was then integrated with personal clinical experiences to complete the review.

**RESULTS**

**Proposed classification of denial of hearing loss**

Denial can be classified in a variety of ways including what is being denied, the manifestation of denial, and the severity of the denial (Figure 2).
Classification based on what is being denied

Denial of existence of hearing loss

In this case, a person with sensorineural hearing loss typically insists that she or he does not have any difficulty in hearing. For example, upon hearing the results of their audiometric evaluation, the person may say that he was distracted by heartbeat and stomach noises, leading to abnormal test results. After realizing they could have a hearing loss, individuals delay a hearing test for 3.5 years on average [12], and some of the delay in seeking hearing health care is related to the stigma associated with hearing loss [13]. Many individuals admit to previously going through a stressful phase of denial and concealment before seeking a hearing test [14].

Denial of impact

Individuals with significant hearing loss may down-play or strongly deny actual hearing difficulties [15]. Even some individuals who are receiving monetary compensation for occupational hearing loss [16] show such denial. In one study, 13% of those who did not seek follow-up testing after failing the hearing screening felt that their hearing problem was not serious enough [17].

Denial of hearing aids

The denier may come up with several excuses, including cost issues, but there are several other reasons for denial including stigma [18] associated with hearing loss or hearing aids. Even in countries where hearing aids are offered at no cost, many patients refuse hearing aids [19]. On average, the denial of hearing aids may last about 1.3 years after an initial diagnosis of hearing loss, as suggested by an observed delay in the purchase of hearing aids by 1.3 years [12].

Denial of the need to use hearing aids following their acquisition

The period between the time when an individual is first fitted with hearing aids and the time when she accepts her hearing loss may last for a couple of years [20]. Approximately 3% of hearing aid owners never use their hearing aids and approximately 13% may use their hearing aids on a less than weekly basis [12], which can significantly reduce the benefit from hearing aids.

Classification based on manifestation of denial

Implicit denial

The patient tries to invoke other causes for their hearing difficulties, such as wax in the ears. Another example is that the patient may say that he did not do well on the hearing test because he was not paying close attention to the presented sounds.

Explicit denial

The patient says that he does not have any hearing difficulties, while family members report clear evidence of hearing loss and a significant hearing report is apparent on the audiogram.

Figure 3. Classification of denial based on the degree of denial

Classification based on the degree of denial

In a strict sense, the denial defense mechanism can be considered unconscious, but it need not be a complete retreat from reality. It can be conceptualized as a continuum of complete denial to partial denial, including minimization to normalization of the problem [21], as shown in Figure 3. Minimization implies acknowledgement of some hearing impairment but is viewed more as a problem for others, and in some cases a problem that can be overcome without any assistance.

The prevalence of denial

The exact prevalence of denial of hearing loss is difficult to assess since many deniers never participate in any screenings or research projects related to hearing, and verification of hearing loss through audiometry or interviews of family members is a prerequisite to the study of denial of hearing loss. Following successful treatment, some patients may admit to previously denying their hearing loss over a long period, either due to vanity issues or shame [e.g. 22]. A fairly long period may be necessary for some individuals to accept their hearing loss or the impact of such hearing loss [20]. Kyle and colleagues [23] noted that up to 75% of individuals with hearing loss are in the denial phase at any given time.

The reported prevalence of denial varies depending on the criterion used for hearing loss. For example, using a criterion of failure to respond to a 40 dB HL tone in one or both ears at 1000 and 2000 Hz, Smith and Cricos [24] concluded that most adults above the age of 65 years acknowledge hearing loss despite their lack of hearing aid use. In their study, only 11% of the individuals who thought they did not have hearing loss failed the screening. However, in the same study 66% of the individuals who...
thought they had hearing loss passed the screening, which indicates a lax passing criterion. Using a similar criterion, a similar prevalence of 11% denial was noted by Dancer & Jacobson [25]. Studies have shown that even a mild hearing loss (25 dBHL) can be disabling [26], and so a 40 dBHL criterion can be expected to exclude individuals who had a hearing loss. Having such relaxed criteria for determination of hearing loss is likely to prevent individuals with mild loss from getting adequate help [20].

Another factor affecting the prevalence of denial of hearing loss is the particular sample surveyed. If socially active older adults who have never been previously examined by any hearing professionals are studied, then the prevalence of lack of awareness of hearing loss or denial can be as high as 50% [27]. Among those who report normal hearing, 70% will continue to deny a hearing loss even after receiving informational counseling about their hearing loss [4]. In another study, investigators recruited individuals above the age of 70 years who had registered with a general practice in an inner London borough. Out of a sample of 253 participants (48 refused to participate), 60% had a hearing loss using a criterion of an average loss of 35 dBHL or worse across 1, 2, and 4 kHz. Among those with hearing loss, 24% refused to accept their hearing loss even in the presence of audiometric evidence [28]. On the other hand, among the individuals who visit hearing clinics, about 17% of the individuals may remain in denial after initial consultation and counseling [29]. The different prevalence in the above populations can be expected since some individuals who visit hearing clinics are cognizant of their hearing difficulties.

An additional factor determining the prevalence of denial is the type of denial assessed and the time of the assessment. As noted previously, if denial of diagnosis of hearing loss is evaluated among those who denied any hearing loss before audiometric testing, the rate of denial following audiometric evaluation and informational counseling can be as high as 70% [27]. If denial of hearing aids is being assessed after acceptance of hearing loss, the denial can be more than 50%, even in countries where hearing aids are provided free of charge [19]. Erler [30] reported acceptance of treatment or purchase of hearing aids only by 22% of individuals after a brief counseling session. Even with newer technologies, if denial of treatment is assessed after an initial audiological appointment and a brief interactive information session related to hearing aids, only 56% may decide to obtain aids, 30% may inform the audiologist that they need to think about hearing aids, while 14% may reject hearing aids [31]. Although 10.6% of adults report hearing difficulties, suggesting awareness of hearing loss, only 3.2% report hearing aid ownership, suggesting an adoption rate of 30.2% [12] or hearing aid denial rate of 69.8%.

Benefits of initial brief denial

During the brief period after learning of the existence of hearing loss, denial may serve a protective purpose. It can allow some time for the unconscious mind to organize to cope with the upcoming changes such as using and adjusting to amplification. In a few cases, when the patient has other very serious health concerns – such as pancreatic cancer – denial of hearing loss can give strength to focus on coping with cancer. Obviously, a beneficial approach to managing the hearing loss, after a brief duration of denial, is to accept it and follow the recommendations of hearing health professionals.

Disadvantages of long-term denial

Prolonged or extended denial can have potentially devastating long-term consequences, such as a divorce due to communication difficulties with the spouse. Such individuals may insist that they have normal hearing and may become furious at individuals who suggest the presence of hearing loss. We have seen such anger from a few individuals by simply administering a questionnaire titled “Survey for Client Acceptance of Loss and Hearing Aids (SCALHA)” that includes questions such as “Do other people think that you have a hearing loss?” [32,27]. However, after a brief period, this ‘anger’ phase can assist in pulling some individuals out of the denial phase. As stated previously, the five stages of the grieving or emotional adjustment process include denial, anger, bargaining, depression, and acceptance [2].

A major disadvantage of the refusal to accept hearing loss is that it presents an obstacle to seeking or successfully participating in auditory rehabilitation efforts [33]. In addition, the denier often places the blame for the unacceptable reality of hearing loss on someone else (e.g. spouse speaking too softly) which can increase tension in the family [34].

Disadvantages of denying the need for a hearing aid

Long term unmanaged hearing loss can lead to reorganization of the auditory pathways due to sensory deprivation. For example, the areas that are normally tuned to high frequencies can become tuned to low frequencies in the presence of untreated high frequency hearing loss [35]. Such reorganization can make adjustment to hearing aids more difficult after a long period of untreated hearing loss.

People with auditory difficulties can suffer from psychosocial, physiological, cognitive, and behavioral issues [36]. For people who do not deny the diagnosis, but deny hearing aids, their emotional reactions to hearing loss may make them tense and nervous, making speech recognition more difficult. They are more likely to be annoyed or exasperated during routine encounters. They may feel anomalous, weakened, or disabled [37]. Some deniers are constantly afraid of being found out as being hearing impaired. Other individuals may become the object of hurtful gibes or shame, leading to reduction in participation in social activities [19]. Hearing loss also affects friends, family, or caregivers due to miscommunications, burden of serving as an interpreter, and psychological costs related to the inability to have honest discussions about hearing difficulties [37–42].

Unmanaged hearing loss can lead to breaking of unwritten social rules. For example, some individuals with unmanaged hearing loss may get too close to the person who is speaking and thus can encroach on the speaker’s personal space. Persons with unmanaged hearing loss may unconsciously speak in a loud voice, which can make the person...
seem angry or unstable [37]. This can lead to negative reactions from the conversation partner such as movement to a position further away, with an apparent display of unfriendliness or lack of empathy [20].

Reasons for denial

The unconscious mind of the denier may deem being hearing disabled, or hearing aided, or aged as more threatening to the ego than the act of denying the presence of hearing loss. In such cases, self-deception is used as a protective shield against the undesired reality of hearing disability, or the actual reality is modified to align with the person’s self-image [43] of being a typical younger individual. People who feel they can minimize the occurrence of hearing loss as they grow older are more likely to display denial of hearing loss [44].

Reasons for denial of diagnosis

One of the reasons for refusal to accept auditory difficulties is the stigma related to hearing loss. Concealing hearing difficulties is a commonly reported stigmatic behavior [45]. The term stigma refers to any attribute, trait, or disorder that marks an individual as being unacceptably unlike the “normal” individuals with whom he or she routinely interacts, and such a trait is expected to elicit some form of (negative) community reaction [46]. Knapp [47] observed that unlike the blind or physically disabled, the deaf are seldom pitied. They are more often ridiculed and the invisibility of their hearing loss may further inflate the perception of “strange or odd” behavior. He further noted that individuals with hearing loss are suspicious, and often with cause, since people do avoid them. Individuals with hearing loss are often the target of hurtful jokes [21].

Up to 23% of the psycho-emotional utterance units of professionals with hearing loss are related to the theme of embarrassment, self-consciousness, or shame [48]. Even health care providers such as nurses may report discomfort in talking to a person with hearing loss [49]. Knapp [47] viewed hearing as a social sense and noted that to hear is to conform and to ‘not hear’ may mean rebel. Thus, individuals with normal hearing may sense disapproval when what they say appears to fall on “deaf ears”.

A few individuals may be striving to avoid being defined as deviant, stupid, or dumb in social interactions and to maintain a positive (normal) self-image [43]. Approximately 30% may not reveal their hearing loss in the workplace [48]. Denial of hearing loss allows the person to not see himself as inept in social interactions or as imposing a burden on others because of hearing difficulties. Such denial may also allow individuals to maintain the self-image of being young. Some individuals associate hearing loss to aging and aging with the approach of death [50]. Other individuals may strongly believe that hearing loss is uncommon and unexpected at middle-age.

Some individuals may feel overwhelmed by the diagnosis of hearing loss and may feel incompetent to adjust to it. For example, they may need to make certain behavioral modifications such as watching the face of the speaker, which may reduce the primary disability caused by hearing loss but may lead to secondary issues such as fatigue due to the effort involved in the adjustment process [51].

Classification of stigmas

Stigmatizing conditions can be classified by their visibility (Figure 4).

![Figure 4. Dimensions of stigma](image-url)
Some stigmatizing disorders such as blindness are clearly visible, and cannot be hidden or disguised, and individuals with such disorders can be discredited based on related stigma. Other conditions such as mild or moderate hearing loss are invisible and may allow people with hearing loss to assume that they can “pass as normal” [46], thus promoting denial. A hearing loss may become visible if visible hearing aids are worn by an individual, which is problematic for those who do not wish to disclose their hearing loss [52]. In other cases, when communication partners become aware of the listening difficulties of a patient, due to several requests for repetition of messages or confusions in carrying out conversations, they will assume a hearing loss or senility.

Stigma can be classified by considering how individuals who do not have hearing loss feel about those with hearing loss and how they act around individuals with hearing loss. For example, in the emotional domain, individuals without hearing loss may have prejudice or negative feelings such as pity or shame about those with hearing loss. From the cognitive point of view, they may, as a group, think about the person with hearing loss as someone who is getting older or who is becoming less competent. Some such individuals may express their prejudice through discriminatory behaviors such as joking or mimicking the person with hearing loss (Uh? What did you say?).

From the viewpoint of those who have a hearing loss, stigma can also be classified into witnessed, anticipated, self-experienced, or internalized stigma and the reasons for stigma may fluctuate over time. Individuals may see stigma in statements in the media, perhaps news or comedies, related to not hearing a word correctly. Wallhagen [53] identified the potential effect of the media and advertisements on maintaining the stigma related to hearing loss and hearing aids.

Anticipated stigma is the anticipation of fear of discrimination [54]. Before acquiring a hearing impairment, an individual may share their prejudice about deafness with others, which will then increase the possibility of anticipated stigma [43]. As a result of anticipated stigma, some people may unconsciously adopt a strategy of non-disclosure or concealment of hearing loss. Some individuals are afraid of the psychosocial disadvantages of disclosure, such as reduced promotion or job opportunities or being excluded from group conversations [21] or activities.

Self-experienced stigma refers to actual prejudice or unacceptability. People with hearing loss often experience stigma and feel that other individuals view them differently due to their hearing loss or hearing aids [reviewed in 18]. For example, some individuals report being stigmatized by coworkers or family members [21], perhaps being bullied by their bosses, fired, demoted, or asked to give up some work-related duties [14]. Other individuals report denial of promotions because of their hearing loss [48].

Internalized stigma refers to the extent to which individuals with hearing loss may believe and accept the negative stereotypes associated with them. For example, after experiencing discrimination in the work place, some participants may begin to believe that they are incompetent or incapable [14]. Some patients believe that they have lost their “competitive edge” because of hearing loss and in competitive professions such as business, some fear that having a hearing loss is perceived as a weakness [48]. Others believe that they have lost their self-esteem due to an inability to get a good job. Some individuals with hearing loss are concerned about appearing stupid or dumb [55], unfriendly, difficult, rude, or old [56]. Hearing aid use does not always ameliorate the feeling of stigma [57].

Reasons for rejection of hearing aids

Perception that hearing loss is not serious enough (minimization)

Some individuals may have a stolical attitude to problems of any kind, including hearing loss [58]. Other individuals may believe that they have only a slight hearing loss or that their hearing problems are minor and that they know how to cope with the loss on their own. For those with mild to moderate hearing loss, the main barrier to adopting a hearing aid is the perception that they hear well enough in most situations [12]. In one study, among those who were unwilling to use hearing aids, 47% did not give a reason for refusal or declined to discuss the topic and 19.7% felt that hearing aids were unnecessary [59]. The perception of minor hearing difficulties may be enhanced by significant others who may compensate for the loss by speaking loudly and allowing the volume of the TV to be sufficiently loud to compensate for the hearing loss.

Ambivalence about the effectiveness of hearing aids

Cost of the hearing aid itself is unlikely to be the only major barrier to accepting a hearing aid [60]. In a recent study of individuals with hearing loss from southern Taiwan, who did not wish to pursue hearing aids, only 5.1% noted cost-related concerns [59]. For individuals in the age-range of 65 to 74 years, in UK, where free hearing aids are available for those who qualify, the hearing aid adoption rate is 40%, compared to a rate of 39% in the U.S. where not everyone receives free hearing aids. For individuals over 75 years, in France, where national healthcare is available, the adoption rate is 39%, compared to 40% in the U.S. [12]. Nonetheless, some patients still believe that the cost related to the treatment is too high [27], especially in the presence of severe hearing loss [12]. Others may not be convinced about the cost effectiveness of hearing aids.

Some individuals report minimal benefit from hearing aids in noisy surroundings, which restricts their participation in social gatherings [56]. Some individuals believe that hearing aids do not work [61] and others consider hearing aids are not worth bothering about [56]. Others assume that hearing aids will make hearing worse due to constant exposure to loud sounds. Some are concerned about hearing aids becoming a type of a crutch; once they start wearing them they will have to continue using them (like eyeglasses). Some may have had past experience with poorly fitted hearing aids or may know a friend or relative with poorly fitted hearing aids or who believed that their hearing aids made things worse for them [52].
Some health professionals may reinforce the rejection of hearing aids by informing patients that hearing aids are not helpful for their hearing loss and may not be worth trying [19,41] or that individuals who get hearing aids too early are worse off due to those aids [52] or that their hearing loss is not severe enough. A physician informed one of our patients with a significant high frequency hearing loss that the only thing she needed to do was to stop worrying about buying a good stereo because of her inability to differentiate between a good and a bad stereo. Other barriers for referral by medical practitioners include negative perceptions about how older patients prioritize hearing and their ability to afford and adapt to hearing aids [62]. In some cases, physicians may offer treatment for hearing loss only in the form of cerumen removal [28].

**Lack of trust in hearing health care providers**

Some patients may believe that hearing health care services are commercially oriented and biased. They have difficulty in trusting the results of their hearing tests since the health care provider profits from selling hearing aids after diagnosis of a hearing loss. This situation can be viewed as a conflict of interest and thus untrustworthy [52]. In such cases, objective tests such as otoacoustic emissions can improve confidence in the subjective audiometric test results. Patients’ lack of trust may be worst in cases where hearing health care providers fail to respond in an empathetic manner to patient concerns [63].

**Hearing aid stigma**

Some stigma is related to the physical appearance of hearing aids, with the size and visibility of hearing aids being associated with stigma [reviewed in 43]. In a study involving a large sample, 18% reported being too embarrassed to wear hearing aids [64]. Women appear to rate men without hearing aids as being more attractive [65]. The physical appearance of hearing aids may not always be a major issue. For example, in a study of individuals with hearing loss from southern Taiwan, only 1.5% of the patients who did not wish to pursue hearing aids had cosmetic concerns [59].

Outer appearance is more prominent in some cultures. Many individuals spend considerable amounts of money in improving their personal appearance through plastic surgery, regular and expensive visits to beauty salons, and costly and time-consuming make-up routines. Understandably, visible hearing aids may not fit into their self-perception or their expectations of an ideal self-image [59].

Some people with hearing loss feel that hearing aids are associated with negative stereotypes such as old age [53,50]. Part of the stigma related to aging is associated with physical appearance. There is a general consensus in society’s views of aging, including a decline in physical attractiveness [66]. Many older adults strive to maintain a youthful and attractive appearance in order to achieve an ideal self-image, to continue to be socially appealing or acceptable [67], and to reduce anxiety related to aging or near-ing death. The desire to maintain physical attractiveness is partly related to the benefit of attractiveness in labor markets and in social situations. Physically attractive adults enjoy better career advancement and promotion opportunities and higher wages than unattractive individuals [reviewed in 68]. As an example of social advantage, attractive professors in a university setting receive better student evaluation ratings than less attractive professors [69].

In our experience, discrete hearing aids promote greater acceptance, satisfaction, and degree of use among some older adults. These adults were not only greatly dissatisfied with their previous, more visible aids but also with the professionals who served them since they perceived that, due to their age, the professionals frowned when the patient expressed cosmetic disapproval of the behind-the-ear hearing aids recommended for them. Such reactions made it impossible for them to further pursue their cosmetic concerns due to the fear of being accused of vanity (Figure 6).

Some individuals anticipate stigma from the use of hearing aids. Studies have shown that a belief that hearing aids are too conspicuous or suggest incompetence can prevent some individuals from seeking amplification [70,71]. Stigma and negative attitudes are considered to be the contributing factors for the low use of hearing aids among Indigenous Australian adolescents [72]. In a study involving a large sample, 16% of individuals were concerned about what others will think of them if they had hearing aids [64]. Plath [73] surveyed hearing aid acousticians to find out the most frequent problems in provision of hearing aids to older individuals. The findings of the survey suggested that cosmetic appearance itself was not the most important variable, but the fear of suffering social disadvantage as a person with a recognizable hearing problem was an issue. In one study, older women perceived their aided peers as less confident, intelligent, and friendly. However, this negative perception was apparent even when the women were unaware of the hearing aids, suggesting that a negative self-image projected by hearing aid wearers may contribute to the negative hearing aid effect [74].

**Lack of confidence in making required adaptations**

Hearing aids represent a change and for some older individuals any change is difficult. Others may lack the confidence in handling new technology. Some individuals may suffer from clinical depression, which can stop them from seeking help or taking on the risk of disappointment.

**Helping the patient move beyond initial denial**

Before attempting to move the denier beyond their initial point of denial, it is important to distinguish between psychological denial and refusal of hearing aids based on legitimate reasons – such as cost, for those who are economically disadvantaged. In addition, due to cultural factors or pride, some individuals may be unwilling to expose their poverty to others [75]. Obviously, such legitimate reasons require specific approaches to address them.

Detection and assessment of denial is not always easy. However, a simple question such as “Do you think you have a hearing loss?” along with an audiogram, can provide a quick initial assessment of the existence of denial. Administration of a survey (SCALHA) with additional questions can also assist in an informal exploration of
denial and in promoting acceptance of hearing loss [30,27]. SCALHA includes questions such as “Do you think that people mumble?” to assess denial, and questions such as “How do people feel when you ask them to repeat?” to promote acceptance of hearing loss. Hallam and Brooks [58] suggested that denial could be captured by the minimization subscale of the Hearing Attitudes in Rehabilitation Questionnaire (HARQ), which includes items such as “By and large I am able to hear without difficulty”. The HARQ also includes items such as “I think that if you wear a hearing aid people tend to ignore you”, which can provide insight into anticipated hearing aid stigma. Additionally, questions such as “If you had a hearing loss and if hearing aids helped, would you be willing to wear hearing aids?” can provide some assessment about the potential denial or acceptance of hearing aids.

An important part of assessment of denial of hearing loss is to determine the presence of hearing loss. In the USA, adults over 65 years of age entering the Medicare program are entitled to a “Welcome to Medicare” preventative physical examination, which includes hearing screening. However, 75% of primary care physicians have reported insufficient time to conduct routine hearing screenings [76], suggesting there is a failure to recognize the impact of hearing on quality of life. Only 23% adults reported having a hearing screening during their latest physical examination and 9% of hearing aid owners and 30% of non-owners reported that their primary care physicians suggested their hearing loss was not bad enough for hearing aids [12].

It is possible some physicians recognize the presence of a hearing loss if the patient responds inappropriately to questions, but they may not discuss it with their patients due to the fear of negative reactions. Such fears have been noted for other health conditions such as obesity [77]. In fact, even if obesity is the reason for many of the patient’s health problems [78] many physicians refrain from talking about obesity to the patient, suggesting the need for improvement in clinical communication [79]. Because hearing loss is an invisible condition, physicians can much more easily ignore it compared to conditions such as obesity. Primary care physicians need to recognize the importance of screening for hearing loss and need to develop confidence and comfort in discussing hearing loss with their patients.

Many of us use self-deception to protect ourselves from unpleasant truths. One study found that half of the physicians with at least some degree of hearing loss reported having good hearing [80]. If the service provider (e.g., physician, audiologist, or psychologist) has a hearing loss and has not accepted the loss or aural rehabilitation, he or she may need to first explore the reasons for this denial through self-reflection and insight. An advantage of self-awareness of denial may be an enhanced appreciation of what the patient is feeling and how difficult the task may be for the denier to forego their strategy.

The psychological defense that we are hoping the patient will abandon is actually either an unconscious defense mechanism or a strategy the patient is using to protect his/her sense of self-worth. Thus, initial short-term denial should be viewed as an initial natural step towards seeking assistance. Luterman [81] noted that assaulting denial is not only ineffective but can lead to passive-aggressive behaviors. Confronting people directly about denial can induce additional stigma beyond the hearing loss itself. The

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Figure 5. Potential impact of stigma associated with concern about the cosmetic appearance of hearing aids (interpreted as vanity). The patient may either abandon hearing health care or seek a second opinion at the cost of traveling great distances and paying for a second set of hearing aids from someone who has a reputation for providing satisfactory services to everyone.
internalization of the negative connotation associated with the label ‘denial’ may interfere with the reshaping of self-identity necessary in adjusting to hearing loss. Kaplan [82] noted the damaging impact on self-esteem when people feel that others are interpreting their behavior negatively.

Promoting acceptance of the existence of hearing loss

It is important to allow the patient to express fears and other feelings. The health professional should address any irrational beliefs or logical flaws in a sensitive and patient-centered manner. For example, a patient might say, “When my wife speaks clearly, I can hear her. Only when she mumbles, I have difficulty.” The clinician can respond by elaborating that ‘clear’ speech tends to be somewhat slower and thus allows the brain more time to fill in the information that the patient is missing due to his hearing loss. In addition, the speech may sound clearer when a conversation partner speaks at a louder level to compensate for the patient’s hearing loss. When the partner speaks at average conversational levels, the patient misses certain sounds, which can give the patient the impression that the partner is mumbling.

Hallberg and Barrenas [41] suggested that for acceptance of disability, the hearing loss must be integrated into the patient’s personal identity. Guiding the individual to explore the positive aspects of hearing loss may open the door towards integrating hearing loss into their personal identity. Some positive aspects of hearing loss include not being bothered by unpleasant noises, thus allowing better concentration; ability to switch off from uninteresting talkers; an acceptable excuse for leaving some unpleasant situations; and empathy for other individuals with hearing loss [51].

Training in using effective coping strategies and psychological support to strengthen self-esteem can assist individuals in moving beyond denial. Clinicians need to acknowledge the positive coping strategies used by their patients such as watching the face of the speaker for visual cues, or those that are used by the patient’s family, such as speaking only when quite close to the patient.

Patient participation in a group aural rehabilitation program can also promote acceptance of hearing loss. Some individuals may have to develop a new social identity and a new self-concept for accepting hearing loss. Group auditory rehabilitation sessions, which provide opportunities to interact with other individuals who also possess the stigmatizing trait of hearing loss, can augment this process. Such sessions can help the individual to retain self-worth in spite of possible changes in roles, relationships, and self-image, and a healthy attitude towards their hearing loss. The social support within the group may enable patients to seek additional services, such as hearing aids, without feeling stigmatized [14].

Promoting the acceptance of hearing aids

Rawool [83] presented several ways to promote the acceptance of hearing aids. One strategy is to inform the patient about the disadvantages of unmanaged hearing loss, which leaves the person unequipped to participate in the world of listeners with normal hearing.

In addition, the person must also work hard to live up to the ‘normal’ world [84], which can increase stress and anxiety, not only due to the hearing loss but also due to the effort involved in concealing the loss. Discussion of other long-term effects of the lack of hearing aid use on morale, social functioning, and somatic health (e.g. sensory deprivation of the nervous system, physical tension, and headache) are also helpful in addressing denial [85].

We need to guide the patient to the self-realization that although they may avoid using hearing aids to conceal their hearing loss, most people in their environment are aware of their loss. We need to help patients recognize that by not helping themselves, their behaviors may be misinterpreted as being senile or weak, the precise things they are trying to avoid by concealing the hearing loss or by not using hearing aids. Some of the stigma they face can be a consequence of their maladaptive behavior caused by unaided hearing loss.

It is also helpful to provide positive images of hearing aids. If positive choices such as “He has a hearing loss and is smart enough to do something about it” are dispersed among negative choices such as “He is too old”, most older adults choose the positive choice [27]. Patients need to understand that individuals restricted by physical conditions who make an effort to cope with their disability are judged more positively than those who do not [86]. Use of hearing aids lowers the self-perception of hearing aid related stigma [87] and the stigma related to hearing aid use is less than that associated with hearing loss, suggesting that taking action can reduce negative perceptions [88].

Health professionals need to encourage individuals to recognize, confirm, and actively seek solutions through rational arguments [41]. For example, one useful strategy is to elaborate on the logical argument presented by the patient such as “Doesn’t everyone at my age have a hearing loss?” The clinician can respond by first agreeing and then elaborating on the response. For example, the clinician might say, “Yes, and many individuals do something about it. For example, President Clinton wears hearing aids.” If the patient says that she hears well in most situations, provide an example of how the brain fills in missing information. For example, if the sentence is “The -ky is clear blue today”, the brain will guess the missing ‘s’ sound. However, such guessing does not work in all situations such as when the phrase is unfamiliar or when too many sounds are missing due to background noise. In addition, with hearing aids, the brainpower need not be spent in guessing the missing sounds. Instead, it can be effectively used for promoting spontaneous and effective conversations, remembering what is being said, and easily recalling any information later.

It is important to make the patient comfortable and confident in seeking and using hearing aids. Some individuals will give up denial when they feel confident that they can be more successful with another strategy such as maintaining and using hearing aids. It is also important to set accurate expectations of possible benefits of hearing
Due to perceived lack of support from their partners, significant others may influence the decisions of patients to preserve their own social identity as part of a normal or normal behavior. Some significant others downplay the effect of hearing loss, compensating for the hearing loss, or distancing the patient develops the habit of wearing and maintaining hearing aids on a regular basis. In some cases, personal appointments may be necessary, whereas in other cases emails or phone calls may be sufficient.

In developing strategies for continued use of hearing aids, interaction of various factors should be considered. For example, significant others could keep reminding the patient to wear hearing aids. However, if the patient is not wearing hearing aids at home due to poor home acoustics caused by hard wood floors or high ceilings, or because the patient finds it more relaxing to have no hearing aids in the ears, then the reminder strategy won't work.

Role for the significant other or family members and friends

Initially, significant others may attribute instances of deviant behaviors resulting from hearing loss to other causes such as egocentrism, disinterest, or senility. This can create tension in the family. Later, significant others can increase the denial by reacting inappropriately to the reduced hearing. A common manifestation of this is to blame the hearing-impaired person of understanding only when he/she wishes to [33]. The attitudes of the significant others or spouse may vary from pretending that there is no problem, playing down the problems arising from the hearing loss, compensating for the hearing loss, or distancing from the patient [36].

Some significant others downplay the effect of hearing loss to preserve their own social identity as part of a normal or ideal couple. A negative attitude towards hearing aids by significant others may influence the decisions of patients due to perceived lack of support from their partners.

Ensuring continued acceptance of hearing loss and hearing aids

Even after providing hearing aids, in some cases it may be important to review other coping strategies to minimize the possibility of the patient falling back on denial. Acceptance of hearing loss and hearing aids may not occur for up to two years following the fitting of hearing aids. Some hearing institutes support individuals through this period by helping them to develop a healthy mental attitude toward their hearing loss [20]. During this critical period, if sufficient support is not provided, the hearing aids may go in a drawer and stay there for a long time. Audiologists need to continue to provide support as needed until the patient develops the habit of wearing and maintaining hearing aids on a regular basis. In some cases, personal appointments may be necessary, whereas in other cases emails or phone calls may be sufficient.

Brooks [89] reported that if the patient admits that a) poor hearing diminishes enjoyment of life and b) that others had difficulty in conversing prior to the hearing aid fitting then there tends to be increased use of the aids four months following the fitting. On the other hand, if the individual has too high expectations, they may be disillusioned after the hearing aid fitting and may thus discontinue hearing aid use. Thus, patients need to be informed about the limitations of hearing aids for continued use [51].

A denier may get impatient from time to time at home and may demand that the family members quit mumbling and speak clearly. As a result, some spouses may regard their significant other as rude, mentally altered, or as growing older. At times, the person with hearing loss may feel that he or she is being deliberately excluded from conversations. Thus, some stigmatization may occur at home [16]. Some relatives may appear socially embarrassed for having to repeat themselves or for having the TV volume too loud [93]. The individual with hearing loss may not be able to enjoy TV without upsetting family members and thus may feel alienated and marginalized. We saw a patient who following diagnosis said, "It is too bad, my husband was right. I was hoping that I had normal hearing, in which case I could have proven him wrong."

People with hearing loss sometimes may fear that those close to them will be unable to cope and will abandon them. For example, a housewife may fear that the cost of hearing aids will be too much of a burden on the husband or family financially. It is important for significant others to let the person with hearing loss know that they are available for help.

It is also important for family members to recognize that unless the person feels a serious need to accept hearing loss, the protective web of denial may persist. Family members may create such needs by expressing their fatigue in having to repeat, or the strain on their vocal cords from having to speak loudly. Occasionally, it may be helpful to create the need to seek hearing health care by not speaking loudly or by creating situations where the person with hearing loss is set-up to have to answer phone calls. Family members need to be informed that many people with hearing loss seek rehabilitation due to pressure from significant others [93].

Stigmatization at home may continue even after the purchase of hearing aids. If family members have not accepted the limitations of hearing aids, they may expect the aided person to be able to hear in every situation such as speaking from another room or speaking with a lot of background noise. They may stop making any effort to help him understand or to include him in conversations, and may unconsciously display impatient and snappish behavior. One possible complication is the presence of hearing loss in the significant other [51]. If the significant other has adjusted successfully to her hearing loss, she may have high expectations from the spouse, which may or may not be met depending on the degree of hearing loss and the ability to recognize speech. Such issues need to be addressed through counseling on similarities and differences in degree and/or configuration of hearing loss of the patient and the spouse.
Role for society

Stephens [51] noted that the general public’s negative attitudes toward individuals with hearing loss are one of the major concerns of such people. For example, newspapers can portray workers as being either competent or limited, and having a good or limited work life [94]. For acceptance of disability, the attitudes from the environment toward the individual with hearing loss must be perceived as non-stigmatizing [41]. Prominent messages in television programs can have an impact on societal attitudes. As an example, one TV drama represented some thematic dimensions including deafness as a disability and social interactions of deaf individuals. After watching the drama, viewers showed positive changes in attitudes related to deafness and social interaction with deaf individuals, since the drama depicted capable deaf characters and friendships among deaf and hearing individuals [95].

Some hearing aid delivery systems measure the success of the hearing aid provider on the number of hearing aids sold, not on the number of high quality outcomes for each patient. In some countries, the government funding systems pay hearing service clinics based on the number of clients seen and hearing aids dispensed [31]. In such delivery systems, patients may not receive enough support for making appropriate decisions and continued hearing aid use. If such delivery systems become more outcomes-focused, the acceptance and continued use of hearing aids may improve.

Persistent deniers

Persistent deniers are rare and can be defined as those individuals who continue to deny the existence of hearing loss over a very long period in the presence of significant attempts by family members and friends. Such individuals are unlikely to visit a hearing health care facility, and if they visit a hearing clinic, it is most likely due to the persistence of a member of the family, with the hope that the hearing health care provider will declare normal hearing status. Knapp [45] described a man who had 45 dB HL thresholds in the speech frequency range but insisted that he had perfect hearing and did not need any rehabilitation. Although he had difficulty hearing, he made outlandish attempts to pretend to have normal hearing by answering questions through guesswork, by reading lips, and by controlling conversations. When he was finally guided to admit the hearing loss, he resorted to denial of impact by insisting that it never bothered him.

Exposing the motivation for denial or the hidden agenda is insufficient in cases of persistent denial, and rational arguments may not be effective. Such deniers reject the idea that they are in denial. Their sense of identity is dependent on the view that they have normal hearing and they are unable to give up that view. It may take months or years for such an individual to accept the reality of hearing loss or to reach a critical juncture, at which point the need for seeking hearing healthcare due to unmanageable stress outweighs any need for hiding hearing loss [14].

Hyde and Riko [96] gave a process model for aural rehabilitation. The 9th step they suggested in their model was to assess denial, and counsel the patient to modify it, providing motivation if necessary. They further recommended re-evaluation of denial and postponement of full rehabilitation in intractable deniers. Goldstein and Stephens [97] described four types of attitudes towards rehabilitation ranging from positive to negative. The negative, or type 4, attitude in their model was those individuals who deny disability. They recommended no hearing aids but offering such individuals communication training as a last ditch effort. Stephens [51] similarly suggested that in cases of persistent denial, the patient’s views must be respected for both ethical and pragmatic reasons and no further treatment need be provided. Interacting with someone on a problem that is emphatically denied or minimized may imply a type of harassment that could lead to unacceptable stress and anxiety for the denier [21]. Stephens [51] recommended contacting the significant others independently of the patient and informing them about communication strategies and environmental aids which could reduce the impact of third-party hearing disability without imposing on the patient.

Conclusions

Many patients with denial of hearing loss are unlikely to seek assistance directly from hearing health professionals. However, they might visit general practitioners or other health professionals for other health issues. Thus, health professionals including physicians need to screen for the presence of hearing loss, identify any denial of hearing loss, and make appropriate referrals and recommendations. Hearing health professionals can also increase outreach efforts to provide hearing health care for older adults by offering hearing screenings and demonstrating hearing aids in community settings.

In order to address denial, hearing health professionals first need to conduct audiometric testing. They then need to carefully listen and observe the patient for signs of either implicit or explicit denial. In the presence of denial, they need to further explore and understand the underlying motivations for denial. In addition, they need to develop communication skills to address denial and to guide their patients to well-informed decisions: attending aural rehabilitation support groups, seeking hearing aids or assistive listening devices, and making use of any additional aural rehabilitation services.

Since very few investigators have explored the issue of denial of hearing loss, future studies are necessary, with large number of participants from various cultures, of those who never seek hearing health care. Such studies will allow us to evaluate the phenomenon and explore effective clinical strategies for addressing denial of hearing loss and rejection of hearing health care.
References