

Citation: Bennett RJ, Donaldson S, Kelsall-Foreman I, Meyer CJ, Pachana NA, Saulsman L, Eikelboom RH, Bucks RS (2021). Addressing emotional and psychological problems associated with hearing loss: perspective of consumer and community representatives. *American Journal Audiology* – accepted June 2021.

**Addressing emotional and psychological problems associated with hearing loss:
perspective of consumer and community representatives**

Rebecca J. Bennett^{1,2}, Sara Donaldson^{2,3}, India Kelsall-Foreman^{2,3}, Carly Meyer⁴, Nancy A. Pachana⁵, Lisa Saulsman³, Robert H. Eikelboom^{1,2,6}, Romola S. Bucks^{3,7}

1. Ear Science Institute Australia, Subiaco, WA, Australia.
2. Ear Sciences Centre, The University of Western Australia, Perth, Australia.
3. School of Psychological Science, The University of Western Australia, Perth, Australia.
4. Department of Clinical, Educational and Health Psychology, University College London, UK
5. School of Psychology, The University of Queensland, St Lucia, QLD, Australia.
6. Department of Speech-Language Pathology and Audiology, University of Pretoria, Gauteng, South Africa
7. The Raine Study, The University of Western Australia

Corresponding author: Dr Bec Bennett, Ear Science Institute Australia, Suite 1, Level 2, 1

Salvado Road, Subiaco, WA 6008, Australia. Tel: +61 8 6380 4900. Email:

bec.bennett@earscience.org.au

Conflict of Interest: The authors declare that they have no competing interests.

Funding: This work was funded by the Raine Foundation through a Raine Priming grant.

ABSTRACT

Purpose: Hearing loss causes emotional distress and can contribute to the development of psychological difficulties, yet emotional and psychological issues are not addressed within current audiology services. The purpose of this study was to use focus groups with consumer and community representatives to explore how we might improve the provision of support for clients experiencing emotional and psychological issues in relation to their hearing loss.

Participants: Adults with hearing loss (n = 19) and their significant others (n = 9), as well as 10 hearing healthcare professionals (n = 4 hearing healthcare clinicians, n = 4 reception staff, and n = 2 clinical managers) participated in consumer and community engagement focus groups.

Methods: Consumer and community representatives were tasked with (i) identifying the stakeholders involved in supporting adults experiencing emotional or psychological difficulties on account of their hearing loss, (ii) describing the behaviours undertaken by each stakeholder group, and (iii) selecting target behaviour(s) that could optimally form the basis of an intervention program to improve the quality and frequency of support provided to people experiencing emotional and psychological problems in the audiology setting.

Results: Participants identified twelve stakeholder groups involved in supporting adults with hearing loss experiencing emotional and psychological problems. The three behaviours voted by participants to be the most promising for a behavioural intervention included the clinician (i) asking about, (ii) providing information on, and (iii) delivering therapeutic

intervention for emotional and psychological well-being within audiological service provision.

Conclusion: Consumer and community stakeholder representatives indicate a general desire for hearing healthcare clinicians to deliver support for the emotional and psychological issues that arise relating to hearing loss.

BACKGROUND

Hearing loss compromises not only the ability to hear, but also to communicate, and consequently contributes to feelings of frustration, embarrassment, resentment, grief, and loneliness (Heffernan et al., 2016; Bennett et al., 2021a; Vas, Akeroyd & Hall, 2017). Hearing loss is thus considered to be a major contributor to the development of psychological difficulties, including anxiety (Contrera et al., 2017) and depression (Lawrence et al., 2019; West, 2017). In a large, nationally-representative sample of US adults, self-reported hearing loss was associated with (i) greater psychological distress, (ii) increased rates of antidepressant and anti-anxiety medication use, and (iii) greater utilization of psychological services, suggesting that hearing loss may be a modifiable risk factor for these outcomes (Bigelow et al., 2020). Yet, social stigma associated with emotional and psychological health generally poses a barrier to mental health help-seeking behaviours (Corrigan, Druss & Perlick, 2014; Courtin & Knapp, 2017; Salaheddin & Mason, 2016).

Adults with hearing loss develop long-term relationships with their hearing healthcare clinicians, to whom they may disclose emotional and psychological experiences associated with hearing loss (Laird et al., 2020). Audiologists are thus well placed to support adults with hearing loss experiencing emotional and psychological difficulties. Although provision of

psychotherapeutic intervention for psychological disorders would be outside of an audiologist's scope of practice, there are a range of ways in which audiologists might support clients experiencing emotional or psychological distress. These can include empathic listening, acknowledging and validating feelings, involving significant others in the rehabilitation process, co-developing strategies for improving social connectedness, connecting the client with peer and support groups, or referring the client for professional mental health support (such as to a General Practitioner or psychologist) (Beck and Kulzer, 2018; Bennett et al., 2020b; Bennett et al., 2020c). However, recent research suggests that audiologists do not provide emotional support in the audiology setting (Bennett et al., 2020a; Bennett et al., 2020b; Ekberg, Grenness & Hickson, 2014; Meibos et al., 2017). In a recent study exploring clinical behaviours in response to three case vignettes depicting depression or severe grief, almost half of the hearing healthcare clinicians surveyed reported actions that only addressed audiological symptoms, and not the emotional or psychological issues raised (Bennett et al., 2020b). Barriers to provision of emotional and psychological support, as described by audiologists, include feeling under-skilled / lack of training, worry that I may get 'out of my depth', and time / caseload pressures (Bennett et al., 2020a). Improving the quality and frequency of support for emotional and psychological concerns within the audiology context may assist in alleviating the burden of disease associated with hearing loss. Behaviour change research is increasingly being used by a variety of health disciplines to improve client health-related behaviours (Fulton et al., 2016; McEvoy et al., 2018) and clinician behaviours relating to the delivery of healthcare services (Webb, Foster & Poulter, 2016).

In January 2020, we commenced a research project aiming to improve the way in which audiologists support clients presenting with emotional or psychological concerns relating to their hearing loss. To achieve this, we employed the Behaviour Change Wheel (BCW) (Michie, Atkins & West, 2014), an eight-step process for the development of behavioural change interventions. The first step of the BCW process involves identifying and describing the problem in behavioural terms. As a research team, we suspected that the optimal pathway for improving emotional and psychological well-being of adults with hearing loss would be for audiologists to refer clients to MHPs. Thus, we presupposed that the focus of our intervention study would be referral pathways and procedures. However, as recommended by the BCW process, we engaged consumer and community representatives to challenge our assumptions and better understand the problem. Partnering with consumer and community representatives affirms the value and right of consumers and community to be involved in research which concerns them.

Consumer and community engagement

Active involvement of consumers and community members facilitates high quality research that meets the needs of the community and promotes the translation of research into improved policy and practice (Concannon et al., 2014; Goodman & Sanders Thompson, 2017). Importantly, consumer and community engagement imply a level of involvement that extends beyond the role of research subject, and purports that researchers do research *with* patients rather than *for, at or to* them (Concannon et al., 2014; Concannon et al., 2012). There is a “critical difference between going through the empty ritual of obtaining stakeholder feedback and giving stakeholders the real power needed to affect the research process and resulting outcomes” (Goodman & Sanders Thompson, 2017, page 486). Indeed,

it is important that partnerships between stakeholders and researchers are authentic and sustainable (Harrison et al., 2019). Consumers and community members can effectively contribute to every stage of research planning, execution and translation/dissemination (Concannon et al., 2012). Roles might include defining topics and formulating study questions; identifying a study population and strategies for recruitment and retention of study participants; choosing interventions or outcome measures; contributing to data collection and analysis; and disseminating research findings into clinical practice and the public domain (Concannon et al., 2014; Concannon et al., 2012). The Australian National Health and Medical Research Council (NHMRC) provides leadership and guidance to the health and medical research sector on the meaningful engagement of consumers throughout all stages of research and health care (Australian Government National Health and Medical Research Council, 2021). In the UK, health and medical researchers look to co-production, a value-driven approach built on the principle that those who are affected by a service are best placed to help design it (Involve, 2021). In the USA, researchers are supported by Community Catalyst, a national non-profit advocacy organization working to build the consumer and community leadership that is required to transform the American health system so it serves everyone (Community Catalyst, 2021).

This Research Note describes the process of consumer and community engagement we undertook and presents the focus group findings regarding how we might improve the provision of support for clients experiencing emotional and psychological issues in relation to their hearing loss.

METHODS

We conducted a series of focus groups with consumers and community representatives (March 2020) to identify target behaviour(s) that could form the basis of an intervention to improve support for people with hearing loss experiencing emotional and psychological concerns within the audiology setting. Specifically, participants (i) identified the stakeholders involved in supporting adults experiencing emotional or psychological problems on account of the hearing loss, (ii) described the behaviours undertaken by each stakeholder group that results in adults with hearing loss receiving emotional and psychological support, and (iii) selected the target behaviour(s) that could optimally form the basis of an intervention program to improve the quality and frequency of support provided to people experiencing emotional and psychological difficulties in the audiology setting.

Participants

Two participant groups were recruited:

- 1) Clients: included adults with hearing loss and self-reported co-morbid emotional and/or psychological concerns due to their hearing loss, and their significant other/s;
- 2) Professionals: included clinicians, reception staff, and managers from an audiology clinic.

All participants were over 18 years of age, and able to communicate verbally, in English, during the data collection sessions. Given that it is recommended that targeted health interventions be context-specific to increase the likelihood of successful implementation

(Michie et al., 2014), all participants were recruited through our partnering clinic, based in Western Australia, Australia.

Participants in the client group ($N = 28$) included 19 adults with hearing loss and nine significant others (eight spouses and one daughter); 20 females and nine males. As per the recruitment strategy, all adults with hearing loss also self-reported co-morbid emotional or psychological concerns due to their hearing loss ($M_{\text{age}} = 73$ years; $SD = 8$), with self-reported years of hearing loss ranging from 1 to 76 years ($M = 18$ years; $SD = 18$). Of the nine significant others ($M_{\text{age}} = 67$ years; $SD = 19$), seven self-reported having some degree of hearing loss.

Participants in the professional group ($N = 10$; $M_{\text{age}} = 41$ years; $SD = 10$) included nine females and two males; four were hearing healthcare clinicians, four were reception staff, and two were clinical managers. The professional group reported between 1 and 39 years ($M = 11$ years; $SD = 12$) of experience working with people with hearing loss.

Procedure

Approval for this study was granted by the Human Research Ethics Office of The University of Western Australia (RA/4/20/5873).

Three focus groups were conducted, two for separate groups of clients (to cater for their availability, and to optimise group conversations) and one for the professionals. Separating the client group from the professionals allowed for freedom of speech when discussing previous experiences with the other group. The two sessions for clients were held in a quiet

meeting room, and for professionals at a conference venue. All sessions were audio-recorded to allow for independent professional transcription, and analysis of the dialogue.

Each session (1.5 hours) was conducted by two moderators (a combination of RJB, IK-F & SD). The session moderators managed the acoustics of the sessions by reminding participants to speak one at a time, ensuring that visual contact within group members was maintained to facilitate lip-reading, and by repeating softly spoken contributions. Each session comprised three steps: (1) background and overview; (2) identify the stakeholders involved in providing emotional and psychological support to people with hearing loss and describe their core behaviours; and (3) select behaviours that should be targeted to improve the emotional and psychosocial well-being of adults with hearing loss.

First, the session moderator provided a five-minute presentation describing the purpose of the focus groups. Participants were provided with a definition of emotional and psychological well-being based on the *5 Ways To Wellbeing* guide (The Royal Melbourne Hospital), and information on the bi-directional relationship between hearing loss and emotional and psychological problems.

Second, the session moderator drew participants' attention to large sheets of paper adhered to the front wall, each with the name of a stakeholder group written at the top of it. These stakeholders were identified from the audiology literature as key stakeholders involved in the provision of support for emotional and psychological problems for people with hearing loss (Bennett et al., 2020b). These included: the adult with hearing loss and co-morbid emotional and psychological symptoms (the client), the client's family/significant

other/s, audiologists/audiometrists, audiology clinic staff (receptionists/managers), MHPs (psychologist/psychiatrists/counselors), general practitioners (aka family physicians), other allied health professionals, support groups, and non-health-based support persons (family/friends/neighbours/religious leaders) (Bennett et al., 2020b). Participants were invited to identify and discuss other potential stakeholder groups involved in the provision of emotional and psychological support for adults with hearing loss. The additional stakeholders identified were written on the top of fresh sheets of paper which were adhered to the front wall along with the others. Participants were then invited to describe the relevant behaviours for each stakeholder group relating to supporting adults with hearing loss experiencing emotional and psychological concerns; that is, all behaviours that currently occur within the workflow system, including those that may be barrier or facilitating behaviours.

Third, participants were tasked with identifying candidate behaviour(s) (barrier or facilitating behaviours) that could be targeted to form the basis of an intervention to improve the frequency and quality of support provided to clients experiencing emotional and psychological difficulties in relation to their hearing loss using the nominal group technique. The nominal group technique is a structured method for group brainstorming that encourages contributions from everyone and facilitates quick agreement on the relative importance of issues, problems, or solutions (Delbecq, Van de Ven & Gustafson, 1975).

The process of identifying candidate target behaviours for intervention was as follows:

- (i) Participants were asked to reflect on the behaviours written on the sheets of paper, with discussion guided by the target selection criteria supporting the Behaviour Change Wheel process (Michie et al., 2014): (i) the likely impact if the behaviour were changed, (ii) how easy it might be to change the behaviour, and (iii) the centrality of the behaviour in the system of behaviours. Key points were documented on the sheets of paper.
- (ii) Participants were then asked to vote for the top three behaviours that they believed should form the basis of an intervention to improve how adults with emotional and psychological concerns are supported in the audiology setting, individually by placing sticky-dots on the sheets of paper posted on the walls.
- (iii) The votes were summed and the group then discussed the top ranked behaviours.

This series of steps was conducted for each of the three focus groups independently. That is, each group was not informed of the ideas brainstormed by the other groups, nor their votes.

Data analysis. The data generated within all three focus groups were combined and tabulated. This included identification of the key stakeholders involved in supporting people who experience emotional and psychological distress on account of their hearing loss, their relevant behaviours, and the total number of votes attributed to each behaviour. Where the groups identified identical behaviours, these were combined. The participants' votes from all three sessions were combined, with all participant scores given equal weighting, allowing us to identify a rank order of behaviours across the total dataset.

RESULTS

Participants identified three additional stakeholder groups in supporting adults experiencing emotional or psychological concerns on account of their hearing loss: work colleagues, local councils, and the media. Work colleagues provided personal support and/or facilitated access to services. Local municipal councils and the media were described as playing a role in health promotion, including increasing public awareness of the link between hearing loss and emotional and psychological issues, as well as promotion of intervention options for people with emotional and psychological concerns.

Behaviours spanned twelve stakeholder groups, and included behaviours perceived to be barriers and/or facilitators to supporting clients who are experiencing emotional and psychological problems in relation to their hearing loss (Table 1). The stakeholder group with the greatest number of behaviours listed, and the greatest number of votes, was the clinician (audiologist/audiometrist) (64 votes across all behaviours), followed by the client and clinic administrators (both with 12 votes each).

The individual behaviours that received the greatest number of votes related to clinician (audiologist/audiometrist) behaviours, and included “deliver intervention to improve emotional distress and loneliness (such as psycho education, behavioural activation, access to support groups, communication and interpersonal skills training, and emotional support)” (17 votes), “ask clients about how their hearing loss has impacted on their emotional well-being” (16 votes), and “provide information on the emotional and emotional and psychological impacts of hearing loss” (12 votes).

In preparing for this research project, the research team's presupposition was that the most problematic behaviour preventing adults with hearing loss from receiving emotional and psychological support was audiologists not referring these clients to mental health professionals (MHP) or general practitioners. However, throughout the focus groups it became apparent that few participants saw this as an important behaviour (2 votes).

Furthermore, while this behaviour was described as facilitating improved emotional and psychological well-being by some participants, it was also perceived as a barrier by others.

Three participants described their previous personal experiences of raising concerns with a general practitioner or MHP about the emotional difficulties they were experiencing due to their hearing loss, only to have their concerns dismissed. For example, one said *"I went and saw a psychologist. She was hopeless. She just kept asking how I was feeling. But she just didn't get it. I kept telling her about my hearing, how I can't hear nothing in a crowd and how this thing [hearing aid] doesn't help much when it's noisy. But she just didn't get it. She told me to get a new hearing aid, but this one's new, right. She just didn't get how hard it is for us. No one understands how hard it is for us to understand when it's noisy out"* (Female, 68 years, hearing loss duration 12 years). Another described her experience with a GP, *"Don't bother sending them to a GP. I tried to talk to mine about the hearing. Told him how my hearing is getting bad, and he told me not to worry about it, that it's normal for me age. I don't think you lot [audiologists] should be sending people back to their GP. They [GPs] are just going to give them drugs. They don't really understand how hearing works. You lot [audiologists] need to be the ones to help us"* (Male, 79 years, hearing loss duration 17 years).

Participants described the value of the existing relationship between the audiologist and the client, expressing preference for the audiologist to be the central person facilitating mental health support in relation to the emotional and psychological issues that relate specifically to one's hearing loss. Several participants said that they would not be comfortable raising their mental health concerns with their GP due to time constraints in GP appointments, and/or the presumption that the GP would recommend medication, rather than explore alternative options first. Participants described their preference for the audiologist to provide them with information on early interventions for managing emotional and psychological well-being, and to refer to MHPs or GPs for more severe cases.

DISCUSSION

The purpose of this study was to use focus groups with consumer and community representatives to explore how we might improve the provision of support for clients experiencing emotional and psychological issues in relation to their hearing loss. We first set out to describe the role of the various stakeholders involved in supporting adults with hearing loss who are experiencing emotional and psychological difficulties, and to identify stakeholder behaviours that could form the basis of a behavioural intervention to improve the frequency and quality of support delivered in the audiology setting. Although participants identified a wide range of stakeholders spanning personal and professional relationships, the target behaviours selected by participants related predominantly to clinician behaviours. These findings echo previous reports highlighting clinicians' skill gaps related to providing emotional and psychological support during audiology appointments (Bennett et al., 2020a; Bennett et al., 2020b; Coleman et al., 2018; Ekberg et al., 2014). A recent self-report survey suggests that up to two thirds of hearing healthcare clinicians

described being under-confident and lacking the skills required to provide emotional support to people with hearing loss (Bennett et al., 2020a).

The individual behaviour that received the most participant votes described the use of clinical interventions by audiologists to address client needs relating to emotional and psychological difficulties. Although psychology-based interventions have been used by audiologists to support tinnitus management (Aazh & Moore, 2018), there have been no reports of audiologist-led therapeutic interventions for the management of emotional and psychological problems for people with hearing loss. A recent study identified 93 unique approaches used by hearing healthcare clinicians around the world to address their clients' psychosocial needs (Bennett et al., 2020c). These approaches described techniques to gather more information, strengthen the client-clinician relationship, or provide targeted intervention for specific psychosocial issues. However, many of the identified approaches were based on adding or modifying hearing devices to address psychosocial concerns, with few directly addressing the emotional state of the client. As such, future research should look towards developing or adapting evidence-driven audiologist-led interventions that aim to target the emotional and psychological impacts of hearing loss, and fit appropriately within the audiologist's scope of practice. The positive attitudes towards expanding the role of the audiologist to use clinical interventions to address clients' needs relating to emotional and psychological concerns, noted in this study, echo recent findings from focus groups with hearing healthcare staff (Bennett et al., 2021b) and adults with hearing loss (Bennett et al., 2021a).

Participants emphasised the need for hearing healthcare clinicians to directly ask clients about how their hearing loss may be impacting their emotional and psychological well-being. Furthermore, participants speculated that increasing the frequency with which hearing healthcare clinicians ask their clients about their emotional and psychological well-being, would in turn enhance the likelihood of appropriate and timely intervention for adults with hearing loss experiencing emotional or psychological problems. Participants also emphasised the need for audiologists to provide adults with hearing loss information about the emotional and psychological impacts of hearing loss. The public tends to have little understanding of audiological rehabilitation processes, and thus clients receiving audiological services generally require extensive information and training (Bennett et al., 2018; Ferguson et al., 2015; Laplante-Lévesque, Hickson & Worrall, 2010). However, the process of information dissemination in the audiology setting has been described as “information dumping” (English, 2008). Furthermore, clinical studies involving adults with hearing loss report both insufficient information transfer and that the information they receive is not communicated effectively (Bennett, Meyer & Eikelboom, 2019; Kelly et al., 2013; Laplante-Lévesque et al., 2013). Therefore, while participants in the current study identified the need for hearing healthcare clinicians to provide information on the emotional and psychological impacts of hearing loss, care must be taken to ensure that this information is delivered in a way that can be understood and recalled by its intended recipient (Cienkowski & Saunders, 2013; Laplante-Levesque & Thoren, 2015).

Audiologists report lack of skills and training to be key barriers to provision of emotional and psychological support in the audiology setting (Bennett et al., 2020a). Current audiology training programs provide little opportunity for developing empathy or counseling skills

(Meibos, 2019). Although time constraints may make it challenging to include this curriculum component in current audiology training programs, an increased focus on service-based interventions for hearing loss are required to counterbalance the current device focussed nature of our industry (Bennett et al., 2021a; Bennett et al., 2021b). Many clinicians look to develop these skills after graduation. Counseling skills training workshops are shown to be effective for improving audiologists' communication skills (Muñoz et al., 2017); however, the effectiveness of such programs in improving the clinical behaviours of audiologists requires further investigation.

Even with improved skills and practices, the scope of practice for clinical audiologists cannot be overlooked. That is, audiologists will find themselves in situations where their clients' emotional and psychological needs are beyond the audiologists' expertise and skill set, and they will need to refer the client for professional mental health support. Although participants in the current study described some hesitation regarding referral for professional mental health support, appropriate referral is best practice. The concerns raised by participants are valid in that not all MHPs may have the knowledge of or experience in working with adults with hearing loss. Audiologists could familiarise themselves with MHPs in their area who are familiar with working with people experiencing mental health concerns related to a chronic illness, such as Rehabilitation Counsellors. Additionally, audiologists might raise awareness of the well-being impacts of hearing loss and considerations when providing psychotherapeutic intervention by sharing hearing loss-related resources with local MHPs.

Reflections on engaging consumer and community representatives

In preparing for this research project, the research team's presupposition was that the most problematic behaviour preventing adults with hearing loss from receiving emotional and psychological support was audiologists not referring their clients to MHPs and GPs.

However, throughout the focus groups it became apparent that few participants saw this as an important behaviour. Although participants described referral to GPs and MHPs as a behaviour within the system, they described it as being unsuccessful in facilitating improved mental health for the client. Engaging consumer and community members in the process of selecting the research direction was highly informative, and highlighted flaws in our understanding of processes at play. If stakeholder engagement had not been sought as a starting point for intervention development within this project, a very different intervention would have evolved that would not have aligned closely with stakeholder needs. We encourage all research groups to adopt consumer and community engagement techniques prior to embarking upon research that aims to interact with the public.

Limitations

Participants (both client and professional representatives) were recruited from a single hearing clinic. This was intentional, in line with behaviour change intervention development processes, so that the resultant intervention will be context specific, likely increasing the effectiveness of the intervention (Michie et al., 2014). However, it is likely that the opinions of clients and professionals associated with other hearing service providers, or in other countries, may have differed regarding priorities for research directions to improve emotional and psychological support. Nonetheless, findings from the current study are informative and provide guidance for our project developing a context-specific behavioural

intervention to improve support services in the audiology setting. The nominal group technique was a useful approach for involving stakeholders in research planning activities. One limitation of this technique was that it required participants to move around the room to read the brainstormed ideas and place their individual votes. This posed a challenge for two participants with mobility issues and one participant with blindness. We sought to overcome this issue by having moderators read aloud the text and assist these individual participants with tasks, however this may have affected these participants' degree of involvement in this stage of the focus group.

Conclusions

Our experiences have been that consumer and community involvement provided a more in-depth view of the problem and provided valuable suggestions influencing research directions. Although we envisaged referral to mental health professionals to be an integral part of the process for improving emotional and psychological support for adults with hearing loss, engaging consumer and community representatives helped us to recognise flaws in our understanding of existing processes at play. Consumers and community members emphasised the need for audiologists to step into the role of counsellor and support adults with hearing loss in navigating the emotional and psychological impacts of their hearing loss. Specifically, the three behaviours voted by participants to be the most promising for a behavioural intervention included the clinician (i) asking about, (ii) providing information on, and (iii) delivering therapeutic intervention for emotional and psychological well-being within audiological consultations. Understanding the barriers and facilitators of these three target behaviours presents as the next challenge in moving closer to meeting the emotional and psychological needs of our consumers.

Acknowledgements

The authors would like to acknowledge the assistance of the Ear Sciences Institute Australia with participant recruitment and the participants for devoting their time to this study.

References

- Aazh, H. & Moore, B. C. (2018). Effectiveness of audiologist-delivered cognitive behavioral therapy for tinnitus and hyperacusis rehabilitation: Outcomes for patients treated in routine practice. *American Journal of Audiology*, 27(4), 547-558.
- Australian Government National Health and Medical Research Council (2021). "Consumer and community engagement." from <https://www.nhmrc.gov.au/about-us/consumer-and-community-engagement>. Accessed 13/06/2021.
- Beck, K. & Kulzer, J. (2018) Teaching counseling microskills to audiology students: recommendations from professional counseling educators. *Seminars in Hearing*, 39:1.
- Bennett RJ, Barr C, Montano J, Saunders G, Pronk M, Preminger J, . . . RH, E. (2020c). Identifying the approaches used by audiologists to address the psychosocial needs of their adult clients. *International Journal of Audiology*, 1-11.
- Bennett, R. J., Meyer, C. J. & Eikelboom, R. H. (2019). How do hearing aid owners acquire hearing aid management skills? *Journal of the American Academy of Audiology*, 30(6), 516-532.
- Bennett, R. J., Meyer, C. J., Eikelboom, R. H. & Atlas, M. D. (2018). Investigating the Knowledge, Skills, and Tasks Required for Hearing Aid Management: Perspectives of Clinicians and Hearing Aid Owners. *American Journal of Audiology*, 27(1), 67-84.

Bennett, R. J., Meyer, C. J., Ryan, B., Barr, C., Laird, E. & Eikelboom, R. H. (2020a).

Knowledge, beliefs and practices of Australian audiologists in addressing the psychological needs of adults with hearing loss. *The American Journal of Audiology*, 29(2), 129-142.

Bennett, R. J., Meyer, C. J., Ryan, B. & Eikelboom, R. H. (2020b). How do audiologists

respond to symptoms of mental illness in the audiological setting? Three case vignettes. *Ear and Hearing*, 41(6), 1675-1683.

Bennett, R. J., Kelsall-Foreman, I., Donaldson, S., Olaithe, M., Saulsman, L. & Badcock, J.

C. (2021b). Exploring the potential for psychotherapeutic intervention in supporting clients with psychosocial concerns in the audiology setting: Perspectives of audiologists, and audiology reception staff and managers. *American Journal of Audiology*, 1-11.

Bennett, R.J., Saulsman, L., Eikelboom, R.H. & Olaithe, M. (2021a). Coping with hearing loss distress: A qualitative investigation using Leventhal's self-regulation theory.

International Journal of Audiology, 1-12.

Bigelow, R. T., Reed, N. S., Brewster, K. K., Huang, A., Rebok, G., Rutherford, B. R. & Lin, F. R.

(2020). Association of Hearing Loss With Psychological Distress and Utilization of Mental Health Services Among Adults in the United States. *JAMA Network Open*, 3(7), e2010986-e2010986.

Cienkowski, K. M. & Saunders, G. H. (2013). An examination of hearing aid counseling

implemented by audiologists. *Perspectives on Aural Rehabilitation and Its Instrumentation*, 20(2), 67-76.

- Coleman, C. K., Muñoz, K., Ong, C. W., Butcher, G. M., Nelson, L. & Twohig, M. (2018). Opportunities for Audiologists to Use Patient-Centered Communication during Hearing Device Monitoring Encounters. *Seminars in Hearing, 39*(1), 32-43.
- Community Catalyst (2021). "Community Catalyst." Retrieved 13/06/2021, from www.communitycatalyst.org. Accessed 13/06/2021.
- Concannon, T. W., Fuster, M., Saunders, T., Patel, K., Wong, J. B., Leslie, L. K. & Lau, J. (2014). A systematic review of stakeholder engagement in comparative effectiveness and patient-centered outcomes research. *Journal of General Internal Medicine, 29*(12), 1692-1701.
- Concannon, T. W., Meissner, P., Grunbaum, J. A., McElwee, N., Guise, J.-M., Santa, J., . . . Leslie, L. K. (2012). A new taxonomy for stakeholder engagement in patient-centered outcomes research. *Journal of General Internal Medicine, 27*(8), 985-991.
- Contrera, K. J., Betz, J., Deal, J., Choi, J. S., Ayonayon, H. N., Harris, T., . . . Lin, F. R. (2017). Association of Hearing Impairment and Anxiety in Older Adults. *Journal of Aging Health, 29*(1), 172-184.
- Corrigan, P. W., Druss, B. G. & Perlick, D. A. (2014). The impact of mental illness stigma on seeking and participating in mental health care. *Psychological Science in the Public Interest, 15*(2), 37-70.
- Courtin, E. & Knapp, M. (2017). Social isolation, loneliness and health in old age: a scoping review. *Health and Social Care in the Community, 25*(3), 799-812.
- Delbecq, A. L., Van de Ven, A. H. & Gustafson, D. H. (1975). *Group techniques for program planning: A guide to nominal group and Delphi processes*: Scott Foresman.

- Ekberg, K., Grenness, C. & Hickson, L. (2014). Addressing patients' psychosocial concerns regarding hearing aids within audiology appointments for older adults. *American Journal of Audiology*, 23(3), 337-350.
- English, K. (2008). Counseling issues in audiological rehabilitation. *Contemporary Issues in Communication Science*, 35, 93-101.
- Ferguson, M., Brandreth, M., Brassington, W. & Wharrad, H. (2015). Information Retention and Overload in First-Time Hearing Aid Users: An Interactive Multimedia Educational Solution. *American Journal of Audiology*, 24(3), 329-332.
- Fulton, E. A., Brown, K. E., Kwah, K. L. & Wild, S. (2016). *StopApp: using the behaviour change wheel to develop an app to increase uptake and attendance at NHS Stop Smoking Services*. Paper presented at the Healthcare.
- Goodman, M. S. & Sanders Thompson, V. L. (2017). The science of stakeholder engagement in research: classification, implementation, and evaluation. *Translational behavioral medicine*, 7(3), 486-491.
- Harrison, J. D., Auerbach, A. D., Anderson, W., Fagan, M., Carnie, M., Hanson, C., . . . Schnipper, J. (2019). Patient stakeholder engagement in research: a narrative review to describe foundational principles and best practice activities. *Health Expectations*, 22(3), 307-316.
- Heffernan, E., Coulson, N. S., Henshaw, H., Barry, J. G. & Ferguson, M. A. (2016). Understanding the psychosocial experiences of adults with mild-moderate hearing loss: An application of Leventhal's self-regulatory model. *International Journal of Audiology*, 55(sup3), S3-S12.
- Involve (2021). "Co-production." from <https://www.involve.org.uk/resources/methods/co-production>. Accessed 13/06/2021.

- Kelly, T. B., Tolson, D., Day, T., McColgan, G., Kroll, T. & Maclaren, W. (2013). Older people's views on what they need to successfully adjust to life with a hearing aid. *Health and Social Care in the Community*, 21(3), 293-302.
- Laird, E. C., Bennett, R. J., Barr, C. M. & Bryant, C. A. (2020). Experiences of Hearing Impairment and Audiological Rehabilitation for Older Adults with Comorbid Psychological Symptoms. *American Journal of Audiology*, 29(4), 809-824.
- Laplante-Lévesque, A., Hickson, L. & Worrall, L. (2010). A qualitative study of shared decision making in rehabilitative audiology. *Journal of the Academy of Rehabilitative Audiology*, 43, 27-43.
- Laplante-Lévesque, A., Jensen, L. D., Dawes, P. & Nielsen, C. (2013). Optimal Hearing Aid Use: Focus Groups With Hearing Aid Clients and Audiologists. *Ear and Hearing*, 34(2), 193-202.
- Laplante-Levesque, A. & Thoren, E. S. (2015). Readability of Internet information on hearing: Systematic literature review. *American Journal of Audiology*, 24(3), 284-288.
- Lawrence, B. J. (2019). Age-related hearing loss and depression in older adults: A systematic review and meta-analysis. *Gerontologist*, 60(3), e137-e154.
- McEvoy, C. T., Moore, S. E., Appleton, K. M., Cupples, M. E., Erwin, C., Kee, F., . . . Woodside, J. V. (2018). Development of a peer support intervention to encourage dietary behaviour change towards a Mediterranean diet in adults at high cardiovascular risk. *BMC public health*, 18(1), 1-13.
- Meibos, A., Muñoz, K., Schultz, J., Price, T., Whicker, J. J., Caballero, A. & Graham, L. (2017). Counseling users of hearing technology: A comprehensive literature review. *International Journal of Audiology*, 56(12), 903-908.

- Meibos, A., Muñoz, K., & Twohig, M. (2019). Counseling Competencies in Audiology: A Modified Delphi Study. *American Journal of Audiology, 28*(2), 285-299.
- Michie, S., Atkins, L. & West, r. (2014). *The behaviour change wheel: A guide to designing interventions*. London: Silverback.
- Muñoz, K., Ong, C. W., Borrie, S. A., Nelson, L. H., & Twohig, M. P. (2017). Audiologists' communication behaviour during hearing device management appointments. *International Journal of Audiology, 56*(5), 328-336.
- Salaheddin, K. & Mason, B. (2016). Identifying barriers to mental health help-seeking among young adults in the UK: a cross-sectional survey. *British Journal of General Practice, 66*(651), e686-e692.
- The Royal Melbourne Hospital (2020). "5 Ways To Wellbeing." from <https://5waystowellbeing.org.au/about-wellbeing/>. Accessed 13/06/2021.
- Vas, V., Akeroyd, M. A. & Hall, D. A. (2017). A data-driven synthesis of research evidence for domains of hearing loss, as reported by adults with hearing loss and their communication partners. *Trends in hearing, 21*, 1-25.
- Webb, J., Foster, J. & Poulter, E. (2016). Increasing the frequency of physical activity very brief advice for cancer patients. Development of an intervention using the Behaviour Change Wheel. *Public Health, 133*, 45-56.
- West, J. S. (2017). Hearing impairment, social support, and depressive symptoms among US adults: A test of the stress process paradigm. *Social Science and Medicine, 192*, 94-101.

Table 1. Summary of the (i) the stakeholders involved in the delivery of emotional and psychological support for adults with hearing loss and co-morbid emotional and psychological concerns, (ii) the behaviours undertaken by each stakeholder group, and (iii) the number of votes attributed to each behaviour (combining the votes from the three focus groups). A higher number of votes indicates that a greater number of participants selected this behaviour to be the ideal focus of an intervention programme that would improve how emotional and psychological support is provided to adults with hearing loss.

Stakeholder	Behaviours	Votes
The Client (i.e. Person with hearing loss)		12
	Discuss emotions	3
	Seek help	2
	Actively attend social activities	5
	Educate others on your communication needs	2
	Assist others who might be experiencing emotional distress due to their hearing loss	0
The Clinician (audiologist/audiometrist)		67
	Ask clients about how their hearing loss has impacted on their emotional well-being	16
	Use surveys to screen for emotional distress / psychological symptoms	3
	Provide information on the emotional and psychological impacts of hearing loss	5
	Provide information on treatment/management options and pathways	14
	Follow up with the individual	2

	Refer to local GPs & MHPs, with the clients consent	2
	Deliver intervention to improve emotional distress and loneliness (such as psycho education, behavioural activation, access to support groups, communication and interpersonal skills training, and emotional support)	17
	Educate GPs /MHPs / the public about hearing loss and its psychosocial consequences	8
	Use appropriate language when discussing mental	0
Other Allied Health Professionals		
	Nil	
Significant Others		2
	Provide emotional support (ask questions, listen non-judgementally)	2
	Look for signs or symptoms of emotional distress in the client	0
	Strategies ways to communicate better with each other and overcome some of the tension within relationships	0
Clinic Reception staff		12
	Provide information on the emotional costs of hearing loss, and support options available	6
	Use appropriate verbal responses to emotional and psychological issues raised by client over the phone or at the front desk	4
	Inform the hearing healthcare clinician of your concerns regarding the clients well-being and extend the appointment for these clients	2
	Triage clients who disclose signs and symptoms of emotional distress, i.e. book them in with hearing healthcare clinicians who are skilled in providing emotional and psychological support	0
Clinic/Manager		5

	Set up support programs for clients to participate in (suggestions included Facebook groups, face-to-face group sessions, and buddy programs)	5
	Train the clinic staff on how to provide emotional and psychological support to clients	0
	Set up peer-support systems so that staff can "offload" after seeing difficult clients (like psychologists do); essentially providing emotional and psychological support/supervision to staff	0
	Create a work culture that values the need to pause, notice, discuss and address emotional and psychological concerns	0
	Employ a psychologist who is specifically trained in supporting people with hearing loss and emotional distress/MH issues	0
General Practitioner (GP)		5
	Follow up with clients; if clients bring up emotional and psychological concerns in an appointment, check in with them at a later date	2
	Provide information about emotional and psychological support services/groups	1
	Ask about emotional and psychological well-being, listen to the response, and act accordingly	0
	Do not just prescribe pills, treat the cause not the symptoms (prescribe hearing assessment & intervention for people who report isolation or loneliness)	2
Mental Health Professional (MHP)		2
	Ask clients about how they perceive their hearing loss to be impacting on their emotional well-being	2
Support Persons (Neighbours/Religious Leaders, Sporting Clubs etc.)		
	Talk about hearing loss and emotional and psychological well-being	0

	Look for signs or symptoms of emotional distress in the client	0
	Provide emotional support (ask questions, listen non-judgementally)	0
People at Work (including colleagues)		
	Provide emotional support (ask questions, listen non-judgementally)	0
Local councils		
	Educate the public about the impacts of hearing loss	0
Media		9
	Highlight the importance and impacts of hearing loss on radio & TV programs	9