Counseling Competencies in Audiology: A Modified Delphi Study

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Abstract

Purpose: Counseling practices in audiology play a critical role in helping patients and families understand, accept, and adjust to the dynamic impacts ear related disorders have on their lives. The purpose of this study was to identify what competencies (i.e., knowledge, skills, and attitudes) are important for audiologists to possess to provide effective counseling in practice.

Method: A modified Delphi study design was used to survey a panel of thirty-three professionals with expertise in audiologic counseling from five different countries. In the first survey round, experts were asked to respond to three open-ended prompts. Responses were condensed and revised into items experts were asked to rate during the second and third survey rounds, on a 6-point Likert scale of importance.

Results: A total of 819 items were generated from the open-ended prompts. A total of 72 items were included in the second and third round survey instruments. Consensus was met on 64 audiologic counseling competency items.

Conclusion: The competency items identified in this study reflect important knowledge, skills, and attitudes that are important to audiologic counseling. Items that met consensus in this study can inform competencies audiology students can acquire during graduate training. Practice guidelines in the field currently lack the necessary clarity and detail needed for implementation of counseling competencies in clinical education. Future research is needed to explore factors important for implementation of evidence-based counseling training in graduate audiology programs.

INTRODUCTION

Counseling practices in audiology play a critical role in helping patients and families understand, accept, and adjust to the impacts of auditory, vestibular (balance), or other ear related disorders (American Speech-Language-Hearing Association [ASHA], 2004, 2006). Experts in audiologic rehabilitation agree that individuals affected by ear related disorders are impacted in diverse ways; because of the "types of activities they do, [the] societal roles they have, who they are, and the [environments] in which they participate" (Meyer, Grenness, Scarinci, & Hickson, 2016, p. 163). A recent paradigm shift in audiology toward patient/family-centered practices has been advocated to advance the field as a result (ASHA, 2004; Cherry, 2015; English, 2005; Erdman, 2013; Hickson, 2012; Schow & Nerborne, 2013; Sharma, 2016; Singh et al., 2016). The diverse nature of patients seeking audiologic services necessitate rehabilitation goals be planned with real-life situational outcomes in consideration. Patients and families do not always know to bring challenges they experience up, unless they are asked; therefore, preparing audiologists to navigate challenges with their patients includes intentionally targeting the development of effective counseling knowledge, skills, and attitudes.

The provision of audiologic counseling has long included addressing two broad aspects of patient and family needs: (a) the need for information and (b) the need for personal-adjustment support (Sanders, 1975; Luterman, 1976; Clark & English, 2014). *Informational counseling* includes educating a patient/family regarding the nature and impact of an ear related disorder, how different interventions work, and how different approaches might be effectively implemented. *Adjustment counseling* in audiology includes helping patients identify and address barriers associated with their condition(s) (e.g., internal: denial, stress, anxiety; external: learning

new information), and to help them reduce these barriers by supporting learning, self-efficacy, self-management, and the implementation of new skills in their daily lives.

Addressing patient's information and adjustment needs through the intentional use of effective communication/counseling ideally can help to foster therapeutic relationships, which in other allied healthcare settings has been shown to improve patient outcomes and promote adherence to clinical recommendations (Robinson, Callister, Berry, & Dearing, 2008; Zolnierek & DiMatteo, 2009). In audiology, studies have demonstrated that counseling can improve outcomes for adults using hearing technology (Meibos et al., 2017), including increasing average hours of hearing aid use (Aazh, 2016; Stephens, 1977), and reducing negative self-perceptions of hearing handicap (Brooks, 1979). Improvement in functional/psycho-social outcomes and long-term success of patients and families is central to the work of audiologists; however, evidence in the literature indicates despite recognizing the importance of counseling to outcomes, audiologists often do not implement it in a successful manner in the clinic. Studies in the past four years for example, have identified a lack of successful implementation of informational and supportive communication skills by both students and professionals, during audiologic assessment and routine hearing technology appointments (Ekberg, Barr, & Hickson, 2017; Ekberg, Grenness, & Hickson, 2014; Grenness, Hickson, Laplante-Lévesque, Meyer, & Davidson, 2015; Sciacca, Meyer, Ekberg, Barr, & Hickson, 2017; Muñoz, Ong, Borrie, Nelson, & Twohig, 2017). Numerous non-supportive interpersonal communication behaviors were observed in these studies, including: failing to empathically respond to psycho-social/emotional concerns of patients (Ekberg et al., 2014, 2017), dominating conversations (Grenness et al., 2015; Muñoz et al., 2017), using unwarranted complex language or technical jargon (Sciacca et al., 2017), and displaying frequent multi-tasking behaviors during appointment conversations

(Ekberg, Hickson, & Grenness, 2017). The supportive interpersonal communication skills absent from these studies, include skills such as listening carefully, acknowledging patient fears, or helping them to find their own sources "of motivation, and develop self-confidence in the face of change" (Clark & English, 2014, p. 2). Limited counseling training in audiology is likely a primary reason why audiologists fall short of meeting patient and family counseling needs/expectations.

Current practice guidelines in audiology lack sufficient depth related to counseling (American Academy of Audiology [AAA], 2006, 2012; ASHA, 2001, 2006), leaving expectations for audiologic counseling education and training vague. Counseling competencies, like other knowledge and skills audiologists are expected to learn (AAA, 1997; Council for Clinical Certification in Audiology and Speech-Language Pathology of the American Speech-Language-Hearing Association [CCC-ASLP], 2012), need intentional instruction for acquisition to occur. Audiologists recognize the importance of counseling and want more training; however, recent evidence suggests many do not receive enough training within graduate training programs (Meibos et al., 2017; Muñoz, Price, Nelson, & Twohig, 2017). The field of audiology needs a more intentional and structured approach to improving counseling education and training, and a "...shift in perspective is necessary for [the] next generation of clinicians to view counseling as a critical element of their professional identity..." (Erdman, 2013, pp. 180-181).

Regardless of previous training experiences, both audiology students and professionals have reported interest in receiving counseling training that will help them to better meet the needs of patients and families they serve (Meibos et al., 2017; Muñoz, Landon, & Corbin-Lewis, 2017; Whicker, Muñoz, & Schultz, 2018). Without careful attention to how counseling is described in our field, it is unlikely that audiology education or training will be structured in

ways that lead to successful implementation of counseling skills. Having consistent counseling terminology, and clearer expectations regarding the audiologist's role, can help guide training related to knowledge, skills, and attitudes needed for effective audiologic counseling. Therefore, the purpose of this study was to identify through expert consensus, the knowledge, skills, and attitudes that are important for audiologists to possess to provide effective counseling in practice**.**

METHOD

This study used a modified electronic Delphi (e-Delphi) survey method/technique. The Delphi technique is considered an appropriate methodology to use when (a) subjective opinions are needed on a certain topic or area where consensus is lacking, (b) participants are geographically dispersed and unable to meet in person, and (c) when anonymity can encourage more candid feedback (Keeney, Hasson, & McKenna, 2011; Linstone & Turoff, 1975). Delphi studies often employ multiple rounds of surveys to solicit feedback from a panel of informed or expert individuals, regarding their opinions on specific issues or concerns until consensus has been reached (Hsu & Sanford, 2007a; Vázquez-Ramos, Leahy, & Hernández, 2007). Modified Delphi studies differ from classical techniques, in that they allow for the modification of items or issues to be discussed with panel members (Keeney et al., 2011). This study was modified by incorporating both a traditional open-ended first round and the inclusion of pre-selected items considered relevant during the second round of the study. An e-Delphi approach was deemed appropriate for this study because participants were recruited from various geographic locations throughout the world. The modified e-Delphi survey process used in this study was adapted from recommendations provided by both Vazquez et al. (2007, p. 113) and Keeney et al. (2011, p. 66). Prior to recruiting participants, a study protocol was approved by the Institutional Review Board

(IRB) at Utah State University (USU), Logan, Utah. This study was conducted over a period of approximately two months, from January to March 2018.

Panel Selection

Most Delphi studies utilize purposive recruitment of panel members who possess: (a) knowledge and experience with the issues under investigation, (b) the capacity and willingness to participate, (c) sufficient time to participate, and (d) effective communication skills (Adler & Ziglio, 1996). Selection for this study involved contacting 60 professionals with extensive experience in the provision or research of audiologic counseling, including research audiologists, research speech-language pathologists, clinical audiologists, and audiologic counseling course instructors. Personal email invitations were sent with priority given to researchers who had a significant history of publications on the subject (e.g., textbooks, book chapters, peer-reviewed articles, trade publications, conference proceedings, presentations, seminars/trainings, etc.). The recruiting process took 5 weeks and included contacting all 60 professionals to recruit at least 30 participants. To account for possible attrition between rounds, a target sample of 30 experts was chosen to stay within the recommended expectations of 10 to 15 panel members for a homogenous panel (Bardecki, 1984; Clayton, 1997; Hsu & Sandford, 2007b).

Survey Development

Recruitment and communication with panel members was completed using the first author's email, and all data and information from panelists in this study was collected using the cloud-based Qualtrics Research Suite hosted by USU. No previous research had been conducted to identify the knowledge, skills, and attitudes that are important for audiologists to possess to

provide effective counseling in all areas of audiologic practice; therefore, three new survey instruments were developed for this study.

Round 1 instrument. The first survey was designed to help recruit panelists, gather demographic information about the panel, and to generate items for inclusion and rating in the Round 2 instrument. The response section included requests for recruits to provide their name and preferred email address, to complete a short 14-item demographic form, and to respond to three open-ended prompts. The demographic form asked panelists to provide the following information: gender, age, race, geographic location, highest level of education, professional field of practice, employment status, professional responsibilities, employment setting, extent of their professional publications related to audiologic counseling, number years working with individuals and families affected by auditory/ vestibular disorders, graduate audiologic counseling course teaching status, graduate audiologic supervising status, and perceived level of experience related to audiologic counseling. The open-ended prompt sections that followed the demographic form, encouraged panelists to list as many counseling knowledge, skill, or attitudinal items they believed were important for audiologists to possess. Definitions and example items were provided to encourage participants to respond appropriately. For example, the counseling skills prompt included the following definition and example items: “counseling skills refer to interpersonal communication abilities of audiologists during interactions with patients, and how they assess for and address barriers that patients experience. In this context, skills may include the ability for audiologists to: (a) attentively listen, (b) ask open-ended questions, (c) discuss realistic expectations, etc.”

Round 2 instrument. The second survey provided participants with the total number of responses from Round 1 and a brief description regarding how items in Round 2 were generated.

Items in this survey were derived from a content analysis of items generated in Round 1, and from a series of 60 pre-selected items (18 knowledge, 32 skills, and 10 attitudinal items) previously generated by the first and second authors, consistent with evidence based counseling competency elements found in the evidence-based professional counseling and audiologic counseling literature (ASHA, 2001, 2006; Blonna & Watter, 2005; Burnard, 1999; Harris, 2009; Ivey, Ivey, & Zalaquett, 2017; Meier & Davis, 2011; Rollnick, Miller, & Butler, 2008; Swank, Lambie, & Witta, 2012) (see appendix for final items). Content validity of these pre-selected items was addressed by having selected items consistent with evidence-based sources. More information regarding the Round 1 content analysis process is discussed in procedures. The response section of this instrument included another request for panelists to provide their name, so the first author could send them their individual results from Round 2 prior to completing Round 3. The remainder of the response section asked panel members to rate the provided competency items using a scale of importance (1 = Not at all important, 2 = Low importance, 3 = Slightly important, 4 = Moderately Important, 5 = Very Important, 6 = Extremely Important), to the extent they believed each item was important for audiologists to possess to provide effective counseling.

Round 3 instrument. The final survey provided participants with the response rate from Round 2 and instructed panel members to compare their individual responses to summative group statistics from Round 2. The response section asked each panel member to re-rate all Round 2 items again the same way, or to change their ratings based on the group information provided.

Procedures and Analyses

Round 1 procedures. The response rate and demographic information submitted by the expert panelists during Round 1 were summarized using descriptive statistics. To complete the content-analysis, responses were exported from Qualtrics into Microsoft Word and Excel documents and reviewed to identify sub-themes and to separate and expand responses to generate single item statements. For example, if a response had two or more relevant items, such as "Identifying pertinent communication and adjustment problems," two separate item statements were generated (i.e., "identifying pertinent communication problems" and "identifying pertinent adjustment problems"). Other items were also expanded as necessary (e.g., if a panelist wrote "all of those listed above," these statements were expanded into 3-4 individual item statements, based on the number of sample items provided to the participant within that section of the survey). The wording of each statement was then further modified to generate items that could complete the following three statements related to the broader theme in context: (a) "It is important for audiologists to have knowledge of… *knowledge item,"* (b) "It is important for audiologists to have the ability to…*skills item*," and (c) "It is important for audiologists to… *attitudinal item.*" After this initial process of separation and expansion, the text for each competency section was copied and pasted into the NVivo 11 Pro Suite, where word maps were generated for each of the competency sections to highlight specific themes where similar words were used by panel members.

Once the word maps were generated, all items were then condensed and coded by the first author, in Microsoft Excel, to eliminate redundancy and to identify items that were consistent with or differed from the 60 pre-selected items. For an example of how this condensing process was completed: 18 open-ended responses were condensed under the pre-selected sub-theme item of *counseling theories*. Of these, 12 panelists used only the words

"counseling theories," and the remaining 6 included responses such as "Counseling theories (cognitive, behavioral, humanistic/affective, integrative)" or "counseling theories related to audiologic practice." After condensing was completed, the first and second authors met together to further refine and eliminate any duplicate/redundant items. Both reached verbal consensus regarding what items agreed with the pre-selected evidence-based competency items as well as any new items to be included in the Round 2 instrument. New items generated by fewer than three panel members (e.g., "learning theories" was submitted as a knowledge item by one panel member), or items that did not match the definition of the section as determined by the reviewers, were removed from the study.

Round 2 procedures. Participants who completed the Round 1 instrument were sent an email with a new survey link and given 12 days to complete the Round 2 instrument. Reminder emails were sent to panelists who had not responded within five days, and within one day of the closing date. An extension of two days was provided for one panel member to complete Round 2. At the end of Round 2, group means, standard deviations, and frequency distributions of each item were calculated using Qualtrics. Other analyses completed using Microsoft Excel and SPSS, included measures of Cronbach's alpha reliability coefficients to measure the degree of internal consistency of items in each competency area (i.e., knowledge items, skills items, attitudinal items), central tendency (median and mode), and levels of dispersion (inter-quartile range).

Round 3 procedures. Participants who completed the Round 2 instrument were sent an email with a copy of their individual Round 2 responses, group statistics from Round 2, and a survey link to complete the Round 3 instrument. They were given 12 days to complete the final round of the study anonymously, with the same email reminder schedule as outlined in Round 2. An extension of two days was provided for two panel members to complete this round. All

analyses completed in Round 2 were repeated after Round 3 for comparison.

Consensus definition. For this study, the concept of consensus was considered a "condition of homogeneity or consistency of opinion among the panelists" (Graham, Regehr, & White, 2003, pp. 1152-1153). Consensus level for each item in this study was equated with items having at least 70% of the panel members rating an item as *very* or *extremely important* (i.e., a score of 5-6 on Likert scale). An interquartile range (IQR) of less than or equal to 1.0 was also chosen based on similar Delphi studies (Alexandrov, Pullicino, Meslin, & Norris, 1996; Raskin, 1994; Rayens & Hahn, 2000). Although no standard scientific threshold of consensus level exists (Keeney et al., 2011), studies in allied healthcare research have suggested that 70% is a strong cut-off point for measuring consensus (Sumison, 1998), including rating clinical skills of importance (McIlrath, Keeney, McKenna, & McLaughlin, 2010; McKenna, Hasson, & Smith, 2002). Items following Round 3 that did not meet the consensus level criteria were discarded from the final list of competency items.

RESULTS

Participants

A total of 33/60 recruits responded to the Round 1 invitation for a recruitment response rate of 55% (see Table 1 for summary panel characteristics). Responses came from professionals living in the United States, Australia, Canada, Denmark, and South Africa. All reported a white racial background. Most of the panel (>70%) were female, worked in the field of audiology, and in a university setting. Thirty panelists reported their highest level of education as a doctoral degree (i.e., AuD, PhD, EdD), and for the remaining three, a master's degree (i.e., MA, MS,

MEd) When asked to report their age, thirty-two responses ranged between the ages of 32 and 83 years, with a median age of 57.5 years. The number of years panel members reported working with individuals and families affected by auditory/vestibular disorders, ranged from 0 to 60 years, with a median number of 30 years. Professional responsibilities reported included those of teaching (85%), research (73%), administration (42%), clinic (33%), consulting (9%), and other activities such as service, textbook writing, executive directing, and project management.

Fifteen (46%) panel members reported they were currently teaching a graduate audiologic counseling course, and of those, six reported they had cumulatively taught a course between 1-9 years, five reported between 10-19 years, and four reported between 20-35 years. Of eighteen (54%) panel members who reported they were not currently teaching a counseling course, nine provided no details regarding their previous experience, five reported that they had previously taught a course between a cumulative number of 1-5 years, two reported a cumulative number of 10 years, one reported 10 years of teaching speech-language pathology students, and one reported they had previously "taught counseling as part of other courses, but not… as a dedicated course."

Of eight panel members (24%) who reported they were currently providing supervision to graduate audiology students, three reported they had cumulatively supervised students between 8-20 years, four had cumulatively supervised students between 25-32 years, and one reported that they supervised, but could not "sign off on hours." Of the remaining twenty-five (76%) panel members who reported they were not currently providing supervision to audiology students, two reported that had never previously supervised, six reported they had supervised previously between 1-5 years, seven reported between 6-20 years, and six reported between 20-50 years.

The last item of the demographic form asked panel members to rate their personal knowledge and experience related to audiologic counseling. One panel member rated their experience as Novice (3%), five members as Intermediate (15%), seventeen as Advanced (52%), and ten as Expert (30%).

Round 1

In response to the open-ended prompt questions in Round 1, a total of 338 knowledge, 291 skills, and 190 attitudinal items were generated (819 total). Word maps of each section were generated, and specific words were removed [e.g., any word less than four letters (a, an, the, and, etc.)] to better represent common words and themes found most frequently within each section (see Figure 1 for an example of the Attitudinal section).

During the content analysis of items, the first and second authors revised and expanded one pre-selected knowledge item into two items (i.e., "The WHO ICF" item to "functional impact" and "psycho-social impact of auditory/ vestibular disorders") and combined redundant items generated by the panel for a total of 67 items. Of these, 54 were consistent with the 60 pre-selected items and 13 were new. Five preselected items that were not identified or generated by the panel were added by the reviewers (i.e., knowledge item #9; skills items #7 and #28; attitudinal items #10 and #13), bringing the total number of revised items to be rated in the Round 2 instrument to 72 (21 knowledge items, 38 skills items, and 13 attitudinal items; see appendix).

Rounds 2 and 3

A total of 32 panel members completed the Round 2 instrument for a response rate of 97% (32/33). Twenty-eight responses were recorded for Round 3; however, the recorded IP addresses in Qualtrics revealed that one panel member had completed the final round twice. Only

their first response was included for analysis, making the response rate for Round 3 84% (27/32). To estimate the internal consistency of the items rated within each competency area, Cronbach's alpha reliability coefficients were computed after Rounds 2 and 3. The results indicated high internal consistency of the items rated within each competency area for both rounds (see Table 2).

Following the consensus level definition outlined previously, 64 (89%) items rated by the panel members after Round 3 met the criteria (16/21 knowledge, 35/38 skills, and 13/13 attitudinal items). Of the 8 items that did not meet final consensus, seven were generated by the panel (consistent with the pre-selected list) and one was an added pre-selected item (skills item #28). Of the 13 new items generated by the panel (knowledge items #20 and #21; skills items #3, #5, #33-35, and #37-38; attitudinal items #2, #4, and #11-12), all met final consensus after Round 3 (see Tables 3-5).

Between these rounds, one knowledge item (#17) moved into the consensus range (IQR change from 2.0 to 1.0) and one knowledge item (#13) was lost (IQR change of 1.0 to 2.0) (see Table 3). No items changed consensus status between rounds in either of the skills (Table 4) or attitudinal (Table 5) sections. Items in Tables 3-5 are listed in priority of strongest final consensus met to least following Round 3.

DISCUSSION

The purpose of this study was to identify counseling competencies (i.e., knowledge, skills, and attitudes) that are needed for audiologists to provide effective counseling in practice. The expert panel members who participated in this study included professionals considered to be

experts in audiologic counseling, and collectively they provided information leading to an understanding of what types of counseling competencies can play an important role in helping individuals and families negatively impacted by hearing loss and other ear related disorders. Sixty-four counseling competency items met consensus in this study and in general lined up well with the 60 pre-selected items generated by the authors. Many of these counseling competencies provide an important level of detail that is missing from the audiologic clinical standards established by professional associations (i.e., AAA, 1997; CCC-ASLP, 2012). Within the 13 attitudinal items specifically, none fell below 80% of panel members rating an item within the consensus criteria. This suggests counseling experts in this study agree with the recent paradigm shift occurring in the field (Cherry, 2015; English, 2005; Erdman, 2013; Hickson, 2012; Meibos et al., 2017; Schow & Nerborne, 2013; Sharma, 2016; Singh et al., 2016), placing patients/families at the center of audiologic services to improve outcomes (see Figure 1).

Training Implications

There were a total of eight knowledge and skills items that did not meet consensus after Round 3. These items revealed uncertainty among experts regarding the application of theoretical knowledge and elements of patient-centered relationships in audiologic practice.

Theoretical Knowledge

Theoretical knowledge items generated in this study included knowledge related to the grieving process (Kübler-Ross, 1969), counseling theories, behavior change theories, family dynamics theories, and human development theories. A fascinating finding in this study was that none of these theory related items were found to meet final consensus (see Table 4). Although 44-74% of the panel rated these items as *very important* or *extremely important* after Round 3, and consensus was met regarding knowledge of “evidence-based counseling techniques,” a lack

of consensus reflects uncertainty in our field regarding the importance of foundational theory information in audiologic education and practice.

Counseling theories. In a recent syllabi review of audiologic counseling courses (Whicker et al., 2017), counseling theories were the most common content area included in the syllabi reviewed. When it comes to counseling in healthcare, Blonna and Watter (2005, p. 19) suggest "[a] counselor needs not only to be proficient in using the skills of counseling but also to have knowledge of theories used to explain, and change, behavior." A similar description from Meier and Davis (2011, p. 64) explains: "theory provides a basis for making-choices and increases the likelihood that they will be of help to [a] client," and "beginning counselors should become familiar with the basic theory and practice of many approaches. Only then can [they] make the informed choices necessary to create, integrate, and structure [a] method with [a] particular client." Current counseling practices and standards in audiology do not rely on a shared fundamental understanding based on evidence, which may explain why for decades a lack of consensus regarding counseling has prevailed.

Behavior theories. Many researchers have been exploring the application of health behavior change theories within audiology, including in the areas of hearing-conservation (Sobel & Meikle, 2008), audiologic rehabilitation (Coulson, Ferguson, Henshaw, Heffernan, 2016; Ferguson, Coulson, Henshaw, & Heffernan, 2016; Laplante-Lévesque, Hickson, & Worrall, 2013; Meyer, Hickson, Lovelock, Lampert, & Khan, 2014; Ridgway, Hickson, & Lind, 2015, 2016; Saunders, Frederick, Silverman, & Papesh, 2013), and vestibular rehabilitation (Barker, 2015). Audiologists work daily with patients whose hearing health or adjustment to ear related disorders could be greatly improved by behavior change. If audiologists do not receive training regarding how to promote health behavior change, it is unlikely they can move toward shared

decision making or motivating change. Evidence of motivational counseling techniques, that are rooted in behavior change theories, have been shown to improve audiologic outcomes (Meibos et al., 2017), but more especially when expert training has been attained.

Patient-Audiologist Relationships

Several counseling skills items maintained high consensus in this study (e.g., skills items #1, #12, #31, #34, and #35; see Table 5) and were consistent with supportive interpersonal communication skills promoting therapeutic relationships in audiology. These items were also found to be consistent with the literature, citing the need for audiologists to include more emotionally focused communication in their service delivery (Ekberg et al., 2014; Erdman, 2013). In allied healthcare professions, therapeutic relationships can be defined as helping relationships based on mutual trust and respect, nurturing hope, being sensitive to differences, and assisting with physical, emotional, and spiritual needs of a patient (Pullen & Mathias, 2010). The three skills items that did not meet consensus (i.e., #16, #25, and #28) appeared to conflict with the other items promoting therapeutic relationships.

The first of these items was the one pre-selected item added by the reviewers that did not meet consensus (see Table 3), regarding the ability to "ask permission" before informing or moving on. According to Rollnick et al. (2008, pp. 91-92), informing or moving on to the next stage of a shared-agenda in healthcare settings without permission can "elicit resistance when [a] patient is unready or unwilling; [whereas, asking for permission] directly honors and reinforces patients' autonomy and active involvement in their own health care…lowers resistance…[and] often makes the patient more willing to [listen]." Audiologists tend to move quickly from hearing assessment to intervention within appointment conversations, ignoring shared-agenda approaches to the rehabilitation process that can influence strong emotional responses/concerns

and may lead to patient ambivalence (Ekberg et al., 2014).

Another skills item (#25) that did not meet consensus indicated panel members were less certain whether it was important for audiologists to assist a patient/family in working toward taking on an advocacy role. This item is essentially describing the process of helping patients to take responsibility for their own personal hearing, communication, vestibular, or other related needs. Although the field of audiology has adopted several extrinsic motivation tactics to convince patients to change their hearing related health behaviors (e.g., incentives, manufacturer discounts/ promotions, celebrity endorsements, etc.), research has demonstrated that sustained changes in hearing health behavior are more often a result of intrinsic motivation, and seldom directly influenced by audiologists (Ridgway et al., 2015, 2016). More research is warranted to explore how the development of a patient/family advocacy role may fall within the shared-responsibility of audiologists.

The final item not meeting consensus in the skills section (#16), dealt with the ability to appropriately challenge a patient/family. A recent survey of pediatric audiologists yielded a contrasting result (Meibos et al., 2016). A question in their study asked audiologists whether they had received and or desired counseling training regarding challenging a "parent who denies hearing loss." Of the fourteen counseling training items the audiologists rated, this was the highest rated item where more training was desired (265/336; 79%). Other instances an audiologist might feel the need to challenge a patient include when a patient is faking a hearing loss, or when a patient refuses to adhere to recommendations that may have critically negative impacts on their own or others' health or quality of life (e.g., medical referral, psychological referral, etc.).

Study Limitations

Consensus results of a Delphi study do not always establish a best answer to a problem or issue being studied; rather, they suggest that an expert panel has come to an agreement regarding a problem or issue (Keeney et al., 2011). The design limitations of this study included the potential bias in the phrasing of instrument questions, bias in the self-report data collection, and pressure to conform through group decision making (Stewart, 1987; Woudenberg, 1991). Three panel members reported never having worked with or provided clinical audiology related services. Panel members provided representation from only five countries, missing experts from other countries where additional audiologic counseling research has been conducted in the literature. Most of the panel were experts in audiologic rehabilitation, with very few if any having expertise in hearing conservation or vestibular rehabilitation.

Future Research

Evidence in the audiologic counseling literature, and this study, suggest there has been a significant lack of a foundational structure, regarding the vision and definition of what audiologic counseling is or what it should look like in practice. As the scope of this problem has become more relevant, audiology researchers and professional associations have begun exploring ways to implement patient-centered approaches and the development of new competency measures into audiologic education (e.g., the ASHA 2016 AuD Education Summit, www.asha.org/Academic/2016-AuD-Education-Summit/; CCC-ASLP, 2018); however, future research is needed to focus on the improvement in audiologic counseling specifically. To achieve this, there is a need to more systematically structure counseling education in audiology.

Student clinicians begin developing a mindset for clinical care from the time they enter training. Students not only need to learn new technical skills, they need to learn how to develop effective working alliances with their patients (Bordin, 1979; Gelso & Hayes, 1998), engaging them in their care, and guiding them as they learn how to cope and manage their ear related disorders in their daily lives. Although programs may not feasibly be able to provide counseling curricula during the first year of clinical training, clinicians can begin learning essential attitudes and skills through clinical instruction. Research is needed to guide training programs related to implementation of learning strategies in both the classroom and the clinic. Importantly, this includes addressing continuing education needs of instructional faculty and clinicians. Empirical studies focusing on the outcomes of patients, families, and providers, are additionally needed with a specific emphasis on audiologic counseling.

There is a saying that alludes to the idea that: when performance has been measured and reported, the rate of improvement accelerates. The identification and measurement of professional counseling competencies has been gaining attention in professional counseling (Bhat, 2005; Eriksen & McAuliffe, 2003), including the development of psychometric measures to assess competencies during training (Swank et al., 2012). Looking at audiologic counseling trends from among different populations and exploring the application of professional counseling research within empirical studies, together will help future researchers and clinicians in the development of standardized/ easy-to-use clinical supervision measures, supporting an evidence-based structure and framework for the training, acquisition, and maintenance of counseling competencies within graduate training programs.

Conclusion

Important counseling knowledge, skills, and attitudes were identified in this study that have relevant implications for audiologic practice. Future research is needed to assist moving the field forward to develop a structural framework that can support the implementation of these competencies within clinical training. including the need to develop ways to measure their efficacy in practice. The results of this study are the first step toward improving functional/psycho-social outcomes and long-term success of patients/families in audiology, with an intentional focus of effective counseling competencies at the forefront of all audiologic practices.

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Table 1

Panel member characteristics (N = 33)

Characteristic	*n*
Gender	
Women	24
Men	9
Geographic location	
United States (Northeast = 5 | Midwest = 6 | South = 8 | West = 5)	24
Australia (Queensland = 3 | Victoria = 1 | Southern = 1 | Western = 1)	6
Canada (Ontario)	1
South Africa (Western Cape)	1
Denmark	1
Professional field	
Audiology	25
Speech-language pathology	5
Audiology & speech-language pathology	2
Speech language pathology & deaf education	1
Employment status	
Full time	22
Part time	6
Semi-retired	3
Retired	1
PhD student	1
Employment setting	
University	20
University & other (hospital = 2 | private practice = 1 | research organization = 1)	4
Private practice	3
Research organization	2
Other (industry = 1 | non-profit = 2 | consulting = 1)	4
Approximate number of audiologic counseling related publications	
None	2
1 to 5	10
6 to 10	5
11 to 15	1
More than 20	14
Rating of personal knowledge and experience related to audiologic counseling	
Novice (limited knowledge)	1
Intermediate (practical application)	5
Advanced (applied theory)	17
Expert (recognized authority)	10

Table 2

Cronbach's Alpha Reliability Coefficients Between Rounds

Competency sections	Round 2 (N = 32) Cronbach's α	Round 3 (N = 27) Cronbach's α
21 Knowledge items	.895	.923
38 Skills items	.944	.946
13 Attitudinal items	.885	.875

Table 3

Knowledge Items: Consensus Results

Item		Round 2 (*N* = 32) %	Round 2 (*N* = 32) IQR	Round 3 (*N* = 27) %	Round 3 (*N* = 27) IQR	Between round status
Consensus met						
7.	The psycho-social impact of auditory/vestibular disorders	94	0	96	1	Stable
8.	Developing therapeutic relationships (e.g., therapeutic alliance, helping alliance, working alliance, etc.)	91	1	96	1	Stable
20.	Reactions to the plight of others (e.g., pity, sympathy, empathy, compassion)	94	1	93	1	Stable
2.	Evidence-based counseling techniques (e.g., motivational interviewing [MI], acceptance and commitment therapy [ACT], group counseling, etc.)	81	1	89	1	Stable
6.	The functional impact of auditory/vestibular disorders	88	0	89	1	Stable
10.	How to educate a patient/family effectively related to external barriers	81	1	89	1	Stable
12.	How to educate a patient/family effectively related to internal barriers	88	1	89	1	Stable
14.	Emotions	84	1	89	1	Stable
15.	Coping strategies	94	1	89	1	Stable
16.	Stereotypes/stigma surrounding auditory/vestibular disorders	88	1	89	1	Stable
9.	External barriers a patient/family may experience that interferes with the rehabilitation process (e.g., lack of knowledge)	84	1	85	1	Stable
11.	Internal barriers a patient/family may experience that interferes with the rehabilitation process (e.g. fears, thoughts)	94	1	85	1	Stable
18.	The use of appropriate culturally and linguistically diverse communication strategies	84	1	85	1	Stable
19.	Referring to a mental health professional (recognizing professional/scope of practice boundaries)	91	1	85	1	Stable
21.	Clinical Counseling Resources (e.g. assessment tools, screening tools, questionnaires, etc.)	84	1	85	1	Stable
17.	The impact of sociocultural diversity	75	2	82	1	Gained
Consensus not met						
13.	The grieving process	78	1	74	2	Lost
3.	Theories of behavior change (e.g., health belief model, social learning, self-efficacy, trans-theoretical or stages of change, reasoned action, etc.)	66	2	70	2	Stable
4.	Family dynamics theories (e.g., family systems, family development, social exchange, ecological, etc.)	63	2	59	2	Stable
1.	Counseling theories (e.g. person-centered, behavioral, cognitive behavior, humanistic, etc.)	59	1	56	2	Stable
5.	Child and human development theories (e.g., psycho-sexual, psycho-social, behavioral, cognitive, attachment, social learning, sociocultural, etc.)	41	1	44	1	Stable

Table 4

Skills Items: Consensus Results

Item		Round 2 (*N* = 32) %	Round 2 (*N* = 32) IQR	Round 3 (*N* = 27) %	Round 3 (*N* = 27) IQR	Between round status
Consensus met						
1.	Empathically listen (e.g., open or empty one's mind, listen with full attention and focus, avoid judgmental thoughts, etc.)	100	0	100	0	Stable
7.	Identify patient/family coping strategies (flexibility/rigidity)	94	1	100	1	Stable
12.	Validate patient/family thoughts, feelings, or experiences (e.g., normalizing, extending understanding, warmth, encouraging them to see they can still act, etc.)	100	1	100	0	Stable
17.	Collaborate with a patient/family to establish a plan of shared priorities (e.g., shared agendas, decisions, goals, etc.)	97	0	100	0	Stable
31.	Assess patient/family understanding	100	0	100	0	Stable
34.	Involve/Engage third-parties (e.g., family members, caregivers, spouses, significant others, peers, social network, etc.)	100	1	100	1	Stable
35.	Establish a therapeutic relationship (rapport, trust, mutual understanding)	100	0	100	0	Stable
37.	Identify strengths of a patient/family	91	1	100	1	Stable
38.	Manage challenging conversations/situations (e.g., bad news, crisis situations, defensiveness, resistance, etc.)	91	0	100	0	Stable
6.	Identify patient/family emotions	91	1	96	1	Stable
9.	Reflect, paraphrase, or restate patient/family thoughts, feelings, experiences using own words	97	1	96	1	Stable
11.	Use door openers (e.g., tell me more about…)	97	1	96	1	Stable
13.	Resist the righting reflex (e.g., setting the priorities/agenda or desiring to persuade/problem solve for a patient/family)	97	1	96	1	Stable
14.	Ask appropriate questions (e.g., open-ended, closed-ended, funneling, clarifying, etc.)	97	1	96	0	Stable
27.	Maintain objectivity with a patient/family, even with those who are less adherent to clinical recommendations or whose decisions conflict with audiologists' professional judgment	94	1	96	1	Stable
29.	Individualize results, implications, and recommendations to the patient/family	97	1	96	0	Stable
30.	Use simple and easy to understand language	100	0	96	0	Stable

(*table continues*)

Item		Round 2 (*N* = 32) %	Round 2 (*N* = 32) IQR	Round 3 (*N* = 27) %	Round 3 (*N* = 27) IQR	Between round status
2.	Use nonverbal communication appropriately (e.g., body position, posture, eye contact, physical distance, space, facial expressions, touch, etc.)	100	1	93	1	Stable
4.	Use appropriate vocal qualities (e.g., tone, inflection, rate, volume of speech, etc.)	88	1	93	1	Stable
10.	Summarize large amounts of information into meaningful statements	94	1	93	1	Stable
18.	Help a patient/family problem-solve anticipated problems	91	1	93	1	Stable
26.	Serve as an unconditional source of support for all patients/families, both traditional and non-traditional	81	1	93	1	Stable
36.	Structure a welcoming counseling environment	100	1	93	1	Stable
3.	Attend to nonverbal communication of the patient/family appropriately	100	1	89	1	Stable
8.	Use minimal encouragers appropriately (e.g., head nods, uh-huh, directly restate/mirror patient/family statements using their words, etc.)	94	1	89	1	Stable
19.	Problem-solve concerns with a patient/family	91	1	89	1	Stable
22.	Identify internal barriers with a patient/family (e.g. fears)	88	1	89	1	Stable
32.	Recognize the need for referral to other professionals	91	1	89	1	Stable
33.	Use silence or breaks in communication appropriately	88	1	89	1	Stable
20.	Identify external barriers with a patient/family (e.g. lack of knowledge)	88	1	85	1	Stable
15.	Discuss realistic expectations	84	1	82	1	Stable
21.	Structure interpersonal communication to help a patient/family regarding external barriers	78	1	82	1	Stable
24.	Identify needs related to networks of patient/family support (e.g., spouse, family, friend, others who have similar experiences, etc.)	88	1	82	1	Stable
5.	Attend to vocal qualities of the patient/family	81	1	78	1	Stable
23.	Structure interpersonal communication to help a patient/family regarding internal barriers	88	1	78	1	Stable
Consensus not met						
25.	Work toward the patient/family taking on an advocacy role	72	2	74	2	Stable
28.	Ask permission before providing information or moving on (e.g., "I've finished discussing the hearing test results, can I move on to what they mean and what we can do about it? Or do you have more questions?")	66	2	67	2	Stable
16.	Appropriately challenge a patient/family member	72	2	59	2	Stable

Table 5

Attitudinal Items: Consensus Results

Item		Round 2 (*N* = 32) %	Round 2 (*N* = 32) IQR	Round 3 (*N* = 27) %	Round 3 (*N* = 27) IQR	Between round status
Consensus Met						
1.	Possess empathy toward a patient/family affected by auditory/vestibular disorders	100	1	100	0	Stable
3.	Respect different patient/family world views/values	100	0	100	0	Stable
5.	Value importance of patient/family engagement in the intervention process	100	0	100	1	Stable
13.	Reject stereotypes/stigma toward a patient/family affected by auditory/vestibular disorders	94	1	100	1	Stable
2.	Possess a genuine interest in and concern for a patient/family affected by auditory/vestibular disorder	97	0	96	0	Stable
6.	Desire to develop a working alliance with a patient/family	97	1	96	0	Stable
9.	Desire to help a patient/family overcome external/internal barriers they experience, related to their auditory/vestibular disorders	84	1	96	1	Stable
7.	Desire to focus on patient/family needs with no hidden agenda	91	1	93	1	Stable
8.	Desire to see a patient/family succeed in overcoming the negative functional, social, and emotional impacts of their disorders	88	1	93	1	Stable
12.	Be willing to admit uncertainty	91	1	93	1	Stable
4.	Value their role as counselors to assist patients/families in the intervention process	94	1	89	1	Stable
11.	Desire to pursue learning opportunities related to audiologic counseling	88	1	89	1	Stable
10.	Desire to collaborate with counseling professionals (e.g., psychologists, marriage and family counselors, rehabilitation counselors, social workers, etc.)	81	1	85	1	Stable

Figure 1. Attitudinal word map (the words *possess*, *desire*, and words less than 4 letters removed).

Appendix

Revised and Final Competency Items Used in Rounds Two and Three

	COUNSELING KNOWLEDGE						
	Please rate the extent you believe each of the following counseling knowledge items is important: (1 = Not at all important, 2 = Low importance, 3 = Slightly important, 4 = Moderately Important, 5 = Very Important, 6 = Extremely Important)						
	It is important for audiologists to have a knowledge of...						
1	Counseling theories (e.g. person-centered, behavioral, cognitive behavior, humanistic, etc.)	1	2	3	4	5	6
2	Evidence-based counseling techniques (e.g., motivational interviewing [MI], acceptance and commitment therapy [ACT], group counseling, etc.)	1	2	3	4	5	6
3	Theories of behavior change (e.g., health belief model, social learning, self-efficacy, trans-theoretical or stages of change, reasoned action, etc.)	1	2	3	4	5	6
4	Family dynamics theories (e.g., family systems, family development, social exchange, ecological, etc.)	1	2	3	4	5	6
5	Child and human development theories (e.g., psycho-sexual, psycho-social, behavioral, cognitive, attachment, social learning, sociocultural, etc.)	1	2	3	4	5	6
6	The functional impact of auditory/vestibular disorders	1	2	3	4	5	6
7	The psycho-social impact of auditory/vestibular disorders	1	2	3	4	5	6
8	Developing therapeutic relationships (e.g., therapeutic alliance, helping alliance, working alliance, etc.)	1	2	3	4	5	6
9	External barriers a patient/family may experience that interferes with the rehabilitation process (e.g., lack of knowledge)	1	2	3	4	5	6
10	How to educate a patient/family effectively related to external barriers	1	2	3	4	5	6
11	Internal barriers a patient/family may experience that interferes with the rehabilitation process (e.g. fears, thoughts)	1	2	3	4	5	6
12	How to educate a patient/family effectively related to internal barriers	1	2	3	4	5	6
13	The grieving process	1	2	3	4	5	6
14	Emotions	1	2	3	4	5	6
15	Coping strategies	1	2	3	4	5	6
16	Stereotypes/stigma surrounding auditory/vestibular disorders	1	2	3	4	5	6
17	The impact of sociocultural diversity	1	2	3	4	5	6
18	The use of appropriate culturally and linguistically diverse communication strategies	1	2	3	4	5	6
19	Referring to a mental health professional (recognizing professional/scope of practice boundaries)	1	2	3	4	5	6
20	Reactions to the plight of others (e.g., pity, sympathy, empathy, compassion)	1	2	3	4	5	6
21	Clinical Counseling Resources (e.g. assessment tools, screening tools, questionnaires, etc.)	1	2	3	4	5	6

	COUNSELING SKILLS						
	Please rate the extent you believe each of the following counseling <u>skills</u> items is important: (1 = Not at all important, 2 = Low importance, 3 = Slightly important, 4 = Moderately Important, 5 = Very Important, 6 = Extremely Important)						
	It is important for audiologists to have a knowledge of...						
1	Empathically listen (e.g., open or empty one's mind, listen with full attention and focus, avoid judgmental thoughts, etc.)	1	2	3	4	5	6
2	Use nonverbal communication appropriately (e.g., body position, posture, eye contact, physical distance, space, facial expressions, touch, etc.)	1	2	3	4	5	6
3	Attend to nonverbal communication of the patient/family appropriately	1	2	3	4	5	6
4	Use appropriate vocal qualities (e.g., tone, inflection, rate, volume of speech, etc.)	1	2	3	4	5	6
5	Attend to vocal qualities of the patient/family	1	2	3	4	5	6
6	Identify patient/family emotions	1	2	3	4	5	6
7	Identify patient/family coping strategies (flexibility/rigidity)	1	2	3	4	5	6
8	Use minimal encouragers appropriately (e.g., head nods, uh-huh, directly restate/mirror patient/family statements using their words, etc.)	1	2	3	4	5	6
9	Reflect, paraphrase, or restate patient/family thoughts, feelings, experiences using own words	1	2	3	4	5	6
10	Summarize large amounts of information into meaningful statements	1	2	3	4	5	6
11	Use door openers (e.g., tell me more about…)	1	2	3	4	5	6
12	Validate patient/family thoughts, feelings, or experiences (e.g., normalizing, extending understanding, warmth, encouraging them to see they can still act, etc.)	1	2	3	4	5	6
13	Resist the righting reflex (e.g., setting the priorities/agenda or desiring to persuade/problem solve for a patient/family)	1	2	3	4	5	6
14	Ask appropriate questions (e.g., open-ended, closed-ended, funneling, clarifying, etc.)	1	2	3	4	5	6
15	Discuss realistic expectations	1	2	3	4	5	6
16	Appropriately challenge a patient/family member	1	2	3	4	5	6
17	Collaborate with a patient/family to establish a plan of shared priorities (e.g., shared agendas, decisions, goals, etc.)	1	2	3	4	5	6
18	Help a patient/family problem-solve anticipated problems	1	2	3	4	5	6
19	Problem-solve concerns with a patient/family	1	2	3	4	5	6
20	Identify external barriers with a patient/family (e.g. lack of knowledge)	1	2	3	4	5	6
21	Structure interpersonal communication to help a patient/family regarding external barriers	1	2	3	4	5	6
22	Identify internal barriers with a patient/family (e.g. fears)	1	2	3	4	5	6
23	Structure interpersonal communication to help a patient/family regarding internal barriers	1	2	3	4	5	6
24	Identify needs related to networks of patient/family support (e.g., spouse, family, friend, others who have similar experiences, etc.)	1	2	3	4	5	6
25	Work toward the patient/family taking on an advocacy role	1	2	3	4	5	6
26	Serve as an unconditional source of support for all patients/families, both traditional and non-traditional	1	2	3	4	5	6
27	Maintain objectivity with a patient/family, even with those who are less adherent to clinical recommendations or whose decisions conflict with audiologists' professional judgment	1	2	3	4	5	6

28	Ask permission before providing information or moving on (e.g., "I've finished discussing the hearing test results, can I move on to what they mean and what we can do about it? Or do you have more questions?")	1	2	3	4	5	6
29	Individualize results, implications, and recommendations to the patient/family	1	2	3	4	5	6
30	Use simple and easy to understand language	1	2	3	4	5	6
31	Assess patient/family understanding	1	2	3	4	5	6
32	Recognize the need for referral to other professionals	1	2	3	4	5	6
33	Use silence or breaks in communication appropriately	1	2	3	4	5	6
34	Involve/Engage third-parties (e.g., family members, caregivers, spouses, significant others, peers, social network, etc.)	1	2	3	4	5	6
35	Establish a therapeutic relationship (rapport, trust, mutual understanding)	1	2	3	4	5	6
36	Structure a welcoming counseling environment	1	2	3	4	5	6
37	Identify strengths of a patient/family	1	2	3	4	5	6
38	Manage challenging conversations/situations (e.g., bad news, crisis situations, defensiveness, resistance, etc.)	1	2	3	4	5	6

COUNSELING ATTITUDES

Please rate the extent you believe each of the following counseling <u>knowledge</u> items is important:
(1 = Not at all important, 2 = Low importance, 3 = Slightly important,
4 = Moderately Important, 5 = Very Important, 6 = Extremely Important)

	It is important for audiologists to have a knowledge of...						
1	Possess empathy toward a patient/family affected by auditory/vestibular disorders	1	2	3	4	5	6
2	Possess a genuine interest in and concern for a patient/family affected by auditory/vestibular disorder	1	2	3	4	5	6
3	Respect different patient/family world views/values	1	2	3	4	5	6
4	Value their role as counselors to assist patients/families in the intervention process	1	2	3	4	5	6
5	Value importance of patient/family engagement in the intervention process	1	2	3	4	5	6
6	Desire to develop a working alliance with a patient/family	1	2	3	4	5	6
7	Desire to focus on patient/family needs with no hidden agenda	1	2	3	4	5	6
8	Desire to see a patient/family succeed in overcoming the negative functional, social, and emotional impacts of their disorders	1	2	3	4	5	6
9	Desire to help a patient/family overcome external/internal barriers they experience, related to their auditory/vestibular disorders	1	2	3	4	5	6
10	Desire to collaborate with counseling professionals (e.g., psychologists, marriage and family counselors, rehabilitation counselors, social workers, etc.)	1	2	3	4	5	6
11	Desire to pursue learning opportunities related to audiologic counseling	1	2	3	4	5	6
12	Be willing to admit uncertainty	1	2	3	4	5	6
13	Reject stereotypes/stigma toward a patient/family affected by auditory/vestibular disorders	1	2	3	4	5	6