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Self-Perception Changes in Adults Post-Hearing Aid Adoption

Dissertation submitted in partial fulfilment of the requirements for the degree (BA) Audiology
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List of Abbreviations

COM-B Model	Capability, Opportunity, and Motivation – Behaviour Model
EHIMA	European Hearing Instrument Manufacturers Association
ELSA	English Longitudinal Study of Aging
OTC	Over-the-Counter
SD	Standard Deviation
WHO	World Health Organisation

1. Abstract

Background: Despite their proven benefits for communication, hearing aids continue to show low adoption and use among individuals with hearing loss who require intervention. Various audiological factors contribute to these outcomes; however, limited research has explored the psychosocial aspects that influence hearing aid adoption and use, which could have important implications for rehabilitation strategies.

Objective: This study aimed to explore changes in self-perception experienced by adults following hearing aid adoption.

Method: A qualitative design was followed to thematically analyse retrospective interview responses from 42 adult participants. Participants were recruited using the Hearing Tracker and Lexie Hearing databases in the United States.

Results: Participant ages ranged from 40 to 84 years (mean=70.2 years; 8.2 SD). The majority of participants were male (n=20; 66.7%), and most participants were unilateral hearing aid users (n=27; 90%). Five main themes emerged: self-awareness, overall communication, social engagement, improved quality of life, and work performance. Within these main themes, 13 sub-themes emerged, where participants described a range of positive experiences, such as greater acceptance of hearing loss, heightened confidence, and increased participation. At the same time, some negative experiences were also reported, including perceptions of no noticeable change, as well as persistent communication and hearing difficulties.

Conclusion: Hearing aid adoption may support improvements in self-awareness, hearing ability, and participation in everyday life, contributing to predominantly positive changes in self-perception in adults. Although hearing aids play an important role in enhancing psychosocial outcomes, challenges still remain due to unmet expectations or limited benefits in some situations. These findings emphasise the importance and the need for holistic hearing rehabilitation and counselling to communicate both the benefits and limitations of hearing aid use in clinical settings.

Keywords: hearing aid adoption; hearing aid use; hearing loss; psychosocial effects; self-perception.

2. Introduction

Hearing loss is a prevalent condition in adulthood and is associated with a wide range of consequences (Haile et al., 2021; World Health Organization [WHO], 2021). When untreated, hearing loss negatively impacts various aspects of life, including an individual's ability to communicate and, therefore, form and maintain interpersonal relationships (Barker et al., 2017; Shukla et al., 2020). Untreated hearing loss could therefore have psychosocial effects, such as impacting social participation and well-being, as social connections are important in supporting healthy aging and overall well-being (Gao et al., 2023; Jayakody et al., 2022). This may result in social loneliness, which is the absence of a larger social network, and emotional loneliness, which is the absence of close relationships (Shukla et al., 2020; Weinstein et al., 2016). Furthermore, untreated hearing loss negatively affects quality of life, which may contribute to emotional challenges, such as anxiety and depression (Haile et al., 2021; Livingston et al., 2024; WHO, 2024).

Hearing aids are the most common intervention for hearing loss and are associated with improved audibility, speech perception, and communicative function (Suatbayeva et al., 2024; Ziemska-Gorczyca et al., 2024). These improvements often extend beyond auditory function, contributing to enhanced social engagement, reduced hearing handicap, and improved quality of life (Tang et al., 2025; Coco et al., 2019; Weinstein et al., 2016). However, despite the proven benefits of hearing aids, adoption and consistent use remain surprisingly low worldwide, suggesting that adoption involves psychological and social adjustments (Bisgaard et al., 2021). Bisgaard et al. (2021) estimated that between 2009 and 2018, approximately 457 million people were affected by disabling hearing loss, based on data from the WHO and the Global Burden of Disease Enterprise. During the same period, only 124 million hearing aid units were sold globally by the European Hearing Instrument Manufacturers Association (EHIMA), corresponding to a coverage rate of just 10-11% among those with disabling hearing loss (Bisgaard et al., 2021). This suggests that approximately 90% of individuals with hearing loss, requiring intervention, do not own hearing aids or do not utilise their hearing aids (Bisgaard et al., 2021). Furthermore, on average, there is an 8.9 year delay between diagnosis and adoption of hearing aids, further highlighting the global gap between need and adoption (Simpson et al., 2019).

Various factors may influence hearing aid adoption and can be categorised into audiological and non-audiological factors. Audiological factors include self-reported hearing difficulties, speech perception, and understanding how hearing aids work (Knoetze et al., 2023; Marcos-Alonso et al., 2023). Research suggests that better speech recognition in challenging situations has been associated with a significant increase in the delay of hearing aid adoption, whereas individuals with more severe hearing loss and greater self-perceived communication difficulties are more likely to

adopt hearing aids (Simpson et al., 2019). Non-audiological factors include positive attitudes towards hearing aids, racial background, and access to financial assistance (Knoetze et al., 2023; Marcos-Alonso et al., 2023; Simpson et al., 2019).

Once hearing aid adoption has occurred, many individuals still choose not to make use of their hearing aids (Franks & Timmer, 2023). Understanding the discrepancy between the proven benefits of hearing aids and the lack of use is crucial to identifying the barriers that prevent individuals from using them. Common audiological reasons for the lack of use include difficulty wearing them with glasses, physical irritations, such as discomfort and feedback problems, and unrealistic expectations that the hearing aid will cure their hearing loss, which can lead to an unsatisfying reality (Gallagher & Woodside, 2018). Inadequate support from audiologists can further hinder proper hearing aid use, reducing the effectiveness, whereas effective counselling can manage expectations and encourage long-term use (Kochkin, 2010; McCormack & Fortnum, 2013).

Importantly, psychosocial factors, such as stigma and reduced self-perception, are known to negatively influence hearing aid adoption and use (De Andrade et al., 2022; Singh et al., 2025)**.** Non-audiological reasons for the lack of use include concerns regarding the social stigma of wearing hearing aids, which often discourages individuals from using them (McCormack & Fortnum, 2013; Scharp et al., 2021; Southall et al., 2010). This concern arises because hearing aids are commonly associated with the perception of being labelled as “disabled” or “different,” which can make individuals hesitant to use them (Aldè et al., 2025; Nickbakht et al., 2024). This influences not only an individual's willingness to seek treatment, but also when and where they decide to wear their hearing aids, if at all (Haile et al., 2021; Scharp et al., 2021; Wallhagen, 2009; WHO, 2024).

Furthermore, perceived stigma negatively affects an individual’s self-perception and perceived attractiveness (Scharp et al., 2021). According to Madara and Bhowmik (2024), some individuals avoid hearing aids for appearance purposes, and they would consider hearing aids if they were less noticeable, due to the attached stigma. Education is crucial in reducing these misconceptions (Foss, 2013). These perceptions contrast being able versus disabled, intelligent versus mentally deficient, and whole versus incomplete, which impacts self-esteem and well-being (Wallhagen, 2009). Psychosocial factors, such as stigma, self-perception, and social acceptance, may play a significant role in the decision to adopt and consistently use hearing aids, beyond the audiological need alone (De Andrade et al., 2022; Scharp et al., 2021; Singh et al., 2025).

Most existing literature has focused primarily on functional and audiological outcomes, with limited attention paid to the psychological and emotional changes that occur post-hearing aid adoption. Some individuals are still troubled by the unrealistic expectations they set, the lack of self-confidence they require to wear their hearing aids, and struggle with their self-esteem (Kelly et al., 2013). This highlights that self-perception is a key construct that influences both hearing rehabilitation success and overall quality of life. This study, therefore, aims to explore changes in self-perception experienced by adults post-hearing aid adoption.

3. Methods

3.1. Study Design

A qualitative study design was used to analyse interview responses from adult hearing aid users, focusing on self-perception changes post-hearing aid adoption. This study forms part of a larger research project conducted by researchers at Lamar University in the United States, which was carried out in two phases. Phase 1 involved an online survey distributed via the Hearing Tracker and Lexie Hearing platforms. At the end of this phase, participants were invited to participate in Phase 2, which consisted of semi-structured interviews aimed at exploring users' experiences with hearing aids.

The current analysis focuses on Phase 2 of the project. Interview data were collected by two research assistants from Lamar University using a semi-structured interview guide (Appendix A), and responses to the open-ended question related to self-perception were analysed in this study.

Ethical clearance for the larger research study was granted by the Lamar University Human Subjects Review Board (IRB-FY21-248) (Appendix B). Informed consent was obtained from all interview participants. In addition, the University of Pretoria Humanities Ethics Review Committee (SLPA 2025/03) (Appendix C) granted ethical clearance for the analysis of Phase 2. A Memorandum of Understanding was established between the University of Pretoria and Lamar University to allow for the analysis of data obtained from the larger study (Appendix D).

3.2. Study Population and Sampling

Participants were recruited through the Hearing Tracker and Lexie Hearing databases. Hearing Tracker (https://www.hearingtracker.com/) is a platform where hearing device users share opinions and feedback on various hearing aid brands and compare device features (Hearing Tracker, 2022). Lexie Hearing (https://lexiehearing.com/us), developed by hearX, offers Over-the-Counter (OTC) hearing aids aimed at increasing access to affordable, remote hearing healthcare (Lexie Hearing, n.d.).

In order to participate, eligible participants were required to be 18 years or older, have experience using hearing aids (either bilaterally or unilaterally), whether as past or current users (Avierinos et al., 2024; Desai et al., 2024; Knoetze et al., 2024).

During Phase 1, 243 participants completed an online survey designed using the Qualtrics platform. This survey included open-ended questions aimed at gathering initial qualitative data (Avierinos et

al., 2024; Desai et al., 2024; Knoetze et al., 2024). After Phase 1 (survey), participants were invited to participate in Phase 2 (interview). Non-probability convenience sampling was used, relying on participants' voluntary agreement to continue in the study. A total of 107 participants consented to be contacted for Phase 2, of whom 42 agreed to participate. Of these, 37 were Hearing Tracker users and 4 were Lexie Hearing users.

3.3. Data Collection

The interviews were conducted virtually via the Microsoft Teams platform between October 2021 and February 2022. The interview guide was created by a team of researchers at Lamar University using the Capability, Opportunity, and Motivation - Behaviour (COM-B) model. The COM-B model demonstrates the interactions between Capability, Opportunity, and Motivation, assisting in the explanation of why specific behaviours might not be carried out and directing the selection of behavioural targets for successful treatments (Michie et al., 2011). The interview guide was organised into eight sections: 1) preconceptions/motivation, 2) decision process, 3) hearing aid fitting experience, 4) acclimatisation, 5) support, 6) outcomes, 7) barriers, and 8) future expectations. Each interview took approximately 40 minutes to complete.

This study focused on the responses to the open-ended question in section 6 of the interview guide (Outcomes): "Has getting a hearing aid changed how you feel about yourself?"

3.4. Data Analysis

Microsoft Teams was used to automatically generate transcripts during the interviews, which were then saved as Microsoft Word documents. Each transcript was assigned a numerical code, and all identifying information was removed. Demographic data were reviewed separately. The transcripts were stored online in a secure folder. This data was then transferred to Microsoft Excel for analysis.

Inductive thematic analysis with a semantic approach was used to retrospectively analyse the collected data. Only content relevant to self-perception from the transcripts was retained for analysis. The six-phase guide developed by Braun and Clarke (2006) for conducting thematic analysis in qualitative research was followed throughout the process. These steps included: 1) familiarisation, 2) selecting keywords, 3) coding, 4) theme development, 5) conceptualisation by interpretation, and 6) development of a conceptual model.

To minimise researcher bias in data coding, researcher triangulation was utilised. This approach involved multiple researchers cross-checking the data to enhance reliability and reduce subjectivity. Specifically, the researchers worked in two pairs: Pair 1 (KP, TY) and Pair 2 (MW, SF). Each pair

independently analysed 100% of the dataset. Subsequently, the datasets were exchanged for cross-checking, ensuring that the entire dataset was reviewed, and both pairs reached consensus. Additionally, blinding to each pair's analysis and coding was employed between the two research pairs during the analysis process to ensure objectivity and accuracy of the results. Furthermore, two research supervisors (CF, MK) verified the themes obtained after the analysis process, and any discrepancies were discussed and resolved.

4. Results

4.1. Participant Characteristics

A total of 42 participants participated in this study. Seven participants' responses were excluded from the analysis. Reasons for exclusion were: the specific research question was not asked (n=4), responses not relevant to the research question (n=2), and a missing transcript (n=1). Demographic data was only available for 30 out of the 35 analysed participants (Table 1). Participant ages ranged from 40 to 84 years, with a mean age of 70.2 years (8.2 SD). The majority of participants were male (n=20; 66.7%). Furthermore, (n=27; 90%) of participants were unilateral hearing aid users and (n=3; 10%) were bilateral hearing aid users.

Table 1. Demographic Data of the Study Participants (n=30)

Demographic Characteristic	% (n)
Age in Years	
40-49	3.3 (1)
50-59	6.7 (2)
60-69	36.7 (11)
70-79	33.3 (10)
80-89	20 (6)
Sex	
Male	66.7 (20)
Female	33.3 (10)
Race	
White	100 (30)
Laterality	
Unilateral	90 (27)
Bilateral	10 (3)
Employment Status	
Retired	63.3 (19)
Employed	33.3 (10)
Unfit to Work	3.3 (1)
Pretax Income	
Less than $25 000	3.3 (1)
$25 000 - $49 999	6.7 (2)
$50 000 - $99 000	40 (12)
$100 000 - $149 000	20 (6)
More than $150 000	30 (9)

4.2. Determinants of Self-Perception Changes Post-Hearing Aid Adoption

Thematic analysis revealed five overarching themes and 13 sub-themes relating to the impact of hearing aid adoption on self-perception (Table 2). The themes include self-awareness, overall communication, social engagement, improved quality of life, and work performance (Figure 1).

Table 2. Themes and Sub-Themes Identified from Participant Responses (n=35) Regarding the Impact of Hearing Aid Use on Self-Perception

Theme	Sub-Theme	Quote Examples (Age in Years, Gender, Hearing Aid Fitting)
Self-awareness	Accepting disability	*“I've got a really clear picture of who I am with hearing aids versus without hearing aids. so I have no problem at all making fun of myself."* (64, M, Unilateral) *"But at my age, I'd be losing some hearing probably."* (68, F, Unilateral)
	Improved confidence	*"Definitely feeling more confident and feeling more. Uh involved with people."* (demographic information unavailable) *"It's guys that are my age, you know guys in their 60s and 70s and and they if they notice I have hearing aids or they know that I do and they're noticing hearing problems they'll they'll come up and they'll ask me.So I've been able to really share a lot of my experience with them and uh. It'll give them some good advice, so I I think that's. Yeah. Yeah. That's something I feel pretty good about it"* (71, M, Unilateral)
	Unchanged	*"At least in my case, so wasnt a major. Life change?"*(82, M, Unilateral)
Overall communication	Improved communication	*"It makes it easier for me to interact with people and to communicate."* (84, M, Unilateral) *"I went from not being able to hear virtually anything that was being said to being a here, able to hear most of it"* (73, F, Unilateral)
	Persistent communication difficulty	*"It's nice to hear. I mean, I know I still don't hear well. And even with hearing aids, but. I don't like asking people to repeat it for it and. Sometimes what I hear isn't what people said."* (69, M, Unilateral) *"And frankly, I still can't hear them”* (75, F, Bilateral)
	Decreased listening efforts	*"I think when I was I was having to listen really hard to people. I remember being tired at the end of the day when I was trying to hear people or straining to hear people. But yeah, that's that's not a problem anymore."* (68, F, Unilateral)
	Improved phone calls	*"But when I have to like make phone calls to like people, I don't know or call doctors offices or like. I feel like I could. Here or Order order food takeout stuff like I used my wife make those kind of calls because I often couldn't hear and well so I feel better about that."* (65, F, Unilateral)

	Communication strategies	*"You end up being really tuned into people more because of your hearing loss because you're so tuned into the body language, facial expressions, eye movement"* (56, M, Unilateral)
Social engagement	Improved participation	*"I'm more outgoing and I feel more a part of things with my hearing aids on and when I'm not, I tend to be more isolated, which is not a good thing."* (demographic information unavailable)
Improved quality of life	Well-being	*"When I'm wearing them. And everything good. My anxiety level goes down. 100% my anxiety issues go down a lot."* (49, M, Unilateral) *"So I'm really happy to have them. I'm really happy to be living in a time when we have good pretty good hearing aids"* (68, F, Unilateral)
	Communication partners	*"But yeah, yeah it it's certainly improved the quality of my life and those around me."* (73, M, Unilateral)
	Independence	*"I'm I'm just feeling as that I can be as independent as I want to be."* (73, F, Unilateral)
Work performance	Improved efficiency	*Interviewer: "OK, and what about efficiency at work, has it? Improve jade or even decreased it." Participant: "I I would say as a general statement it efficiency improved."* (56, M, Unilateral)

Note: M = Male, F = Female.

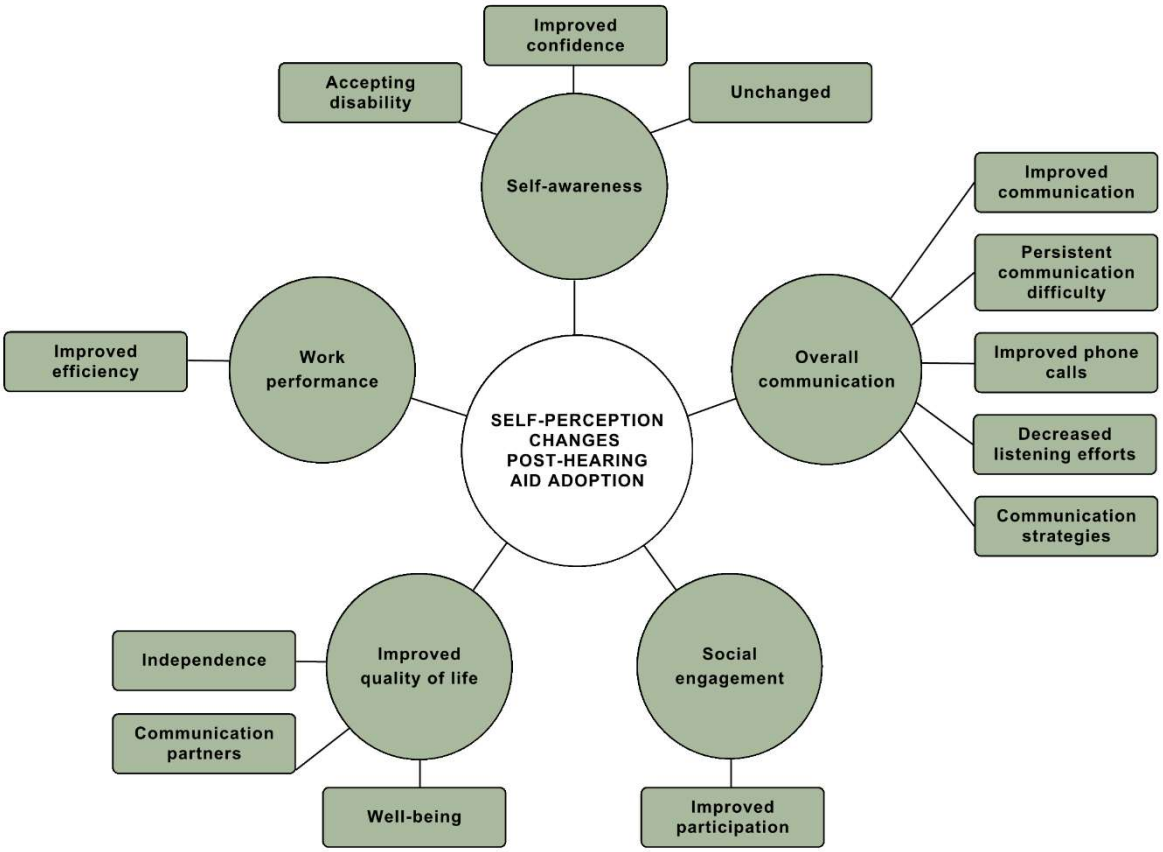

Figure 1. Themes and Sub-Themes Identified Regarding Self-Perception Changes Post-Hearing Aid Adoption

Self-Awareness

Self-awareness emerged as a prominent theme. Many participants demonstrated increased self-awareness post-hearing aid adoption, with many accepting their hearing loss as part of their identity or as a natural part of aging. Several participants reported improved confidence, feeling more comfortable in social and work settings, and being open about their hearing needs. Additionally, improved confidence allowed them to take on the role of advocacy, sharing their experiences and offering advice regarding overcoming hearing-related challenges. Some reported no changes in their self-awareness post-hearing aid adoption.

Overall Communication

Many participants noted improvements in communication following hearing aid adoption, reporting that conversations became easier to follow and that reduced listening effort resulted in reduced auditory fatigue. Additionally, the ability to hear sounds previously missed, such as speech, music, and everyday environmental sounds, was reported. Although better speech understanding during phone calls and improved conversations were described, some still experienced persistent communication difficulties, acknowledging that hearing aids do not fully restore natural hearing. This highlights the need for communication strategies, such as speechreading. A few embraced

communication strategies to better participate in different social contexts, such as using facial expressions and body language to interpret communicative intent.

Social Engagement

Improved participation helped several participants feel more socially connected and less isolated. Many described feeling more outgoing and confident in social situations, and more likely to engage in community activities, which reduced feelings of isolation and withdrawal.

Improved Quality of Life

A few participants noted an overall enhancement in their quality of life, which also positively affected those around them. Improvements in emotional well-being following hearing aid adoption were described. Many felt more capable and reconnected with their daily life and expressed a strong sense of gratefulness since adopting their hearing aids, which contributed to a more positive attitude. They also experienced better interactions with their communication partners, greater independence, and reduced anxiety levels.

Work Performance

Although only one participant addressed work performance, it is important to mention that they expressed feeling more efficient, which indicates that hearing aid use could have positively affected their perceived ability to work more effectively and independently in the workplace.

5. Discussion

This study aimed to explore changes in self-perception experienced by adults post-hearing aid adoption to better understand the emotional and psychosocial consequences experienced by hearing aid users. Five themes and 13 sub-themes emerged. The main themes included self-awareness, overall communication, social engagement, improved quality of life, and work performance.

Self-awareness refers to the continuous understanding of one's character and originality (Li et al., 2021). In this study, increased self-awareness appeared to support acceptance and helped hearing aid users come to terms with their hearing loss, as mentioned by some participants' ability to laugh at themselves or talk more openly about their condition. This suggests that hearing aid use may support identity integration by helping individuals reconcile their hearing loss with their overall sense of self (Hlayisi & Sekoto, 2023). Through increased self-awareness and acceptance, users are better able to view their hearing loss as part of their identity, suggesting that hearing aids positively influence self-perception (Holman et al., 2022). These findings align with previous research, which shows that emotional factors related to hearing aids, such as positive self-image, autonomy, and identity integration, support positive emotional well-being when self-perception is grounded in acceptance (Holman et al., 2022; Oosthuizen et al., 2022). Additionally, some participants framed their hearing loss as a natural progression relating to age, rather than a deficit, which corresponds with findings from Davis et al. (2016), where many participants described their auditory difficulties as part of "normal aging". Contrasting evidence from Da Silva et al. (2023) reveals that aging and hearing loss are closely linked with social stigma and self-stigma, often contributing to a more negative self-perception. Other participants described enhanced confidence, stating that they felt more involved in social interactions. A previous study similarly reported that hearing aid users experienced enhanced self-confidence and a greater sense of inclusion in social interactions (Holman et al., 2022). A minority of participants, however, reported no changes in self-awareness, which may reflect the complexity and individuality of the adjustment process related to hearing aid adoption.

Overall communication abilities also emerged as another key aspect contributing to self-perception changes post-hearing aid adoption. Many participants reported that hearing aids led to easier and more effective communication, including improved interactions and reduced listening fatigue. Similarly, literature shows that hearing aids significantly enhance the ability to follow conversations in group settings as well as reduce listening effort, leading to less fatigue and increased confidence (Beechey et al., 2020; Holman et al., 2021). Furthermore, this study's findings are consistent with research among adult populations, primarily in high-income settings, where participants described

significant enhancements in conversational interactions, reduced frustration, and reduced listening effort, which facilitated smoother interactions and improved conversations (Beechey et al., 2020; Fourie et al., 2024; Holman et al., 2022; Petersen et al., 2022). Participants frequently noted improvements in their physical hearing ability, which enhanced their overall communication ability. These experiences correlate with findings from previous research, where hearing aid users described improvements in the clarity of conversations, their ability to enjoy media, and improvements in daily interactions (Beechey et al., 2020; Holman et al., 2022; Picou, 2022). These communication improvements may foster a greater sense of competence and control in social situations, helping individuals feel more confident, socially capable, and less self-conscious, which in turn can positively influence self-perception (Aziz & Faisal, 2025).

Despite these improvements in overall communication, a few participants highlighted persistent difficulties, such as still missing parts of conversations or struggling with clarity. Comparably, in the study by Petersen et al. (2022), several participants acknowledged limitations in hearing performance, especially in noisy environments, highlighting that communication improvements may not always eliminate all challenges associated with hearing loss. This acceptance of partial benefit and persistent hearing difficulty reflects a realistic understanding of device limitations, which may be linked to greater satisfaction if audiologists counsel hearing aid users appropriately, by setting realistic expectations, teaching communication strategies, providing follow-up support, and addressing emotional adjustment (Malmberg et al., 2017; Oosthuizen et al., 2022). Other participants reported that they adopted communication strategies to better engage with people around them. Parallel to this, studies have shown that individuals with hearing loss consciously applied communication strategies, such as requesting clarification, environmental positioning, educating others, and advocating for clear dialogue, not only to manage their impairment more effectively, but also to strengthen social participation (Coco et al., 2019; Garcia et al., 2025; Holman et al., 2021).

Hearing aid users in the current study also reported improvements in social engagement following hearing aid adoption. Positive changes in social participation were widely described. Participants reported greater sociability and feeling less isolated when using their hearing aids, which emphasises the devices' role in enabling connection. These findings are consistent with prior research, which found that adult hearing aid users in high-income settings experienced improved sociability and an increased willingness to participate in social settings (Hamada et al., 2025; Holman et al., 2021).

Improved quality of life and work performance emerged as less prominent yet meaningful themes, reflecting how hearing aids shaped self-perception. Participants reported that hearing aids improved

their own quality of life and that of their communication partners, by fostering an improved sense of well-being, increased independence, and reduced anxiety. This demonstrates the holistic and psychological impact of hearing aid use on an individual's self-perception. Existing research supports these findings, reporting that hearing aid users experienced overall life enrichment, with hearing aids enabling improved relationships and a sense of emotional well-being (Dawes et al., 2015; Holman et al., 2022; Kamil & Lin, 2015). Tsimpida et al. (2021) conducted a longitudinal analysis using data from the English Longitudinal Study of Ageing (ELSA), spanning from 2002 to 2017 across eight two-year waves and encompassing 74,908 person-years of observation. Similarly, they found that hearing loss negatively influences quality of life, particularly by increasing the risk of depression among individuals with lower socioeconomic status, while hearing aids were shown to help lessen these effects (Tsimpida et al., 2021). Furthermore, a few participants in the current study expressed gratefulness, demonstrating how hearing aids could foster a positive attitude through contentment and appreciation. A single participant commented on how hearing aids positively affected work performance by improving work efficiency. Although this was an isolated mention, it highlights an important aspect to consider. Existing literature offers limited insight, with Holman et al. (2021) reporting no significant impact of a hearing aid fitting on work or physical activity. However, broader evidence reveals that hearing loss is associated with negative outcomes, such as unemployment, often linked to reduced work performance and communication difficulties in the workplace (Malcolm et al., 2022). Within this context, hearing aids, particularly when paired with interventions such as personal adjustment counselling and vocational guidance, may help mitigate these negative effects and support successful employment (Cuevas et al., 2021).

The themes identified in this study also support theories linking the impact of hearing loss on self-perception, revealing that participants' lived experiences collectively supported a more positive view of their hearing loss, alluding to the fact that hearing aid use could contribute to a more positive self-perception. In this study, it was evident that hearing aid users who had a better understanding of the changes in their self-perception following hearing aid adoption were those who accepted their disability, felt more confident, and advocated for themselves and for others. This highlights the importance of incorporating psychological counselling into rehabilitation, not only to set realistic expectations but also to address stigma, provide coping mechanisms, and build resilience (Timmer et al., 2023). Such an approach shifts the focus beyond device fitting and amplification benefits towards holistic care. Supporting this, Bennett et al. (2020) argue for integrating psychological considerations into rehabilitation, while Singh et al. (2025) highlight that stigma, loneliness, and social connection strongly influence hearing aid adoption, reinforcing the need for strategies that combine both technical and emotional components of care.

While this study offers valuable insights, some limitations should be acknowledged. Participants were recruited via online platforms through voluntary participation, introducing potential sampling bias. The qualitative data were also collected through semi-structured interviews with a relatively small sample size (n = 42), with seven participant responses excluded due to missing transcripts, irrelevant content, or omission of the key self-perception question as in some interviews, the interviewer asked only the broader prompting question about unexpected benefits. Certain demographic and contextual factors, such as the degree and type of hearing loss, cultural attitudes, and support systems, were not captured, limiting interpretation. Additionally, the reliance on retrospective self-report may be influenced by participants' ability to recall their experiences (Wu et al., 2020). Future research should aim for larger, more diverse samples, consistent questioning, and longitudinal designs to better understand the psychological impacts of hearing aid use over time.

6. Conclusion

Beyond amplification benefits, hearing aids could create a positive shift in self-perception and potentially enable users to reconnect with their environment. It may enable users to communicate more confidently and engage socially with reduced listening fatigue. These improvements might lead to increased emotional and physical well-being, with participants expressing reduced anxiety and improved hearing ability. Although it is important to acknowledge that some challenges persist, particularly in noisy environments, these findings provide insight into the benefits of hearing aids on self-perception. By highlighting these benefits and still addressing potential challenges, hearing healthcare professionals can improve their counselling to support patients in making informed decisions and setting realistic expectations to improve their overall health and well-being, which advocates for a more holistic approach to hearing rehabilitation.

7. References

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8. Appendices

8.1. Appendix 1: Semi-Structured Interview Guide

INITIAL QUESTION

Could you start by telling me how you first obtained your hearing aids?

PRECONCEPTIONS/MOTIVATION

- **How did you feel when you first started to realize that your hearing may have deteriorated? (C)**
- **What motivated or encouraged you to seek help for your hearing? (M)** What discouraged you to seek help for your hearing? Who did you first consult about your hearing problems?
- **What did you think about hearing aids before you got them? (C)** How did you think they would change your life or your ability to hear?

DECISION PROCESS

- **What motivated or encouraged you to purchase hearing aids? (M)** Was there anything that discouraged you?
- **What was the process of getting hearing aids like for you? (C)** Was it easy to find help? Did you know which professionals or practices to contact? Did you have enough information to make decisions? Did you feel pressurized to make decisions before you were ready? What were the main difficulties in this decision process? What helped you make this decision?
- **Did you discuss this process with anyone? If so, who? If not, why was this? (O)** Any family members or friends, people you know with hearing aids? Did you contact more than one professional (e.g., Primary Care Physician, ENT, audiologists)? Were these discussions helpful?
- **What factors influenced your overall choice of hearing aid/s selected? (C, O, M)** Was the decision based on price, the style, whether it had special features (e.g., streaming with phone or TV, rechargeable batteries, remote microphones, etc)?
- **Did you try Direct-to-Consumer (DTC) or Over-the-Counter (OTC) hearing devices (e.g., Personal Sound Amplification Products (or PSAPs), hearables) before or after getting hearing aids? (O)** How much did this help? Did this experience encourage the use of hearing aids?

DURING HEARING AID FITTING

- **How was your experience making an appointment to see an audiologist?** What kind of support did you receive from those who helped book your appointment?
- **What do you recall about the day you were fitted with hearing aids?** What kind of procedures were performed? What type of information was provided?
- **What was your immediate reaction to hearing aids on the day or first few days of wearing the device (O)?**

ACCLIMATIZATION

- **Can you describe your experience of using hearing aids during the first few weeks? (O)** How did you find this period? Was there anything that made it hard to use to the hearing aids? Did you expect it to be difficult/easy? Were they complicated to use or get in your ears?
- **How often and when do you use the hearing aids at present? (O, M)** Do you wear hearing aids in certain situations or certain times of the day? Has this changed over time and why? In these situations where you wear your hearing aids, how did your hearing aids help you? How did it make you feel?

SUPPORT (C, O, M)

- **Is there anything about your hearing aid journey that would have made it easier for you to acquire as well as get optimal benefits from these devices**? Did you feel prepared, supported, and have enough information before purchase? Did your hearing health professional (audiologist) provide enough support helping you to learn how to use the hearing aids and handle them? What did you think about your overall care? How supportive were your family and did they make the journey easier or harder?
- **What additional resources, if any, were provided by your audiologist** (e.g., communication tactics, information leaflets, online rehab program)? Did they direct you to any other professionals or organizations or groups for additional support?
- **Have you needed many changes to the original settings of the hearing aids**? Why? Was it easy to get this done? Did you feel the changes made helped you? Did the audiologist help you?
- **How important was your audiologist in your hearing aid journey**? Do you think you could have managed fitting and getting used to hearing aids that were bought directly from the internet or pharmacy?

OUTCOMES

- **We spoke about your views before you got the hearing aids. Did this view change after you got the hearing aids and used them for some time? (C)** Were your initial expectations met, exceeded, or were you disappointed? Please explain your experiences.
- **Have hearing aids changed your life in any meaningful way? (O)** Why or why not? How you think and feel about your hearing aids? We would really like to know your experience with your hearing aids.
- **What do you think about the cost of hearing aids? (M)**
- **Do you feel the money spent on your hearing aids was worth it considering the benefits? (M)**
- **Are you comfortable telling people you wear hearing aids? (O)** Do you mind other knowing that you have hearing aids?
- **Do you think wearing hearing aids help the people around you (e.g., your family living with you/your colleagues at work in communication)? (O)** Please provide reasons for your answer.
- **We want to know if having hearing aids has opened new possibilities for you that were difficult before (O, M).** For example, do you find that you are more or less social since getting a hearing aid? Do you find that you participate/engage in more or less physical activity (exercise or recreational) since getting a hearing aid?
- **Has getting a hearing aid changed how you feel about yourself? (M)** Are there any unexpected benefits from using the hearing aids that you have noticed (e.g., less effort during communication, more confident, more efficient at work, less tired at the end of the day)?
- **If you had a friend that was struggling to hear, what would your advice to them be and why? (C, M)**

BARRIERS (O)

- **Are there any unexpected negative side effects of using hearing aids?**
- **Are there any situations that have caused you to avoid wearing your hearing aids?** Which situations and why?
- **Why do you think many people with hearing loss do not purchase and/or use their hearing aids? (M)**

FUTURE (C, O, M)

- **Would you consider getting self-fitting or over-the-counter (OTC) hearing devices** in **future?** Why do you want to purchase these devices (or not)?
- **Is there anything you would change about your hearing aids if you could?** In other words, tell us how you would think hearing aids should be to be more useful for you and the people around you. What features and functionalities does future generation hearing aids should include?

8.2. Appendix 2: Ethical Clearance Letter from Lamar University

[EXTERNAL] IRB-FY21-248 - Initial: Initial - Exempt - Approved

do-not-reply@cayuse.com <do-not-reply@cayuse.com>
Fri 7/23/2021 3:40 PM
To: Vinaya Manchaiah <vmanchaiah@lamar.edu>

RESEARCH & SPONSORED PROGRAMS ADMINISTRATION
LAMAR UNIVERSITY

Jul 23, 2021 3:40:40 PM CDT

Vinaya Channapatna Manchaiah

Re: Exempt - Initial - IRB-FY21-248 Hearing aid experiances

Dear Dr. Vinaya Channapatna Manchaiah

Lamar University's Institutional Review Board (IRB) for Human Research Participants Protection has completed its review of your submission and has deemed your study to be exempt from further IRB review.

Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).
The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

As a research investigator, please be aware of the following:

- You will immediately report to the IRB via LU Cayuse any injuries or other unanticipated problems involving risks.
- You acknowledge and accept your responsibility for protecting the rights and welfare of human research participants and for complying with all parts of 45 CFR Part 46, the LU IRB Policy and Procedures.
- You will ensure that legally effective informed consent is obtained and documented if necessary. If written consent is required, the consent form must be signed by the participant or the participant's legally authorized representative. A copy is to be given to the person signing the form and a copy is to be kept for your file.
- Any proposed changes, including changes to your survey, hard copy or in Qualtrics, from previously approved IRB applications must be submitted to the Office of Research and Sponsored Programs via LU Cayuse. The proposed changes cannot be initiated without IRB review and approval.

Once your study is complete, please login to Cayuse and close your study.

8.3. Appendix 3: Ethical Clearance Letter from the University of Pretoria.

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Humanities
Fakulteit Geesteswetenskappe
Lefapha la Bomotho

Humanities 100. Since 1919

Department of Speech- Language Pathology and Audiology

20 Feb 2025

Dear Researchers,

Project: Self-Perception Changes in Adults Post-Hearing Aid Adoption

Researchers: Kaylan Poonasamy (u22496492); McKayla Warren (u21436534); Sulette Ferreira (u21439062); Tamaryn-Ann Young (u22530224)

Supervisors: Dr Caitlin Frisby, Dr Megan Knoetze, Prof Faheema Mahomed-Asmail, Prof De Wet Swanepoel

Department: Department of Speech-Language Pathology and Audiology

Reference Number: SLPA 2025/03

Thank you for the application submitted to the Research Committee of the Department of Speech-Language Pathology and Audiology, Faculty of Humanities. Your application has been approved

The approval is subject to the candidates abiding by the principles and parameters set out in the application

We wish you success with the project.

Sincerely

Prof Lidia Pottas
Chair: Departmental Research Committee

Prof J van der Linde
HEAD: DEPARTMENT OF SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY
UNIVERSITY OF PRETORIA

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8.4. Appendix 4: Memorandum of Understanding between the University of Pretoria and Lamar University

Memorandum of Understanding

This Memorandum of Understanding ("MOU") is made and entered into on August 01, 2021 (the "Effective Date"), between Lamar University, an institution of higher education in the State of Texas and a component of The Texas State University System, ("University'), which is located at 4400 MLK Parkway, Beaumont, Texas 77710, United States of America (USA) and University of Pretoria, Faculty of Humanities, an institution of higher education in the Gauteng Province, which is located at corner Roper Street and Lynwood Road, Hatfield, 0028, Pretoria, Republic of South Africa (SA)("Partner "), University and Partner shall be known collectively as "the Parties" and singularly as "a Party" or "the Party."

Recitals

Whereas, cordial relations exist between Lamar University and University of Pretoria, Faculty of Humanities,

Whereas, Lamar University and University of Pretoria, Faculty of Humanities have discussed mutual goals regarding academic opportunities for students and faculty; and

Whereas, Lamar University and University of Pretoria, Faculty of Humanities desire to establish a program to be formalized at a later date (the "Program") for the benefit of students and faculty of their respective educational institutions;

Now, therefore, the Parties enter into this MOU, in order to memorialize fundamental concepts regarding the Program, which includes supporting collaborative research projects, international experience for faculty/staff and students and academic teaching.

Understanding of the Parties

In contemplation of the establishment of the Program, the Parties agree as follows:

Article 1 (Objectives)

A. To contribute further to the original understanding between both countries (the United States of America and the Republic of South Africa), both cities (Beaumont and Pretoria), and both institutions (Lamar University and University of Pretoria, through mutual cooperation programs.

B. To further collaborations between Lamar University and University of Pretoria through academic programs in instruction, research and faculty/staff development among the faculty/staff and students of both institutions.

C. To enhance the international experience of faculty/staff and students in the area of:
    1. Research
    2. Joint Programs and Collaboration
    3. Exchange of Faculty/Staff and Students

Article 2 (Responsibilities of Parties)

A. Both institutions commit themselves to identify concrete areas of academic collaboration and to explore the means to achieve a successful collaboration.
B. The officials who will have the responsibility in coordinating the Program for the Parties are: Dr. Vinaya Manchaiah, Department of Speech and Hearing Sciences, Lamar University, USA; and Prof De Wet Swanepoel, Department of Speech-Language Pathology and Audiology, Faculty of Humanities, University of Pretoria, SA.

Article 3 (Understanding of Parties)

A. The Parties understand and acknowledge that they are making a significant commitment to this collaborative effort. Accordingly, the Parties agree to expend their best efforts on the design, implementation, and successful continuation of the Program.

B. This MOU shall remain effective from the effective date listed above until the end of the term of three (3) years.

C. The Parties understand and acknowledge that this MOU will provide the foundation for a more comprehensive agreement concerning the details of the Program; and that this MOU does not commit the Parties regarding the Program. This MOU is gratuitous for the parties and no payment or remuneration may be required by virtue of its execution as the Parties will absorb inherent costs to comply with this MOU at this time.

D. The Parties understand that this Program must support through its activities the mission of Lamar University and the University of Pretoria, Faculty of Humanities; that the Programs may not use the name and official seal of the other Party or any of its components without the written consent of the senior management of the other Party or her/his designee; that the Program is subject to all policies and procedures of the Board of Regents and Administration of the Texas State University System and those of the University of Pretoria, and must submit to reporting and auditing requirements as established by both Parties,.

E. Any intellectual property matters that arise from the Program shall be addressed pursuant to applicable policy, law and mutual written agreements among the Parties.

F. This MOU contains the entire understanding of Parties at this time. If either Party is unwilling or unable to continue with plans for the Program, that Party may do so by sending thirty (30) days written notice to the other Party.

G. This MOU may not be amended or otherwise modified except by the written agreement of both Parties. Neither Party may assign this MOU without the other Party's prior written consent. The invalidity or unenforceability of any provision(s) of this MOU will not impair the validity and enforceability of the remaining provisions.

H. In their execution of this agreement, all contractors, subcontractors, their respective employees, and other acting by or through them shall comply with all federal and state policies and laws that prohibit discrimination, harassment, and sexual misconduct. Any breach of this covenant may result in termination of this agreement.

In witness whereof, the Parties have caused their fully authorized representatives to execute this MOU effective as of the date written above.

Printed Name: Prof. William Harn
Signature: William Harn
Title: Chair, Speech and Hearing Sciences

Printed Name: Prof. De Wet Swanepoel
Signature: _____
Title: Professor, Dept of Speech-Language Pathology and Audiology

Printed Name: Prof. Derina Holtzhausen
Signature: _____
Title: Dean, Fine Arts and Communication

Printed Name: Prof. Vasu Reddy
Signature: V Reddy
Title: Dean of the Faculty of Humanities, University of Pretoria

Printed Name: Prof. Jerry Lin
Signature: _____
Title: Associate Provost for Research and Sponsored Program, Lamar University

Note: Modification of this form requires approval of OGC

Standard Form Approved by the Lamar University Office of General Counsel