

Review

Communication between Audiologist, Patient, and Patient's Family Members during Initial Audiology Consultation and Rehabilitation Planning Sessions: A Descriptive Review

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Abstract

Background: Communication during clinical consultations is an important factor that facilitates decision-making by patients and family members. For clinicians, these interactions are opportunities to build rapport and to facilitate appropriate decision-making.

Purpose: This article presents the literature review of studies focusing on communication between audiologist, patients, and their family members during initial audiology consultations and rehabilitation planning sessions.

Research Design: A literature review was conducted.

Study Sample: The review included eight empirical studies.

Data Collection and Analysis: A systematic search of the CINAHL Complete, MEDLINE, and PsychInfo databases was used to identify relevant articles for review. Quality of the included studies was assessed using the Rating of Qualitative Research (RQR) scale.

Results: The average consultation length was 57.4 min (ranged 27.3–111 min), in which the mean length of case history discussion was 8.8 min (ranged 1.7–22.6 min) and the mean length of diagnosis and management planning was 29 min (ranged 2.2–78.5 min). Utterances spoken by audiologists were greater (about 51%) than patients (37%), whereas family members spoke the fewest utterances (12%) during interactions. Patients raised concerns (typically psychological in nature with negative emotional stance) about hearing aids in half of the appointments where hearing aids were recommended as the rehabilitation option. However, audiologists missed opportunities to build relationships as these concerns of patients were not typically addressed. Also, audiologists' language was associated with hearing aid uptake (i.e., patients were less likely to uptake hearing aids when audiologists used complex language).

Conclusions: The review highlights that audiologists dominate the conversation during audiology consultations and rehabilitation planning sessions. Audiologists did not take advantage of the opportunity to develop patient-centered communication and shared decision-making. Implications of these findings to both clinical practice and to audiology education and training are discussed.

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Key Words: audiology, clinical consultation, clinician-client communication, communication, conversation analysis, interaction analysis, patient-centered care, psychosocial concerns, shared decision-making

Abbreviations: CA = conversation analysis; RIAS = Roter Interaction Analysis System; RQR = Rating of Qualitative Research

INTRODUCTION

Collaborative partnership between patients, family members, and health professionals is central to fostering patient- and family-centered care (Epley et al, 2010). Effective communication between patients, family members, and practitioners in health-care settings leads to improved care and outcomes for patients (Epstein and Street, 2011). Effective communication requires practitioners to engage in conversation that helps patients understand their health and facilitate patients' involvement in their care. Practitioners can engage in conversations that are meaningful based on the patient's frame of reference (Street et al, 2011). Mutual participation in conversation facilitates shared decision-making and increases conversational reciprocity (Lown et al, 2009). Patients may benefit when practitioners actively listen and respond empathetically to feelings.

For health professionals, communication is an important part of our praxis and using appropriate language can help us develop rapport and working relationships with families. Successful communication will facilitate decision-making that is not based on a limited presentation of clinical options. In addition, clinician-patient communication may be linked to health outcomes (Street et al, 2009). For this reason, language and terminology use during consultations with patients with hearing loss and their family members needs to be carefully framed. In this manner, language has a framing function (Tannen, 1993); as such, the language used conceptualizes and provides perspective of how individuals organize, perceive, and communicate their reality. Therefore, the words we select convey our own views and more importantly affect our behavior. Moreover, successful communication with patients and their families is critical in building trust and developing good long-term working relationships (Ramachandran and Stach, 2013). Successful communication may be straightforward, but the practitioner must be cued into the patient's feelings, ideas, and expectations (Brown et al, 2001). To accomplish this type of communication, practitioners should use partnership-building behaviors such as open-ended questions, active listening, and expectant pauses (i.e., pausing while looking at the patient for the patient to continue speaking).

Studies of physician-patient communication have identified issues and analytical tools that are applicable across health-care professions (Levinson et al, 1997; Roter et al, 1997). The literature within the field of audiology is consistent with other health-care research

showing that professional care and patient-clinician communication are reported to influence hearing health decision-making and hearing health outcomes. For example, a large-scale survey has shown that hearing health-care professionals' attributes (e.g., knowledge, professionalism, empathy, creation of realistic expectations, explaining care, and quality of service) are linked to the success of hearing aid users (Kochkin et al, 2010). Another study has highlighted that factors related to patient-centered care and interaction influence the hearing aid purchase decision (Poost-Foroosh et al, 2011). Manchaiah et al (2016) reported a mismatch between patient and audiologist preference for patient-centered communication and care. Therefore, the authors recommended that the nature of relationships between patients and audiologists should be further investigated.

This article presents the results of a systematic investigation of aspects related to patient, family, and clinician communication during initial audiology consultation and rehabilitation planning sessions.

METHOD

A systematic literature search was conducted during October 2017 to May 2018 in the databases CINAHL Complete, MEDLINE, and PsychInfo. The systematic review adheres to the principles of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Protocols 2015 statement, which suggests 17 items when reporting systematic reviews and meta-analysis (Moher et al, 2015). Preferred Reporting Items for Systematic Reviews and Meta-Analyses Protocols prescribes a flow diagram describing the process in four phases, including identification, screening, eligibility, and inclusion (see Figure 1).

Search Strategy

A search strategy based on the Sample, Phenomenon of Interest, Design, Evaluation, and Research type tool was developed and used in this study. The Sample, Phenomenon of Interest, Design, Evaluation, Research type tool is reported to be effective in finding qualitative and mixed method research (Cooke et al, 2012). The key search words included ([audiology consultation] or [hearing rehabilitation consultation] or [clinician-client communication] or [clinical consultation] or [patient centered communication] or [shared decision-making]) and ([hearing loss] or [hearing impairment] or [significant other] or [audiologist]) and ((conversation analysis [CA]) or (interaction analysis)).

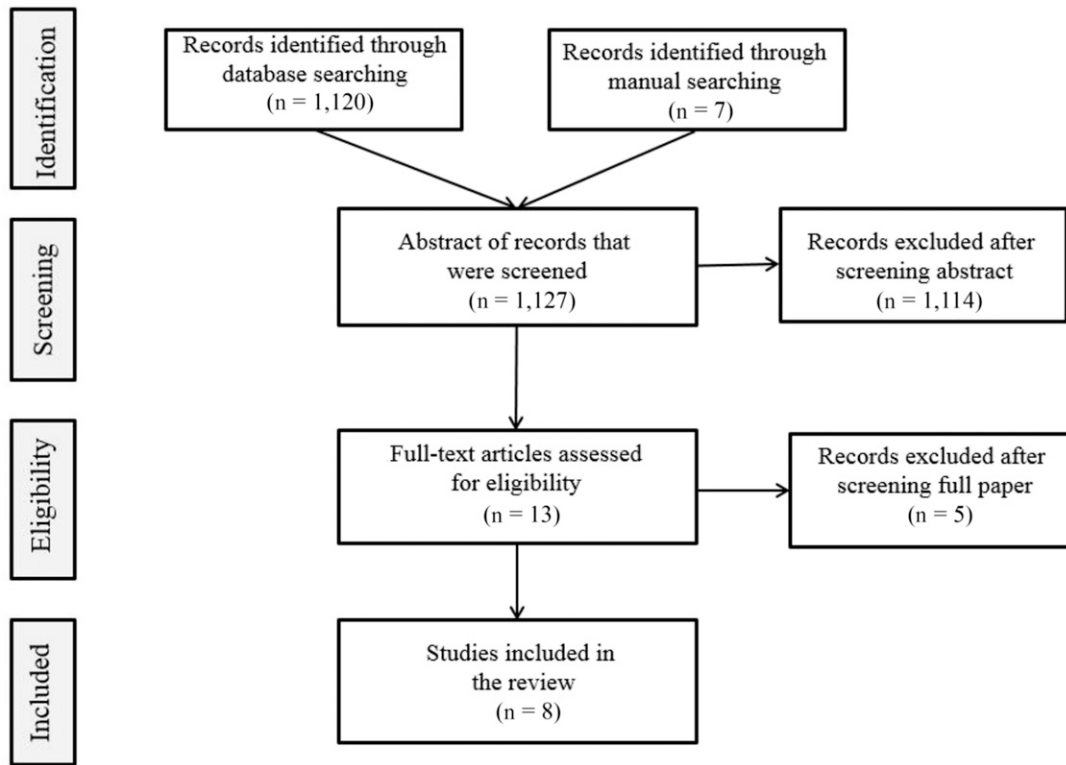


Figure 1. Flow diagram of the study identification, eligibility search, and inclusion process.

Inclusion Criteria

All articles published in peer-reviewed journals were included as long as they met the following inclusion criteria: (a) population—adults (18 yr or older) with hearing loss and their family members, (b) focus—communication during audiology consultation and rehabilitation sessions, (c) study type—any study design which is published in peer-reviewed academic journal, and (d) language—English.

A total of 1,120 articles identified through the electronic database search and seven additional articles were found through manual search. After the abstract screening, 13 were considered relevant to the topic and the full article was extracted and reviewed. However, only eight studies were found to meet the inclusion criteria. The flow diagram (Figure 1) represents the search strategy and article identification process.

Quality Assessment of Studies Included

Of the eight studies included, there was great variation in the study design and methodology, although qualitative study design was the most prevalent. For this reason, the Rating of Qualitative Research (RQR; Simmons-Mackie et al, 2010; Cherney et al, 2013) scale was used for the quality assessment of the studies included. The RQR scale was developed specifically for use in communication disorders and has been found

to be valid and reliable (Cherney et al, 2013). The RQR consists of 16 items (see Table 1). However, the last two items (i.e., item 13—treatment fidelity and item 14—treatment replicability) were not used in the current rating as they were not relevant to the studies included. Although Cherney et al (2013) did not use the RQR with descriptive case studies, we elected to include descriptive studies in the quality assessment. It is important to recognize that none of the existing published rating scales were well suited for quality assessment of studies with variable types of study designs.

Each of the articles was reviewed independently by the first and second authors (V.M. and M.B.H.) and a score (yes, no) was assigned. Because reliability and validity of the RQR have not been reported for individuals with limited knowledge and understanding of qualitative research, a third reviewer (J.H.A.) provided guidance on the appropriateness of the tool for each study and was consulted for any discrepancies that existed between the coders. The result was a final “quality score” (highest achievable score of 12) for each article. Inter-rater reliability was examined using the Cohen’s Kappa.

RESULTS

Table 2 provides a summary of all studies included in the review. All studies used a combination or individual use of video or audio recordings to gather data. Two of the eight studies used only qualitative data

Table 1. RQR Quality Criteria

Item	Criterion
1a	Appropriate design: the qualitative tradition or research design is appropriate to the question and the aims of the research.
1b	The qualitative research tradition is reported.
2a	Data collection methods are appropriate to the research question and subject matter.
2b	Data collection methods are labeled.
3	Participants are sufficiently described to meet the study goals.
4	Settings are sufficiently described to meet the study goals.
5	Investigator(s) role and relationship to participants/procedure are stated.
6	Data collection procedures are clearly described.
7	Data analysis procedures are described and appropriate to the goals.
8	Emergent data: the findings emerge logically from the data.
9	Thick description: a sufficiently detailed description of the subject matter is presented.
10	Interpretive themes: a clear effort is made to interpret meanings or explanations of phenomenon under study (e.g., not a simple listing of categories).
11	Triangulation: a preponderance of triangulated evidence supports findings.
12	Verification: procedures for auditing or verifying are reported.
13 not rated	Treatment fidelity: adherence to the treatment protocol is assessed and reported.
14 not rated	Treatment replicability: the treatment process is clearly described or made available.

analysis methods. Two studies used both qualitative and quantitative (i.e., mixed) data analysis methods. Four studies were descriptive in nature and consisted of exploratory analyses of communication behaviors during audiology appointments. The most commonly used data analysis methods included (a) Roter Interaction Analysis System (RIAS) and (b) CA. RIAS method used to profile the overall communication content and form based on predetermined categories and codes used to quantify health-care interactions (Roter and Larson, 2002). CA is a data-driven qualitative method used to investigate the sequential organization and progression of behavior through which participants manage different aspects of an interaction (e.g., turn taking). Six of the eight studies combined several different procedures in their approach and study designs, likely because of the exploratory nature of the investigations.

Following review, five predominant themes were identified and highlighted below.

Theme 1: Interaction Balance and Reciprocity

Of the eight articles, four reported on the utterances spoken by each member of the interaction (Ekberg et al, 2015; Grenness et al, 2015a,b; Dockens et al, 2017). Overall, the audiologist dominated interactions (Ekberg et al, 2015). In addition, both patients and family members were marginalized, with family members contributing the least to conversations (Grenness et al, 2015a,b). Communicative patterns further led to imbalance and poor reciprocity.

Mean Utterance and Balance

Ekberg et al (2015) reported that utterances spoken by audiologists were greater in number (about 51%)

than those spoken by the patient (37%), whereas family members spoke the fewest utterances (12%) during the interactions in audiology consultations.

Differential distribution of conversational turns and words per turn as well as content of turns were linked to the goal of an interaction (Dockens et al, 2017). A more equitable number of utterances produced by the audiologist and patient was observed in some sessions, where audiologists dominated the conversation with higher utterances in other consultation sessions (Dockens et al, 2017). During initial audiological consultations, audiologists produced more utterances related to explicit description of the symptoms, whereas more utterances about patients' interpretation of the symptoms were noted during sessions involving complex disorders or hearing aid consultation (Dockens et al, 2017).

Communicative Patterns and Dominance

Grenness et al (2015a) explored communication patterns in the history-taking phase of audiology consultations. The average consultation length was 57.4 min (range 27.3–111 min), but the mean length of the history-taking phase was 8.8 min (range 1.7–22.6 min). Communication behavior during the history-taking phase can be grouped into three main areas, including opening structure, information exchange, and relationship building. It was evident that the audiologist had the tendency to control the opening structure of the history-taking by (a) predominantly asking closed-ended questions (62% of the time) and (b) interrupting while the patient was talking (interruption noted at 21.3 sec on average). The audiologist maintained verbal dominance during the history-taking phase and controlled the content of questions (i.e., closed questions

Table 2. Summary of Study Design and Main Findings

Study	Country	Study Design	Population	Data Collection	Data Analysis
Ekberg et al (2014a)	Australia	Qualitative	26 audiologists (11.5 yr avg experience, 16 F and 10 M) 63 older adults (71.6 yr avg age, 27 F and 36 M) with HL*	63 video recordings of initial audiology appointments	CA
Ekberg et al (2014b)	Australia	Mixed	13 audiologists (10.4 yr avg experience, 9 F and 4 M) 17 older adults (75.1 yr avg age, 7 F and 10 M) with HL 17 family members (71.5 yr avg age, 12 F and 5 M)	63 video recordings of initial audiology appointments (avg 63 min, range 27–111 min)	RIAS, CA, <i>t</i> test, ICC
Ekberg et al (2015)	Australia	Mixed	13 audiologists (10.4 yr avg experience, 9 F and 4 M) 17 older adults (75.1 yr avg age, 7 F and 10 M) with HL 17 family members (71.5 yr avg age, 12 F and 5 M; 13 spouse, three children, and one friend)	17 video recordings of initial audiology appointments with family members in the 62 videos (avg 63 min, range 23–111 min)	CA, Quantitative coding, ICC
Grenness et al (2015a)	Australia	Descriptive	26 audiologists (11.4 yr avg experience, 16 F and 10 M) 63 older adults (71.6 yr avg age, 27 F and 36 M) with HL* 17 family members (69.4 yr avg age, 11 F and 6 M)	63 video recordings of initial audiology appointments (avg 57.4 min, range 27.3–111 min)	RIAS, linear mixed model, between-subject ANOVA, <i>t</i> test, ICC, Pearson's correlation
Grenness et al (2015b)	Australia	Descriptive	26 audiologists (11.4 yr avg experience, 16 F and 10 M) 62 older adults (71.6 yr avg age, 26 F and 36 M) with HL* 17 family members (69.4 yr avg age, 11 F and 6 M)	62 video recordings of initial audiology appointments (avg 57.8 min, range 27.3–111 min)	RIAS, linear mixed model, between-subject ANOVA, ICC
Ekberg et al (2017)	Australia	Qualitative	26 audiologists (11.4 yr avg experience, 16 F and 10 M) 62 older adults (71.6 yr avg age, 26 F and 36 M) with HL* 17 family members (69.4 yr avg age, 11 F and 6 M)	62 video recordings of initial audiology appointments (avg 57.8 min, range 27.3–111 min)	CA
Dockens et al (2017)	United States	Descriptive	One audiologist Six adults with HL	Six audio recordings of initial audiology appointments	Content analysis of turns, mean length of turn, reliability agreement
Sciacca et al (2017)	Australia	Descriptive	26 audiologists (10.7 yr avg experience, 16 F and 10 M) 63 older adults (71.6 yr avg age, 27 F and 33 M) with HL*	62 initial audiology appointments	Readability measures, use of jargon, logistic regression, Homer–Leme goodness-of-fit statistic

ICC, interclass correlation coefficient; ANOVA, analysis of variance; HL, hearing loss; M, male; F, female. Mixed study design included qualitative data collection, but both qualitative and quantitative data analysis methods.

*Two participants in a sample of 63 were found to have normal hearing as indicated by pure-tone audiometric testing.

in 86% of reminder of history-taking). There was good balance noted in topics of questions (i.e., 57% of biomedical questions versus 42% of psychosocial/lifestyle). The most commonly occurring utterances from audiologists were facilitation and patient activation (36%) and relationship building (36%), although fewer emotionally focused utterances (less than 5%) were noted (Grenness et al, 2015a). The most common utterances of patients included providing information to audiologists (62%),

followed by building a relationship (30%). Family members were present in 27% of consultations and contributed to 10% of verbal utterances. The most common utterances of family members included arguments and laughter/jokes (52%), followed by information provision (41%).

Grenness et al (2015b) explored the communication patterns during the diagnosis and management planning phases of audiology consultations. The mean length of diagnosis and management planning phase

was 29 min (range 2.2–78.5 min). The average utterances produced by the audiologist, patient, and patient's family members (when present) on average were 420.7 (range 52–1,428), 261.2 (range 30–749), and 111.3 (range 12–325), respectively (Grenness et al, 2015b). The average time spent on information exchange to facilitate decision-making was much greater (i.e., 20.4 min) compared with the average time spent on discussion of financial matters related to rehabilitation decisions (i.e., 4.7 min). The most commonly occurring utterances from audiologists were education and counseling (48%) and building a relationship (26%), whereas fewer utterances (4%) were about data gathering. The most common utterances of patients included building a relationship (60%), followed by information providing to audiologists (25%). Also, family members contributed the largest number of their utterances toward building a relationship (56%), followed by activation and engagement (11%) and asking questions (6%). Hearing aids were recommended on 83% of consultations and little effort was made to offer other options, whereas only 56% of those who were offered hearing aids subsequently obtained them. The authors suggest that the opportunity to build a relationship was missed as audiologists made little effort to address psychosocial concerns expressed by their patients and also little involvement of patients and their family members in management planning.

Theme 2: Discussion of Patient Concerns and Development of Therapeutic Alliance

Across three studies, a mismatch in discussion of patient concerns between patients, family members, and audiologists was found. Although a trend of negative emotional responses and psychological concerns was found among patients and families, audiologists did not address these types of concerns but rather focused on informational and technological components. As such, therapeutic alliances were compromised. Overall, different conversational techniques that may contribute to building relationships and alliances among patients, family members, and clinicians were described.

Theme 3: Patient and Family Expressions of Concern

Patients raised concerns about hearing aids in half of the appointments where hearing aids were recommended as a rehabilitation option (Ekberg et al, 2014a). The concerns regarding hearing aids were typically psychological in nature and conveyed a negative emotional stance.

Ekberg et al (2014b) provided a detailed account of agreements and disagreements between patients and their family members' responses. In response to audiologist questions regarding denial of hearing loss, various disagreements between patients and family members

were noted. Most often, the additional information provided by the family members involved disaffiliation with the patient's reports about the extent of hearing difficulties and rehabilitation needs of the patient. In addition, varying accounts of the extent of patients' hearing loss were expressed by patients and their family members in which family members often expressed deeper concern about the patients' hearing loss. Finally, patients often displayed resistance to an audiologist's recommendation of hearing aids, whereas their family members often expressed eagerness toward hearing aids. For this reason, family members constituted the primary source of information regarding concern for patient rehabilitation.

Views of patients differed from family members in that the family members were significantly less likely to use talk to build relationships. Most of the talks used by patients to establish relationships with audiologist were positive (e.g., agreements, approvals, and laughter) (Ekberg et al, 2014b). Differences between patients and family members were also noted in other aspects in which family members used social talk and negative talk more often.

Theme 4: Audiologist Response to Patient and Family Expressions of Concern

The psychological concerns expressed by patients which required empathetic responses were not addressed appropriately by audiologists during audiological consultations most of the time (Ekberg et al, 2014a). The audiologists focused on providing general discussion about hearing aids rather than acknowledging the patient concerns. Hence, the patients re-expressed their negative concerns which were not addressed appropriately by the audiologists (Ekberg et al, 2014a).

Audiologists typically used two key ways to respond to disagreements between patients and their family members. Both minimal acknowledgment tokens (e.g., okay and yeah) and laughter were used (Ekberg et al, 2014b). These responses indicated no affiliation with either patient or their family members, which may be perceived as not addressing concerns expressed during the appointment.

Audiologists typically did not respond to family members even though family members displayed strong interest in participating. Audiologists usually shifted the conversation away from the family member toward the patient (Ekberg et al, 2015). Family members attempted to engage in the conversation by responding to a question from the audiologist that was directed to the patient, self-initiating expressions on patient's turn, and self-initiating questions. However, audiologists typically responded by shifting the conversation back to the patient. These actions of audiologists (i.e., not inviting family members to talk, not responding to self-initiated talk of family members) may not help build therapeutic alliances during clinical consultations. However, family members attempted to build alliances through their conversational

behaviors approximately half of the time. Ekberg et al (2014b) showed agreements, neutral acknowledgments, social talk, laughter, and negative talk were associated with relationship building. For example, RIAS coded family members' laughter (6% of their total talk) as positive talk, whereas the CA highlighted that the laughter of family members was often associated with disaffiliations and resembled awkward laughter.

Theme 5: Conversation Patterns Related to Acceptance of Treatment Recommendations

Conversation patterns used in patient–clinician interactions by audiologists may affect the outcome and acceptance of treatment and therapy recommendations. Patterns identified in two studies revealed a more technology-centered approach to care, which may lessen uptake and compliance with rehabilitation.

Ekberg et al (2017) explored the aspects related to talking about cost in audiology consultations. In this study, hearing aids were recommended to 49 of 62 clients (79%), of which 46 appointments (74%) involved discussion about costs of hearing aids. Two key patterns were observed. First, both audiologists and patients displayed interactional difficulty during conversations about cost. Often patients took a negative emotional stance (e.g., “Oh god,” “Goodness me”) toward the cost of a hearing aid, which was not typically addressed by an audiologist. Second, audiologists typically started the conversation by offering one cost option about a hearing aid (76%), which was either accepted or rejected by the patient. If the cost option was rejected, audiologists would typically respond by (a) discussing another less expensive option and (b) questioning the patient about going ahead with the hearing aid. However, during management planning, some audiologists used an alternative approach in which they presented multiple cost options (i.e., low, mid, or top range device), which provided options for patients and also resulted in smoother interaction. Presenting only one or two cost options may give an impression to patients that the audiology practice is device-oriented and commercial in nature (Preminger et al, 2015).

On average, audiologists introduced three to four jargon terms (e.g., high or low frequency, (hearing aid) channels, advanced directional microphones, mold, and decibel) per appointment, although no association was found between audiologists' use of jargon and hearing aid purchase (Sciacca et al, 2017). Patients were more likely to obtain hearing aids when audiologists used less complex language.

Quality Assessment of Studies Using the RQR

A quality assessment of studies was conducted by two independent researchers. The Cohen's Kappa was 0.927, which showed high agreement between raters. Quality

scores for all studies according to the RQR are reported in Table 3. All eight studies selected appropriate design and data collection methods. All studies identified and detailed data collection and analysis procedures. Although most studies gave adequate description of participants, few sufficiently described the setting to meet the study goals. Seven of the eight studies detailed findings that logically emerged from the data. Six of the eight studies used thick description that allowed for a detailed account of the interactional patterns observed in the data, but only three studies clearly designated themes that gave an explanation of the phenomenon under study. Thick description is an important practice in qualitative research that includes providing readers with sufficient contextual details, emotions, and meanings for interpretation and generalization (Geertz, 1973). The only studies that reported the research tradition were those that used CA methodology. Four of the eight studies used methodologies that required reporting of investigator role; none of these studies stated the role of the investigator or relationship to the participants. Triangulation and verification techniques commonly used in qualitative research were not reported in any of the eight studies.

DISCUSSION

This article reviewed studies focusing on communication between audiologists, patients, and their family members during audiology consultation and rehabilitation sessions. Patients and family may attend an initial audiology consultation for a variety of reasons and may not expect a hearing aid recommendation to be presented at their first consultation (Claesen and Pryce, 2012). Congruent perception of disability and rehabilitation needs between patients and their family members is important in functional coping (Preminger and Meeks, 2010). For this reason, dynamics of communication between audiologists, patients, and their family members are important.

Clinical and Practice Implications

The findings from this review have direct and immediate clinical and practice implications. First, developing appropriate communication is important to establish patient-centered and family-centered care (Mead and Bower, 2002). Patient-centered communication and a better therapeutic alliance is important in improving adherence to and outcomes of rehabilitation (Stewart, 1995; Mead and Bower, 2002). For example, audiologists should consider targeting balanced talk during appointments which may provide more opportunities for patient and their family members to talk and to ask questions (Ekberg et al, 2015). During balanced talk, the practitioner should strive for equitable contributions with the patient. The practitioner may wait for 1–2 sec after

Table 3. Quality Scores for Studies Using the RQR

Study	Research			Data Collection			Data Collection			Data Collection			
	Appropriate Design	Tradition Reported	Methods Appropriate	Methods Labeled	Participants Description	Setting Description	Investigator Role	Procedure Detailed	Data Analyses	Emergent Data	Thickness Description	Interpretive Themes	Verification
Ekberg et al (2014a)	Yes	Yes	Yes	Yes	Yes	No	NA*	Yes	Yes	Yes	Yes	No	No
Ekberg et al (2014b)	Yes	Yes	Yes	Yes	Yes	Yes	NA*	Yes	Yes	Yes	Yes	No	No
Ekberg et al (2015)	Yes	Yes	Yes	Yes	Yes	Yes	NA*	Yes	Yes	Yes	Yes	No	No
Grenness et al (2015a)	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No
Grenness et al (2015b)	Yes	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No
Ekberg et al (2017)	Yes	Yes	Yes	Yes	Yes	No	NA*	Yes	Yes	Yes	Yes	Yes	No
Dockens et al (2017)	Yes	No	Yes	Yes	No	No	No	Yes	Yes	Yes	No	No	No
Sciacca et al (2017)	Yes	No	Yes	Yes	Yes	No	No	Yes	Yes	No	No	No	No

*Role of the investigator is not relevant to conversation analysis methodology by criteria definition.

the patient takes a conversational turn to make sure the patient is finished with their turn. In that way, the practitioner may be less likely to dominate the conversation. Moreover, use of open-ended questions is necessary to open the dialog from patients and their family members. Second, empathetic listening and good clinician–patient communication helps in better understanding the problems experienced by the patient and understanding their stage in the journey through hearing loss (Manchaiah et al, 2011). This is critical in developing personalized management plans. For example, understanding the readiness of each party to embark on the patient journey is important in providing appropriate treatment recommendations to achieving optimal outcome (Manchaiah et al, 2011; 2017). Third, American Speech-Language Hearing Association Preferred Practice Patterns (ASHA, 2006) promotes family-centered care. Hence, audiologists should make an effort to involve family members during audiology consultation and rehabilitation planning sessions (Manchaiah et al, 2012). Fourth, critical aspects of communication identified in the studies reviewed here can be used in training audiologists and students. Nearly half of the audiologists surveyed in one study reported that they did not have adequate training to provide counseling to adults with hearing loss (Martin et al, 1992).

Limitations and Further Research

Quality scores reported here should be interpreted with caution. Although the RQR is a valid and reliable tool for assessing the overall methodological integrity of qualitative research (Cherney et al, 2013), questions remain about the utility of the tool for studies that do not clearly fall within specific traditions of inquiry in qualitative research. For example, three of the eight studies rated used a single-case mode of CA. In this methodology, it is not recommended that researchers make generalizations across the data that would constitute interpretive themes (Schegloff, 1987). Therefore, although this item may be appropriate for studies that use a collection-based mode of CA, it may be unsuitable for single-case modes. Similarly, verification is appropriate for a collection-based mode but is not commonly used in single-case modes. Although triangulation is commonly used in other qualitative methodologies (e.g., ethnography), its use in CA investigations is unusual because of the emic nature of these investigations (Seedhouse, 2004). Despite these limitations, the RQR proved to be a useful tool in providing an overall rating of higher or lower quality across studies. Future research efforts should be directed toward refining the scale and weighting items based on specific traditions of inquiry.

Researchers in the last few years have made attempts to advance our understanding in the important, but relatively neglected, area of audiologist–patient–family member communication. However, most of the research

published in this area (seven of eight studies included in this review) comes from a large research project conducted in Australia by one research group. Much of the data presented in this review come from the same data corpus (see Table 2), although researchers have conducted in-depth analyses to examine various aspects related to communication. Although there are likely extensive commonalities across settings, some aspects of communication and communication patterns may be unique to a region and a culture.

We hypothesize that several aspects related to clients and their family (e.g., education, health literacy, and social, cultural, and ethnic background) and hearing health-care professional attributes (i.e., health-care setting, education, and experience) may have influence on the communication behavior during clinical consultations. Hence, more research is needed from across the globe to better understand the phenomena that have been observed in the studies reported (Zhao et al, 2015). The qualitative and mixed methods design used in the studies reported have developed many hypotheses and shed light into an area of limited knowledge. Large-scale and quantitative studies would be beneficial to confirm and generalize specific aspects of the communication behaviors observed. For example, structured surveys about communication aspects during clinical consultations and data gathering from both patients and their family members could be developed. This approach should provide data to further examine factors related to audiologists, patients, and family members who influence communication behavior and hearing healthcare outcomes.

CONCLUSIONS

The review highlights that audiologists dominate the conversation during audiology consultation and rehabilitation planning sessions. Audiologists frequently miss opportunities to develop patient-centered communication and shared decision-making. These findings have implications for both clinical practice and for audiology education and training.

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