A Qualitative Study of Shared Decision Making in Rehabilitative Audiology

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This study examined rehabilitative audiology clients' experiences with shared decision making. Adults with acquired hearing impairment and with no previous experience of rehabilitative audiology were recruited for a shared decision making clinical trial. A sample of 22 participants completed an in-depth interview which was transcribed and analyzed using content analysis. The results were organized into an evidence-based model of rehabilitative audiology shared decision making. Participants described decision making by its actors, processes, and dimensions. Two themes, "my story" and "trust," highlight the importance of a client-centered and ethical approach to shared decision making in rehabilitative audiology.

Acquired hearing impairment is a prevalent chronic health condition and has serious consequences (for a review, see Laplante-Lévesque, Hickson, & Worrall, 2010c). Fortunately, rehabilitation interventions such as hearing aids and group and individual communication programs are effective (Chisolm et al., 2007; Hickson, Worrall, & Scarinci, 2006; Kramer, Allessie, Dondorp, Zekveld, & Kapteyn, 2005; Sweetow & Henderson Sabes, 2006; Thibodeau, 2007). As outlined in the preceding companion article (Laplante-Lévesque, Hickson, & Worrall, 2010b), approaches that promote client participation in their health such as client-centeredness, joint goal setting, and shared decision making hold promise for the rehabilitation of people with acquired hearing impairment.

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Decision Making in Rehabilitative Audiology

Little empirical evidence on rehabilitative audiology decision making is currently available. A paternalistic approach to decision making (clinician making the decision) has dominated historically, however rehabilitative audiology decision making has been described as "a vital stage in the rehabilitative process in which key decisions are made jointly between the professionals and the hearing impaired people" (Stephens, 1996, p. 61).

Given that shared decision making achieves better intervention adherence and outcomes than other types of decision making (Joosten et al., 2008), a clinical trial was designed to test the shared decision making approach in rehabilitative audiology. Other publications are arising from this clinical trial (see, e.g., Laplante-Lévesque, Hickson, & Worrall, 2010a) and more information is available from the authors on request. The purpose of this study, nested in the clinical trial, was to examine the experiences of clients with rehabilitative audiology shared decision making. This study was undertaken to investigate how shared decision making was construed by adults with acquired hearing impairment and to formulate an evidence-based model of shared decision making relevant to rehabilitative audiology.

This fills a gap in the current literature as shared decision making theories and definitions have predominantly originated from philosophical and ethical views, have been elaborated by researchers and clinicians, and have focused on processes occurring during the client-clinician encounter. Only a small number of studies explored the experiences of people facing shared health decisions. For example, using a qualitative methodology, the meaning that African-Americans with diabetes made of shared decision making was found to differ significantly from the well-known theoretical models proposed by researchers (Peek et al., 2008). Similarly, women with cancer who faced shared decisions described their experiences as extending beyond the client-clinician encounter (O'Brien et al., 2008) and depicted situations where their preferred degree of decisional involvement changed over time (Ziebland, Evans, & McPherson, 2006). Healthy members of the general community stressed the importance of prerequisites for shared decision making including knowledge, clinician explicitly encouraging client participation, client's rights and responsibilities regarding involvement in decision making, awareness of choice, and sufficient time (Fraenkel & McGraw, 2007).

METHOD

This study was conducted in 2008-2009 in Brisbane (Queensland, Australia) and received clearance from the University of Queensland's Behavioural and Social Sciences Ethical Review Committee and the Australian government's Department of Health and Ageing Ethics Review Committee.

Sampling and Recruitment

Adults aged 50 years and over with acquired hearing impairment and who had not previously received rehabilitative audiology services were recruited via the Office of Hearing Services of the Australian government's Department of Health and Ageing (Australian government program offering subsidized hearing services to people receiving a government pension), print and electronic media, notice boards, and word-of-mouth for a shared decision making clinical trial. Potential participants received a hearing assessment (otoscopy and air conduction puretone audiometry). Eligibility was restricted to those who presented with a hearing impairment defined as an average of air conduction thresholds at 0.5, 1, 2, and 4 kHz greater than 25 dB HL in at least one ear. Potential participants whose hearing assessment indicated they needed medical attention were excluded from the study after completing further testing (bone conduction pure-tone audiometry and tympanometry) and being referred to a medical practitioner. A total of 153 participants participated in the shared decision making clinical trial and a subsample of 22 participants participated in this study. The 22 participants were recruited according to purposive sampling, and more specifically maximum variation sampling (Sandelowski, 1995), to capture a broad range of rehabilitation intervention decision making processes among people with acquired hearing impairment. More specifically, sampling occurred until enough variations in the sample were found in terms of age, gender, degree of hearing impairment, work status, living situation, eligibility for the Office of Hearing Services program, and intervention decision. Table 1 presents an overview of the 22 adults with acquired hearing impairment who participated in the study.

Procedures

Participants attended two research appointments with the first author (a registered clinical audiologist). The first research appointment took place at the Audiology Clinic of the University of Queensland. Once eligibility and consent for the study were confirmed, the rehabilitation decision was approached using shared decision making (Charles, Gafni, & Whelan, 1997, 1999). Participants listed their rehabilitation goals and four options were presented as described in Table 2: hearing aids, group communication program, individual communication program, and no intervention.

A decision aid summarizing the intervention options and their outcomes according to the most recent scientific evidence was developed. Simple language accessible to most was used (Flesch Reading Ease: 72.8; Flesch-Kincaid Grade Level: 5.2, meaning that the decision aid can be understood by people with at least 5 years of formal education). It is typically recommended that decision aids do not require more than 8 years of formal education according to readability formulae (Elwyn et al., 2006). Intervention options were discussed in relation to each participant's rehabilitation goals and significant others were invited to take

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part in the discussion if present. Each participant received a copy of the decision aid. Figure 1 illustrates the first page of the decision aid; the following four pages each provided more detailed information about each of the four intervention options.

The decision was elicited at the second research appointment, which took place at the most convenient location for each participant (i.e., participant home, participant workplace, community location, or Audiology Clinic of the University of Queensland) between 1 and 4 weeks after the first research appointment. In this clinical trial, each participant was required to choose only one of the four inter-

Table 1
Sample Characteristics

		Participants	
Characteristics	%	(n)	
Age			
50-65	36%	(8)	
>65-80	55%	(12)	
>80	9%	(2)	
Gender			
Male	68%	(15)	
Female	32%	(7)	
Degree of hearing impairment in better ear			
Mild (≤40 dB HL)	91%	(20)	
Moderate (>40 and ≤55 dB HL)	9%	(2)	
Work status			
Full-time paid work	18%	(4)	
Part-time paid work and/or semi-retirement	27%	(6)	
Retirement and/or home duties	55%	(12)	
Living situation			
Alone	27%	(6)	
With spouse or partner	55%	(12)	
With family member(s) other than spouse or partner	9%	(2)	
With friend(s)	9%	(2)	
Eligibility for the Office of Hearing Services program			
Eligible	50%	(11)	
Ineligible	50%	(11)	
Intervention decision			
Hearing aids	45%	(10)	
Group communication program	14%	(3)	
Individual communication program	27%	(6)	
No intervention	14%	(3)	

vention options. After completion of the intervention of choice, participants were invited to consider another intervention, if relevant. However, simultaneous completion of more than one intervention was not available in this clinical trial. After the initial intervention decision, each participant then took part in a semi-structured audio-recorded interview of approximately 1 hr in duration during which they described their experiences with shared decision making. The interview guide (written prompts the first author referred to during the interview to ensure all important topics were discussed) focused on factors involved in the decision (see Laplante-Lévesque et al., 2010a) as well as on experiences with shared decision making with prompts including asking the participant to describe how the decision was made and what an ideal scenario of decision making in rehabilitative audiology would entail.

Table 2Intervention Options

1. Hearing aids

Description: Electro-acoustic devices restoring the impaired sound audibility.

Provider: Participant's preferred hearing aid clinic.

Cost: Depending on the type of hearing aids obtained, free or reduced

cost for participants eligible for subsidized hearing services. For other participants, the current market cost of hearing aids is ap-

proximately 1250-4500 USD per hearing aid.

2. Group communication program: Active Communication Education (ACE)

Description: Group sessions on problem-solving strategies to improve commu-

nication. Facilitated by an audiologist. Significant others are encouraged to attend. Runs for 6-10 people for 5 consecutive 2-hr

weekly sessions.

Provider: Audiology Clinic of the University of Queensland.

Cost: Free of charge for all participants.

3. Individual communication program: Individual - Active Communication Education (I-ACE)

Description: Written chapters on problem-solving strategies to improve commu-

nication. Facilitated by an audiologist. Significant others are encouraged to participate. Each of 5 chapters completed at the participant's pace before contacting the facilitator and then receiving

the next chapter in the mail.

Provider: Audiology Clinic of the University of Queensland.

Cost: Free of charge for all participants.

4. No intervention

Description: Intervention delay or decline. Outlined in the medical literature as

a valid option in several clinical circumstances. Acknowledges that age-related hearing impairment is not a life-threatening condition and that relative readiness for rehabilitation must be taken into

consideration.

Analysis

Data analysis occurred simultaneously with sampling and data collection. Interviews were transcribed verbatim by the first author, anonymized, and expanded with contextual information from the notes taken by the first author during the interviews.

The interview transcripts were analyzed inductively with content analysis (Graneheim & Lundman, 2004). An inductive approach does not aim at categorizing the data according to previous knowledge and/or research hypotheses but rather searches for patterns emerging from the data. The interviews generated a total of 852 meaning units (i.e., words related to each other through their content and context). Each meaning unit was shortened to a condensed meaning unit (i.e., reduced meaning unit with preserved meaning). The 852 condensed meaning units were clustered into 42 codes (i.e., labels). The 42 codes were grouped into 11 sub-categories and then 3 categories (i.e., groups of content that share a commonality). Condensation drove the process from meaning units to condensed meaning units while abstraction drove the process from condensed meaning units to codes, subcategories, and, finally, categories.

Later, two themes (i.e., latent content) were identified. While a category represents similar data that can be defined, compared, and contrasted with other categories, a theme represents the essence, or quintessential topic, of the narrative

My hearing options					
What is it?	<u>Hearing aids</u>	Group program: Active Communication Education (ACE)	Written program: Individualised Active Communication Education (I-ACE)	No intervention	
What is involved?	Being fitted with hearing aids. Wearing the hearing aids to help with my hearing problems.	Participating in group sessions to learn ways to cope with my hearing problems. Using the information to help with my hearing problems.	Reading chapters at home to learn ways to cope with my hearing problems. Using the information to help with my hearing problems.	Keeping on going the way I am at the moment.	
FIRST STEP Options I want to know more about ☑					
SECOND STEP Options I will think about ☑					
Communication Disability Centre, 2009					

Figure 1. Decision aid excerpt.

(Morse, 2008).

Several steps were taken to ensure methodological rigor. Periodic checks against the interview sound files and transcripts validated the condensation and abstraction processes. The three authors reviewed all condensed meaning units, codes, sub-categories, categories, and themes, and areas of discrepancies were discussed until consensus was achieved. In accordance with principles of reliability in qualitative research (Barbour, 2001), these discussions refined the data analysis.

RESULTS

The categories and themes were organized into an evidence-based model of rehabilitative audiology shared decision making (see Figure 2). The figure depicts the three categories (*decision making actors*, *decision making processes*, and *decision making dimensions*) along with their relevant sub-categories as well as the two themes (*my story* and *trust*) reported by adults involved in rehabilitative audiology shared decision making.

The model's categories and themes are illustrated with selected interview excerpts. Sections in parentheses refer to contextual information added from notes taken by the first author during the interviews.

Category 1. Decision Making Actors

Participants listed the people involved in shared decision making. Some of these influences were explicit while others were implicit.

1.1. Family. Frequent communication partners such as family members played a vital role in the participants' decisions.

(Had I decided not to obtain hearing aids) she (my wife) would make sure I knew she thought I made the wrong decision. (69-year-old male)

Had I not been nagged by my kids . . . I was aware that there were certain situations in which I was having a small degree of difficulty hearing, but I don't know that I would have thought, at that stage of it anyway, that it was bad enough for me to do anything about it. (66-year-old male)

1.2. *Me***.** More than anyone else, participants put themselves at the center of the people involved in shared decision making.

I've decided what I wanted was the hearing aids. I thought a lot about it, but THAT'S the option for me. (82-year-old female)

I already had in my mind "I don't really want a hearing aid, and if I can do anything else to avoid that, I will." (68-year-old female)

1.3. Health clinicians. Participants also described the role of various health clinicians such as general medical practitioners; ear, nose, and throat medical spe-

cialists; hospital audiologists; and rehabilitative audiologists. Their role varied from that of offering a reference or a screening test to providing information and guidance.

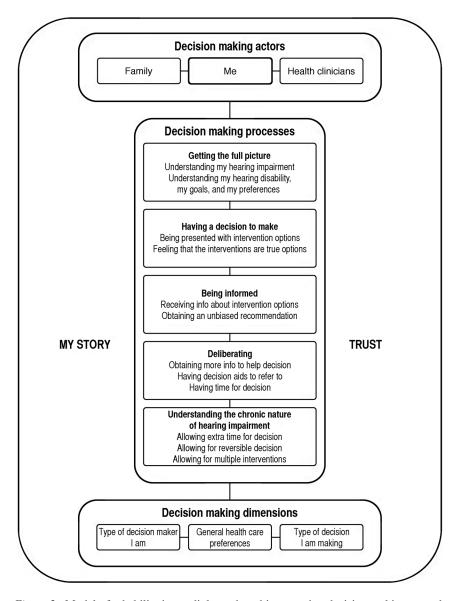


Figure 2. Model of rehabilitative audiology shared intervention decision making according to adults with acquired hearing impairment.

He's a GP and so he said "They're the people to see, I can't do much about it." He didn't even bother having a look in there! (The participant points to his ear.) I thought "That's fair enough, you don't go to a plumber if you want your cabinet fixed, do you?" (Laughs) I believe in specialists. (65-year-old male)

He (GP) was... not forceful, but he was saying "I've seen too many people get hearing aids too early in the hearing problem and they end up being worse off as a result of that." (66-year-old male)

Category 2. Decision Making Processes

The participants described the steps taken towards shared decision making.

2.1. Getting the full picture. Participants felt the need for all people involved in the decisions to obtain a good understanding of their hearing impairment.

It was good to see how defective my hearing was with the test. (66-year-old male)

Similarly, they reviewed their hearing disability, goals, and preferences.

I like to watch movies, but they've gotta have subtitles. It's a pain because there are some good movies that haven't got subtitles! (65-year-old male)

2.2. Having a decision to make. Participants reflected on the intervention options they were presented with.

I thought I'd come along (to the research study) and they'd say "Oh yeah, hearing aid, good bye, have a nice day!" (55-year-old male)

Some participants did not feel that intervention options were available for their health condition.

I've never thought of other options: if you can't hear, you get hearing aids. (79-year-old female)

For some, the lack of knowledge about hearing interventions other than hearing aids had previously been a deterrent to help-seeking.

If it was general knowledge that there's an approach other than hearing aids I'm sure I would have investigated it before this. (77-year-old male)

2.3. *Being informed.* Participants required information about the intervention options.

I've come here (to the research study) and I'm more knowledgeable, informed. (65-year-old male)

Some had already gathered information which they wanted to verify.

As far as hearing aids go, I'd come to a set of conclusions. I wanted to validate it and that's what happened. (55-year-old male)

Many participants were also interested in obtaining a recommendation.

I like to get an informed opinion, an educated opinion because I'm not the expert. (65-year-old male)

2.4. *Deliberating.* Some participants needed time to obtain more information to guide their decision. The Internet was one of the information sources used.

What I've been able to dig up off the Net is that it seems to be a smart idea to shop around (hearing aid clinics). (71-year-old male)

The decision aids provided as part of the study were also used in the deliberation period.

I did go through it (decision aid) when I got home, showed my wife and talked about it. (77-year-old male)

2.5. Understanding the chronic nature of hearing impairment. Participants framed their decisions within the slowly degenerative health condition that is agerelated hearing impairment. They typically did not report urgency in decision making.

I never hurry, unless nature hurries me. It took me a year or two to come to the conclusion that it could be a good idea to do something about it (my hearing). (79-year-old male)

Reversible decisions and multiple interventions were also considered.

Decisions like this are reversible. I can always turn around and say "Yep, ok, at this point I need it (a hearing aid)." (59-year-old male)

Category 3. Decision Making Dimensions

The third category encompassed participants' experiences and preferences for decision making.

3.1. Type of decision maker I am. Some participants described their decision making preferences according to their occupation. They described their decision making styles, which varied greatly.

My training is to evaluate all the options. And then if you're good at that process, the solution will present itself as being the right one. (71-year-old male)

I'm impulsive. Well, I have been in my life, I know that! (68-year-old female)

Overall, participants felt at ease with being involved in decisions.

For me, this way of doing things (shared decision making) is part of the way of the future. (79-year-old male)

That's a better thing: to make the patient decide, to give options. (81-year-old male)

3.2. General health care preferences. Participants described the way they approach health care and how this shaped their decision making for their hearing.

The shift's got to be away from the experts telling us, to people taking responsibility for saying "I noticed these changes in my body, they're like this." And somebody listens! (79-year-old male)

If I go to the doctor and she tells me what to do and I'm happy with that then I'll go ahead. If I don't, I'll think about it and get a second opinion. (63-year-old female)

3.3. Type of decision I am making. Participants' experiences with rehabilitative audiology shared decision making was influenced by their perceptions of the decision they were facing. Some people saw the intervention decision in this study as complex while others saw it as simple.

I find it hard to make a decision. (71-year-old male)

Sometimes it's not hard to make your mind up about something like that. Because you know what's going to suit you more than anything. (68-year-old female)

Across the categories, two themes reoccurred. These themes represent the common threads within the participants' experiences with rehabilitative audiology shared decision making.

Theme 1. My Story

Participants described how their story must be at the center of rehabilitative audiology shared decision making. They wanted rehabilitative audiologists to hear their experiences and preferences and to tailor their interventions accordingly. In other words, they expected clinicians to adopt a client-centered approach.

It's a good question to ask: "What is it that you miss with your hearing loss?" I think specific questions in that regard are important. "Do you feel at a total loss when you're watching a play?" (81-year-old male)

My experience (with clinicians) has been overwhelmingly good. I've found people in the medical profession who'll listen. You have to go against their grain initially, but I've found people that will listen. (79-year-old male)

Theme 2. Trust

Participants also expressed various levels of trust, both towards the profession of rehabilitative audiologists as a whole or towards a specific clinician.

I will be led by them (clinicians). I've got no choice in the matter. I don't know anything about them (hearing aids). After they (clinicians) test me, they're there to advise me and I'll be taking their advice. (65-year-old male)

In the last couple of years, they seem to become big, hearing aid clinics. I'd never seen them advertised the way they do and they're always very swish looking setups. That's what made me cynical about it. (55-year-old male)

I won't go to one of these (hearing aid clinics) that offer free hearing tests because they're not interested in your hearing from your health point of view. (63-year-old female)

Different audiologists, it's a business to them and they're just interested in selling you the hearing aid. (63-year-old female)

DISCUSSION

This study provided an evidence-based model of shared decision making relevant to rehabilitative audiology. It was nested in a clinical trial investigating shared decision making in rehabilitative audiology, which gave participants the opportunity to describe their recent experiences with shared decision making. The model includes five main domains: three categories and two themes.

In the realm of categories, the first category, decision making actors, focused on people, other than the rehabilitative audiologist, that clients interact with and that implicitly or explicitly contribute to decisions. This has also been reported in shared decision making for other health conditions. For example, 70% of surveyed clients with malignant diseases reported that they consider their family members should participate in medical decision making (Schäfer et al., 2006). Women with breast cancer described how clinicians, as well as family and friends, played a part in their intervention decisions (O'Brien et al., 2008). The participants of this study highlighted how frequent communication partners, such as family members, as well as clinicians other than rehabilitative audiologists, played a role in their decisions.

The second category, decision making processes, described the steps that participants took. These steps were not taken chronologically by all participants and some participants cycled between different steps and/or took more than one step simultaneously. This has also been observed in a study where clients and medical practitioners jointly formulated their own definitions of shared decision making with "themes (that) did not reflect sequential stages, but rather continuous movement among all of the described attitudes and behaviours, with no one starting point for all encounters" (Lown, Hanson, & Clark, 2009, p. 169).

The third category, decision making dimensions, focused on people's experiences and preferences for decision making. The participants reported how the type of decision maker they were, their general health preferences, and the type of decision they were making influenced their experiences of rehabilitative audiology shared decision making. The parallels that participants drew between their decision making in rehabilitative audiology and their general health preferences, both in terms of decision making and in terms of client-clinician interactions, have not been a central finding of previous shared decision making research. One explanation could be that the design of this study, where the participants had recent experience in shared decision making in the form of the clinical trial they were involved in, allowed them to further reflect on shared decision making than

studies where participants discussed their perceptions of shared decision making without having explicitly experienced it.

In the realm of themes, the first theme, my story, highlighted that adults with acquired hearing impairment wished their clinician to hear their experiences and preferences. In other words, they viewed client-centeredness as a prerequisite to rehabilitative audiology shared decision making and were not comfortable with a prescriptive approach that does not allow for individual differences. This finding supports the conceptualization of shared decision making as one of the components of client-centeredness (Mead & Bower, 2000). Similarly, two qualitative studies found that people with diabetes emphasized the importance of being able to tell their story to their clinicians (Entwistle, Prior, Skea, & Francis, 2008; Peek et al., 2008). The similarities between the shared decision making experiences of people with hearing impairment involved in this study and those of people with other chronic health conditions are salient.

The second theme, trust, was also central to the participants' experiences with rehabilitative audiology shared decision making. In this study, participants reported that the financial incentives some audiologists receive for hearing aid sales undermine their trustworthiness. Participants only wanted to engage in shared decision making with clinicians perceived as motivated to improve their wellbeing and this has also been reported when shared decision making occurred with general medical practitioners (Edwards & Elwyn, 2006; Lown et al., 2009). In the medical literature, trust can either refer to the profession as a whole or to a particular medical practitioner (McKinstry, Ashcroft, Car, Freeman, & Sheikh, 2009) and this distinction was also made by adults with acquired hearing impairment describing their level of trust either towards rehabilitative audiologists as a whole or to specific clinicians. The relationship between trust and preferred involvement in decisions is such that people who want to make autonomous decisions have a low level of trust in their medical practitioner; those who have blind trust prefer a passive role; and those with a high, but not excessive, amount of trust are most likely to want to engage in shared decision making (Kraetschmer, Sharpe, Urowitz, & Deber, 2004). But what makes clinicians trustworthy in their clients' eyes? Medical practitioners who understand their clients' individual experiences and who build partnerships and share power with their clients are those that clients trust (Thom & Campbell, 2004). As noted by Entwistle (2004), trust and client-centeredness, with shared decision making as one of its components, might be mutually reinforcing concepts, with similar positive benefits of increased intervention adherence and outcomes (McKinstry et al., 2009). A qualitative study also unveiled the relationship between clients' trust in health clinicians and health clinicians' interpersonal caring attributes (Hupcey & Miller, 2006). The link between trust in rehabilitative audiologists, client-centeredness, and shared decision making remains to be investigated, but the results of this study suggest a synergy between these three concepts.

The decision making processes were controlled for within the study sample: all participants were involved in shared decision making with the same researcher using the same decision aid. The semi-structured interviews provided rich descriptions and uncovered experiences of shared decision making for the first time in this population. However, the participants were predominantly Caucasian Australians and were all over 50 years of age. As younger clients with more years of formal education and of female gender are more likely to prefer participation in health decisions (for a review, see Say, Murtagh, & Thomson, 2006), the applicability of the evidence-based model of rehabilitative audiology shared decision making proposed here for different populations should be investigated. For example, it would be interesting to contrast the results of this study with those of parents and caregivers of children with hearing impairment or of people with different cultural beliefs. Similarly, as decision making processes are expressed differently depending on the decision at stake, the generalization of this study's results to situations where the nature of the health condition or where the intervention options are vastly different is advised against.

From a clinical perspective, the evidence-based model of rehabilitative audiology shared decision making presented here can guide new models of service delivery that evolve from a paternalistic approach to an approach where clients take an active role in their management. In order to adequately meet the needs of clients involved in rehabilitative audiology shared decision making, rehabilitative audiologists should consider the categories and themes of the model proposed here. For example, it is important to acknowledge the input of people other than the client and the rehabilitative audiologist in decisions. Also, the rehabilitative audiologist can help clients make sense of their hearing impairment by relating it to their hearing disability rather than to the audiology assessment results. The Client Oriented Scale of Improvement (COSI; Dillon, James, & Ginis, 1997), the Hearing Attitudes in Rehabilitation Questionnaire (HARQ; Hallam & Brooks, 1996), or an informal interview with the client can help unveil clients' goals and preferences for rehabilitation. Rehabilitation options can be discussed using a decision aid such as the one used in this study. Adequate time for deliberation should be provided and decisions should be reviewed periodically. Finally, the rehabilitative audiologist can help clients understand their decision making preferences and offer support accordingly.

From a research perspective, the evidence-based model of rehabilitative audiology shared decision making can guide future research efforts. How client-centeredness, shared decision making, and trust can influence intervention adherence and outcomes must be evaluated. Although this study clearly unveiled the importance of client trust towards the clinician, it did not explore clinician trust towards the client, which is required for shared decision making as well (Saba et al., 2006). The client-rehabilitative audiologist relationship is a black box that needs to be better understood and the model proposed here will channel research

efforts in each of the three categories (decision making actors, decision making processes, and decision making dimensions) and two themes (my story and trust) identified. As part of the clinical trial in which this study was nested, the factors influencing the participants' decisions are being recorded using sequential mixed methodology, with a first phase using a qualitative methodology and a second phase using a quantitative methodology. Participants are also followed-up to monitor whether their intervention intention translated into intervention action, intervention adherence, and positive intervention outcomes.

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