
Communication Difficulties Experienced by Nursing Home Residents with a Hearing Loss During Conversation with Staff Members

Difficultés de communication éprouvées par certains bénéficiaires d'une maison de soins infirmiers atteints d'une perte auditive durant les conversations avec les membres du personnel

Rachel Caissie, PhD
School of Human Communication Disorders
Dalhousie University, Halifax, Nova Scotia

Elaine Rockwell, MSc
Yarmouth Regional Hospital
Yarmouth, Nova Scotia

Key words: audiological rehabilitation, repair strategies, aging

Abstract

The purpose of this study was to analyze some of the communication difficulties experienced by eight nursing home residents with a hearing loss during dyadic conversations with staff members, and to describe how breakdowns in communication are resolved. Thirty-minute samples of conversation were videotaped and analyzed for conversational dominance, occurrence of communication breakdowns, and repair strategies used by the residents and staff members. Results showed that half of the residents tended to dominate the communicative interaction by taking longer speaking turns than their partners and by controlling topics of conversation. Communication breakdowns were present in an average of 10.5% of the residents' speaking turns. Forty percent of these communication breakdowns were never repaired, in that the residents failed to request clarification. When repairing breakdowns, residents frequently used nonspecific, rather than specific, requests for clarification, while staff members primarily repeated their original message and used few paraphrases. Results are discussed with regard to clinical implications for the improvement of audiological rehabilitation services to nursing homes.

Abrégé

L'étude a pour but d'examiner les difficultés de communication qu'éprouvent huit bénéficiaires d'une maison de soins infirmiers atteints d'une perte auditive lors de conversations dyadiques avec les membres du personnel, et de décrire les méthodes utilisées pour résoudre les ruptures de communication. On a analysé des échantillons de conversation de trente minutes enregistrés sur bande vidéo en ce qui concerne la dominance de la conversation, les ruptures de communication, et les stratégies utilisées par les bénéficiaires et les membres du personnel pour rétablir cette dernière. Les résultats indiquent que la moitié des bénéficiaires tendent à dominer la conversation en prenant la parole plus longtemps que leurs interlocuteurs et en contrôlant les sujets de conversation. On note des ruptures de communication dans, en moyenne, 10,5 % des

cas où les bénéficiaires prennent la parole. Pour 40 % de ces ruptures, la communication n'est jamais rétablie, en ce sens que le bénéficiaire omet de demander des éclaircissements. Lorsqu'ils essaient de rétablir la communication, les bénéficiaires formulent fréquemment une demande non spécifique, plutôt que spécifique, d'éclaircissements, tandis que les membres du personnel répètent principalement le message original et utilisent peu de paraphrases. On discute des résultats dans le contexte de leur portée clinique en ce qui concerne l'amélioration des services de réadaptation audiolinguistique dans les maisons de soins infirmiers.

Hearing impairment is believed to be one of the most widespread sensory deficits associated with aging (Bess, Logan, & Lichtenstein, 1990; Brown, 1990; Gates, Cooper, Kannel, & Miller, 1990). Its prevalence is especially high among residents of nursing homes; indeed, the literature suggests that as much as 90% of this population may be affected by a hearing loss (Schow & Nerbonne, 1980; Tolson & McIntosh, 1992). Auditory deficits exhibited by elderly individuals are well documented and include increasing pure tone threshold deterioration with increasing age, particularly in the high frequencies (Brown, 1990; Gates et al., 1990; Moscicki Elkins, Baum, & McNamara, 1985), reduced speech recognition abilities (Jerger, Jerger, & Pirozzolo, 1991; Schum & Matthews, 1992; Stach, Spretnjak, & Jerger, 1990; Tobias, et al., 1990), and central auditory processing difficulties (Cooper & Gates, 1991, 1992; Jerger, Jerger, Oliver, & Pirozzolo, 1989; Stach, 1990; Stach, Spretnjak, & Jerger, 1990). Such hearing loss with concomitant speech understanding difficulties may result in psychosocial withdrawal and lead to feelings of frustration, embarrassment, and anger (Alpiner, 1978; Hull, 1992).

In the literature addressing the effects of acquired hearing impairment on conversational exchanges, two types

of difficulties are commonly cited. First, it has been suggested that adults with a hearing loss may show either withdrawing or dominating behaviors during communication with others (Erber, 1988; Hallberg & Carlsson, 1991; Hull, 1992; Sanders, 1993). Withdrawing behaviors may take the form of avoiding situations where communication may be particularly difficult (for example, refusing to attend family gatherings) or avoiding active participation in ongoing conversations, that is letting other interactants do most of the talking. Other adults with a hearing loss may adopt aggressive rather than submissive behaviors in conversation. For example, they may dominate communicative interactions by controlling topics of conversations or by controlling the conversational floor, perhaps in order to avoid facing possibly embarrassing situations resulting from perceptual errors when in the role of listener. Dominance in conversation may also be manifested through frequent interruptions of a partner's speaking turn. In fact, West and Zimmerman (1983) have suggested that interruptions may be a "device for exercising power and control" (p. 103). Moreover, Erber (1988) has pointed out that interruptions may be frequently observed in the conversations of adults with a hearing loss.

Another commonly cited conversational difficulty encountered by adults with a hearing loss pertains to the occurrence of breakdowns in communication following the misperception of a partner's message (Erber, 1988; Kaplan, 1992; Sanders, 1993). Communication breakdowns may be resolved through usage of requests for clarification by the person with a hearing loss, and repair strategies, such as repetition or message revision, by the communicative partner. However, communication breakdowns may be particularly disruptive when they impede conversational fluency, that is when a considerable amount of the communicative interaction is devoted to repairing breakdowns rather than exchanging information (Erber, 1988). Moreover, researchers have suggested that a number of individuals with a hearing loss lack the necessary skills for effectively repairing communication breakdowns through usage of clarification requests. For example, Tye-Murray (1991) observed that adults with a hearing impairment tended to primarily use nonspecific requests for clarification during structured tasks prior to receiving intervention on the management of communication breakdowns. Nonspecific clarification requests, which are usually in the form of "What?" or "Pardon me?", do not indicate to the partner if all or only portions of the message was misperceived, and hence are believed to be less effective for repairing breakdowns than specific clarification requests (Erber, 1988; Gagné & Wyllie, 1989). Specific requests, such as requests for the repetition of a specific constituent or requests for confirmation, are believed to be more effective because they provide the partner with information on the extent of the misperception. Furthermore, some adults with a hearing loss

may lack the assertiveness needed for requesting clarification of continued misperceptions (Hull, 1992; Kaplan, 1992). Instead, they may nod inappropriately in conversation, pretending that they have understood their partner's message, thereby obstructing the process of information exchange.

Clinical observations and reports from clients have primarily served as the basis for describing the types of conversational difficulties that may be experienced. In contrast, gathering and analyzing samples of conversations between adults with a hearing loss and their communicative partners in order to systematically investigate communication difficulties as they might occur during daily communicative exchanges has received very little attention in research. The dearth of research in this area may be related to the difficulties inherent to the analysis of everyday conversations. Recently, Caissie and Rockwell (1993) proposed a method for analyzing videotaped conversation samples in order to explore hearing-impaired adults' difficulties in conversation and their management of communication breakdowns. This methodological approach may be employed to quantify and further describe the types of difficulties commonly reported, and the use of repair strategies by adults with a hearing loss and their communicative partners. Because of the very high prevalence of hearing disorders among nursing home residents, greater knowledge is particularly needed on the conversational difficulties experienced by this population so that audiological rehabilitation services may be improved. Moreover, because nursing home staff members are important communicative partners in the residents' daily life, it becomes important to investigate the residents' communication difficulties as they occur during interaction with staff members.

The purpose of the present study was to demonstrate the usefulness of videotaped conversation analysis as a means for exploring some of the communication difficulties experienced by a group of nursing home residents with a hearing loss during communicative interactions with staff members. This study attempted to determine whether the residents exhibited dominating or withdrawing behaviors in conversations, and to quantify the occurrence of communication breakdowns and their management by both residents and staff members.

Method

Subjects

Eight elderly individuals with a hearing loss (7 females and 1 male) participated in the study (Table 1). They were residents of a nursing home located in a rural community.

Table 1. Audiological profile of the residents.

Resident	Age	Sex	PTA		Hearing aid	HHIE score
			Right	Left		
1	87	F	62	67	Left	34
2	97	F	55	59	Binaural	18
3	92	F	57	72	Right	10
4	89	M	72	NR	Right	60
5	93	F	36	39	Right	8
6	83	F	59	55	–	0
7	86	F	56	55	Right	42
8	91	F	77	71	Right	36
Mean	89.8		59.2	59.7		26
SD	4.4		12.3	11.6		20.3

The nursing home was a 130-bed facility which was divided into three units of 38, 45, and 47 residents. The majority of the participating residents were from the same unit. They ranged in age from 83 to 97 years and exhibited bilateral sensorineural hearing losses acquired in late adulthood. Their mean PTA (pure tone average at 500, 1000, 2000, and 4000 Hz) was 59.2 dB HL for the right ear (SD = 12.3) and 59.7 dB HL for the left ear (SD = 11.6). Seven of the residents had been using amplification consistently for at least one year. The remaining resident had a hearing aid but never used it. None of the residents had any major debilitating physical conditions, any known neurological impairments, or language deficits as reported in their medical charts. All regularly participated in leisure activities (e.g., crafts, social events) organized in the nursing home. The length of nursing home residency ranged from 2 to 14 years (M = 5 years).

Eight staff members (all females) also participated in the study. They included an activity director, activity worker, registered nurse assistants, and resident attendants. These individuals served as communicative partners for the residents. The director of nursing of the facility, who was acquainted with the staff members and residents, was asked to pair residents and staff members who were familiar with one another and who interacted together on a regular basis. The staff members had been working in the residents' respective unit for at least one year, and thus each pair had had previous opportunity for frequent daily interaction. None of the staff members had received prior training on how to effectively communicate with adults with hearing losses.

Procedure

Each resident was visited twice in the nursing home. During the first visit, the residents underwent pure tone audiometry and were administered the Hearing Handicap Inventory for the Elderly (HHIE) (Ventry & Weinstein, 1982) using a face-

to-face administration technique (Newman & Weinstein, 1989). A few items on the HHIE were modified to better reflect situations relevant to a nursing home setting. More specifically, item S-16 ("Does a hearing problem cause you to go shopping less often than you would like?") was changed to "Does a hearing problem cause you to go to the general store less often than you would like?", and item S-21 ("Does a hearing problem cause you difficulty when in a restaurant with relatives or friends?") was changed to "Does a hearing problem cause you difficulty when in the dining room". All items related to the ease of communication with family members were expanded to also include communication with other residents of the nursing home and staff members.

Next, during a separate visit to the nursing home, each resident was videotaped engaged in a communicative interaction with a staff member. Participants were simply instructed to talk to each other as they would normally do. Thirty-minute conversational samples were obtained with members of the dyads sitting facing each other, approximately 1 meter apart, in the resident's room. The camera was mounted on a tripod, and the interactants were left alone in the room while videotaping was taking place. Topics of conversation centered around subjects familiar to both interactants, such as activities organized in the nursing home, family members, other residents, or health problems.

Analysis of conversations

A total of four hours of videotaped conversations were orthographically transcribed and coded largely based on guidelines suggested by Caissie and Rockwell (1993). The first five minutes of each sample were excluded from the analysis to allow time for the participants to become more at ease and less camera conscious. Communicative interactions were analyzed for conversational dominance, for the occurrence of communication breakdowns, and for the types of repair strategies used by the residents and staff members to resolve the breakdowns. Each of these coding categories are described below.

Conversational dominance. Conversational dominance was investigated through the examination of three conversational features: speaking turn length, control of topic, and interruptions. Dyadic members were compared to each other on these measures. First, a measure of how long the participants maintained their speaking turns was obtained in order to explore the resident and staff member's overall amount of participation in the communicative interaction. A speaking turn was characterized by the verbal possession of the conversational floor and could include one or many utterances strung together. A mean length of turn, expressed as the average number of words per turn, was calculated for each resident and staff member. False starts, hesitations, and

verbal fillers (e.g., “uhm”) were not considered in the calculation of the average number of words per turn.

Second, the residents and staff members’ control of the topic of conversation was examined. This involved calculating the number turns used by each interactant to shift topics of conversation. Based on writings by Brinton and Fujiki (1989) and Bedrosian (1993), a change in topic was noted whenever a dyadic member (a) initiated a new topic, that is when his or her speaking turn was not related to the immediately preceding topic, (b) reintroduced a topic that had been discussed earlier in the conversation, or (c) shaded a topic. Topic shading occurred when an interactant’s speaking turn provided a smooth transition of the current topic by changing its focus.

Finally, conversational dominance was investigated by examining the frequency of occurrence of interruptions by each dyadic member because this type of behavior has been associated with dominance in communicative interactions, and because it has been suggested that some adults with a hearing loss often interrupt their communicative partner. Interruptions were defined as disruptive simultaneous speech (Brinton & Fujiki, 1989) and included instances where a participant took or attempted to take possession of the conversational floor before their partner had finished speaking. Instances where an interactant’s beginning of speaking turn overlapped with the ending of the partner’s turn were not considered disruptive, and therefore were not coded as interruptions (Ferguson, 1977; Silliman & Lamanna, 1986). Similarly, backchannel responses such as brief acknowledgments (e.g., “Yeah”, “Uh-huh”) and interjectory remarks (e.g., “My goodness”) during a partner’s speaking turn were not considered disruptive simultaneous speech.

Communication breakdowns. The conversational samples were also analyzed for the occurrence of communication breakdowns and for the various repair strategies used by the residents and staff members to resolve the breakdowns. When a resident’s speaking turn suggested a misperception of the staff member’s previous contribution, the turn was coded as a communication breakdown. Misperception was indicated when the resident used a request for clarification, gave an inappropriate response to the partner’s previous turn (for example, an affirmative response to a Wh-question), or abruptly shifted the topic of conversation (Caissie & Rockwell, 1993). When a disruption in conversational fluency due to a misperception took more than one speaking turn to be resolved, that is when repeated repair strategies were used, each turn was counted as a communication breakdown.

Communication breakdowns were then classified according to whether the residents requested clarification of

the misperception (repaired breakdowns) or failed to request clarification (unrepaired breakdowns). Requests for clarification were further divided into nonspecific requests for clarification and specific requests for clarification (Brinton & Fujiki, 1989). Nonspecific requests included neutral requests for the partner to repeat the message (e.g., “What?”, “Hmm?”, or “Pardon me?”), and specific requests for clarification included those requests which provided the staff member with specific information about the nature and extent of the misperception (e.g., request for repetition of a specific constituent or request for confirmation).

The repair strategies used by the staff members to resolve communication breakdowns were also coded. These included responses to the clarification requests expressed by the residents as well as instances where the staff member spontaneously offered a repair following an obvious misperception for which the resident had failed to request clarification. The staff members’ repair strategies were classified into one of the following three categories: (a) repetition (exact or partial repetition of the misperceived message), (b) paraphrase (semantic or syntactic modification of the message without providing new information), and (c) elaboration (new information was provided in an attempt to clarify the message).

Reliability

Interjudge reliability scores were obtained by having another observer code 10% of each conversational sample. Percentages of agreement for the conversational dominance coding categories were high: 100% for turn length, 86% for topic shifts, and 98% for interruptions. Percentages of agreement for the coding of communicative breakdowns were also high: 90% for the occurrence of breakdowns, 91% for the residents’ types of requests for clarification, and 89% for the staff members’ types of repair strategies.

Results

Conversational dominance

The residents expressed an average of 225.8 speaking turns (SD = 47.8) throughout the 30-minute conversational samples, while the staff members expressed an average of 226.5 speaking turns (SD = 49.0). As illustrated in Table 2, the residents used an average of 10.6 words per turn (SD = 6.0), and the staff members used an average of 7.2 words per turn (SD = 3.0). For only two dyads (Dyads 2 and 7), each dyadic member expressed speaking turns of similar lengths, indicating an equal share of the conversational floor between the two interactants. In contrast, results for half of the dyads (Dyads 1, 3, 4, and 5) suggested dominance by the residents, while results for Dyads 6 and 8 were indicative of a more passive role in conversation.

Table 2. Residents and staff members' performance on conversational dominance measures.

Dyad	Length of turn (number of words)		Topic shifts		Interruptions	
	Resident	Staff	Resident	Staff	Resident	Staff
1	10.3	3.7	19	10	1	1
2	6.1	6.7	11	16	1	1
3	13.0	8.3	14	8	17	6
4	21.9	3.5	18	7	3	7
5	15.8	5.5	14	7	3	3
6	3.9	12.8	9	16	15	1
7	8.2	8.6	9	19	2	7
8	5.9	8.3	17	21	5	6
Mean	10.6	7.2	13.9	13.0	5.9	4.0
SD	6.0	3.0	3.9	5.7	6.4	2.9

The residents shifted the topic of conversation an average of 13.9 times ($SD = 3.9$), while the staff members did so 13 times ($SD = 5.7$). The four dyads that showed dominating behaviors with respect to speaking turn length also exhibited dominance for topic shifts, that is, the residents in these dyads shifted topics of conversation more frequently than did their communicative partner. In the remaining dyads, the staff members tended to control the topic of conversation.

Overall, the occurrence of interruptions was low. The residents interrupted their communicative partners' speech an average of 5.9 times ($SD = 6.4$) throughout the conversation samples, while the staff members interrupted the residents' speech an average of 4 times ($SD = 2.8$). However, two residents exhibited a considerably larger number of interruptions than their partner; that is, residents in Dyads 3 and 6 interrupted the staff members a total of 17 and 15 times, respectively. On the other hand, results for Dyads 4 and 7 suggested that the staff member was the dyadic member the more likely to interrupt.

Communication breakdowns

Because the participants differed with respect to the total number of speaking turns used in their conversation, results pertaining to the occurrence of communication breakdowns were converted into percentages. As illustrated in Table 3, between 2 to 18% ($M = 10.5$; $SD = 6$) of the residents' total number of speaking turns represented communication breakdowns. Between 0 and 93% ($M = 40$; $SD = 30.8$) of these breakdowns were not repaired, while 7 to 100% ($M = 60$; $SD = 30.8$) of them were followed by requests for clarification from the residents. All residents except those in Dyads 3 and 6 were more likely to request clarification when faced with incomplete understanding of their partner's message than to ignore the misperception.

Table 3. Percentage (number) of occurrence of unrepaired and repaired communication breakdowns and types of requests for clarification used by the residents to repair breakdowns.

Resident	Total Break-downs	Unrepaired Break-downs	Repaired Break-downs	Nonspecific Requests	Specific Requests
1	3 (7)	43 (3)	57 (4)	100 (4)	0 (0)
2	12 (18)	33 (6)	67 (12)	50 (6)	50 (6)
3	18 (42)	76 (32)	24 (10)	40 (4)	60 (6)
4	9 (18)	28 (5)	72 (13)	100 (13)	0 (0)
5	2 (3)	0 (0)	100 (3)	33 (1)	67 (2)
6	13 (30)	93 (28)	7 (2)	50 (1)	50 (1)
7	9 (24)	33 (8)	67 (16)	44 (7)	56 (9)
8	18 (50)	14 (7)	86 (43)	93 (40)	7 (3)
Mean	10.5	40.0	60.0	63.8	36.2
SD	6.0	30.8	30.8	28.7	28.7

When repairing communication breakdowns, residents used nonspecific requests for clarification 63.8% of the time on the average ($SD = 28.7$) and specific requests for clarification 36.2% of the time ($SD = 28.7$). Dyads 1, 4, and 8 used almost exclusively nonspecific requests, while Dyads 3, 5, and 7 tended to use specific requests more often than nonspecific requests for clarification.

The types of repair strategies used by the staff members to resolve communication breakdowns are presented in Table 4. Results showed that "repetition of the message" was a commonly employed strategy ($M = 49.1\%$ use; $SD = 16.9$). In comparison, "paraphrase" and "elaboration" tended to occur less frequently ($M = 23.4$; $SD = 12.2$ and $M = 27.4$; $SD = 17.5$, respectively).

Table 4. Percentage (number) of occurrence for the types of repair strategies used by the staff members.

Staff member	Repetition	Paraphrase	Elaboration
1	60 (3)	40 (1)	0 (0)
2	57 (8)	29 (4)	14 (2)
3	29 (6)	29 (6)	42 (9)
4	69 (9)	15 (2)	15 (2)
5	67 (2)	0 (0)	33 (1)
6	33 (2)	17 (1)	50 (3)
7	28 (5)	28 (5)	44 (8)
8	50 (21)	29 (12)	21 (9)
Mean	49.1	23.4	27.4
SD	16.9	12.2	17.5

Discussion

Previous literature has suggested that there may be unequal amounts of participation in conversational exchanges where one of the communicative partner has a hearing loss (for example, Erber, 1988; Hull, 1992). Results of the present investigation provide some support for this premise. Dominating or withdrawing behaviors were noted for six of the eight residents on measures of length of speaking turns and topic shifts. That is, residents in four dyads controlled the conversational floor by maintaining their speaking turns for longer periods of time and selected topics of conversation more often than did their communicative partner. In contrast, the residents in the other two dyads tended to adopt withdrawal behaviors on these same two measures.

On the other hand, this study did not find that the residents consistently used interruptions as a means of controlling the interaction. That is, only two out of the eight residents frequently interrupted their communicative partner. Thus, it appears that speaking turn length and topic shifting may be more sensitive to the assessment of conversational dominance or withdrawal by elderly people with a hearing loss than interruptions. Although the present findings are in disagreement with Erber's (1988) suggestion that interruption of a partner may be common among adults with a hearing loss, it is possible that the nature of the relationship between nursing home residents and staff members contributed to these results. The residents may have perceived the staff members as dominant and may consequently have adapted their communicative behaviors to reflect differences in social rank.

The results pertaining to speaking turn length and topic shifting can only be interpreted with caution. This study compared the residents to the staff members on these measures, and it is not possible to determine whether the observed conversational behaviors result from the residents' hearing loss, aging, or other contributing factors. This is an issue difficult to investigate in nursing home residents due to the high prevalence of hearing disorders among that population, and the difficulty of finding residents with normal hearing and no language deficits for comparison to the residents studied. Perhaps, investigations of conversational performance of non-institutionalized hearing-impaired and normally hearing adults of various age groups would help clarify this important issue.

Also of interest was the finding that between 2 to 18% of the residents' speaking turns represented a communication breakdown. It should be stressed that these occurrences of breakdowns were obtained during listening conditions considered ideal for a person with a hearing loss.

That is, the dyadic conversations occurred in a relatively quiet environment with interactants facing each other. Larger proportions of communication breakdowns would undoubtedly be observed when communicative interactions occur in adverse listening conditions.

Several aspects of the results highlight the residents' difficulty in effectively managing communication breakdowns. For example, they failed to request clarification for a fairly large proportion (40% on the average) of the communication breakdowns experienced. One resident failed to request clarification for as many as 93% of the breakdowns she encountered. A number of explanations may be offered for this substantial occurrence of unrepaired communication breakdowns among residents. First, based on Erber's (1988) contention that some individuals with a hearing loss must first learn to recognize that communication breakdowns have occurred before they can develop the skills necessary to repair them, it may be argued that the residents, who had never participated in an audiological rehabilitation program, were unaware of some of their difficulty in conversation. Second, the residents may have lacked the assertiveness needed to request clarification of all misperceptions encountered. Assertiveness training has indeed been identified as an important component of audiological rehabilitation (Hull, 1992; Kaplan, 1992). A final possible reason for the high occurrence of unrepaired communication breakdowns may be that the residents simply did not bother requesting clarification of all misperceptions due to a lack of interest or belief that the information missed was not that important to the conversation.

Another indication of the residents' difficulty in managing communication breakdowns was that a number of them tended to primarily use nonspecific, rather than specific, requests for clarification. Nonspecific requests for clarification are believed to be less efficient for repairing communication breakdowns (Erber, 1988; Gagné & Wyllie, 1989). The large occurrence of nonspecific requests, however, is consistent with findings by Tye-Murray (1991) on adults with hearing impairments.

It is interesting to note that the resident in Dyad 6 obtained a total score of 0 on the HHIE, thus claiming no hearing difficulty whatsoever. She was also the only participant who did not wear amplification, despite a pure tone average of 58.7 dB and 55 dB in the right and left ear, respectively. Based on this information, one might speculate that she was utilizing compensatory strategies effectively, such as speech reading or attending to additional cues provided by the linguistic and situational contexts. However, examination of her conversational performance revealed considerable difficulty. During the half hour conversation, she experienced a total of 30 breakdowns in communication,

93% of which were not followed by requests for clarification. Moreover, she did not actively participate in conversation as indicated by an average speaking turn length of 3.9 compared to 12.8 for her partner, and she interrupted her partner a total of 15 times. It appears more likely that her score on the HHIE reflected a denial rather than an absence of hearing or communication difficulty. The problem of adults denying a hearing handicap on self-assessment questionnaires, despite the presence of a hearing impairment, has also been documented by others (Schow, Smedley, & Longhurst, 1990; Voeks, Gallagher, Langer, & Drinka, 1993). The possibility that some hearing-impaired adults with significant conversational difficulties may deny their problem suggests caution in the use of self-assessment questionnaires for the purpose of determining who should receive audiological rehabilitation. That is, a low score may not necessarily mean that the individual with a hearing loss is coping well and that audiological rehabilitation is not required. Nevertheless, information gained from self-assessment scales can greatly assist audiologists in the planning of audiological rehabilitation sessions, particularly sessions of counselling nature. The relationship between self-perceived hearing handicap and amount of conversational difficulties should be addressed in future research.

Results pertaining to the types of repair strategies used by the staff members also highlight some of their difficulty in effectively managing communication breakdowns during conversations with the residents. For example, staff members frequently provided an exact or partial repetition of their original message when a misperception occurred. This type of repair strategy has not been found to be an effective one (Gagné & Wyllie, 1989), and its use is generally not advocated in audiological rehabilitation programs. On the other hand, paraphrasing a misperceived message is believed to be a more useful strategy for repairing communication breakdowns with individuals with a hearing loss; however, it was found to be the least frequently used repair strategy by the staff members. The large proportion of repetitions by staff members may be related to the residents' frequent use of nonspecific requests for clarification which would tend to foster usage of repetitions by partners. Other researchers have noted that the types of requests for clarification used by a person with a hearing loss may influence the types of repair strategies used by the communicative partner (Gibson & Caissie, 1994).

This study has used analysis of videotaped conversations to quantify some of the difficulties experienced by nursing home residents with a hearing loss during communicative interaction with staff members, and to describe how breakdowns in communication are resolved. It should be pointed out that due to heavy caseloads, nursing home staff members do not typically spend blocks of thirty minutes

sitting down with a resident to have a conversation, as it was done in this study. Instead, shorter communication exchanges are more likely to occur throughout the day during caregiving activities. In addition, the role that the communicative partners may have on the residents' conversational performance cannot be ignored. Because each resident was paired with a different staff member, it becomes difficult to compare residents on overall communicative competence. Despite the above limitations, results of this study stress the need for professionals to direct more of their audiological rehabilitation efforts to residents of nursing homes and staff members. These clinical efforts should concentrate on helping residents with a hearing loss identify communication breakdowns, be assertive in requesting clarification, and request clarification effectively, that is using a variety of strategies as opposed to mainly using nonspecific requests for clarification. In addition, clinical efforts should focus on coaching staff members to use the types of repair strategies that are believed to be the most effective for managing communication breakdowns, such as paraphrasing misperceived messages.

Address all correspondence to: Rachel Caissie, PhD, Assistant Professor, SHCD, Dalhousie University, 5599 Fenwick St., Halifax, Nova Scotia, Canada, B3H 1R2.

References

- Alpiner, J. (1978). Rehabilitation of the geriatric client. In J. Alpiner (Ed.), *Handbook of adult rehabilitative audiology*. Baltimore: Williams & Wilkins.
- Bedrosian, J. (1993). Making minds meet: Assessment of conversational topic in adults with mild to moderate mental retardation. *Topics in Language Disorders, 13*, 36-46.
- Bess, F., Logan, S., & Lichtenstein, M. (1990). Functional impact of hearing loss on the elderly. In E. Cherow (Ed.), *Proceedings of the Research Symposium on Communication Sciences and Disorders and Aging. ASHA Reports, 19*, 144-149.
- Brinton, B., & Fujiki, M. (1989). *Conversational management with language-impaired children*. Rockville, MD: Aspen Publications, Inc.
- Brown, S.C. (1990). The prevalence of communicative disorders in the aging population. In E. Cherow (Ed.), *Proceedings of the Research Symposium on Communication Sciences and Disorders and Aging. ASHA Reports, 19*, 14-25.
- Caissie, R., & Rockwell, E. (1993). A videotape analysis procedure for assessing conversational fluency in hearing-impaired adults. *Ear and Hearing, 14*, 202-209.
- Cooper, J., & Gates, G. (1992). Central auditory processing disorders in the elderly: The effects of pure tone average and maximum word recognition. *Ear & Hearing, 13*, 278-279.

- Cooper, J., & Gates, G. (1991). Hearing in the elderly - The Framingham Cohort, 1983-1985: Part II. Prevalence of central auditory processing disorders. *Ear and Hearing, 12*, 304-311.
- Ferguson, N. (1977). Simultaneous speech, interruptions and dominance. *British Journal of Clinical Psychology, 16*, 295-302.
- Erber, N. (1988). *Communication therapy for hearing-impaired adults*. Victoria, Australia: Clavis Publishing.
- Gagné, J.P., & Wyllie, K. (1989). Relative effectiveness of three repair strategies on the visual identification of misperceived words. *Ear and Hearing, 10*, 368-374.
- Gates, G., Cooper, J., Kannel, W., & Miller, N. (1990). Hearing in the elderly: The Framingham Cohort, 1983-1985: Part I. Basic audiometric test results. *Ear and Hearing, 11*, 247-256.
- Gibson, C., & Caissie, R. (1994). The effectiveness of repair strategy intervention with a hearing-impaired adult. *Journal of Speech-Language Pathology and Audiology, 18*, 14-21.
- Hallberg, L., & Carlsson, S. (1991). A qualitative study of strategies for managing a hearing impairment. *British Journal of Audiology, 25*, 201-211.
- Hull, R. (1992). The impact of hearing loss on older persons: A dialogue. In R. Hull (Ed.), *Aural rehabilitation*, San Diego: Singular Publishing Group.
- Jerger, J., Jerger, S., Oliver, T., & Pirozzolo, F. (1989). Speech understanding in the elderly. *Ear and Hearing, 10*, 79-89.
- Jerger, J., Jerger, S., & Pirozzolo, F. (1991). Correlational analysis of speech audiometric scores, hearing loss, age, and cognitive abilities in the elderly. *Ear and Hearing, 12*, 103-109.
- Kaplan, H. (1992). The impact of hearing impairment and counselling adults who are deaf or hard of hearing. In R. Hull (Ed.), *Aural rehabilitation*. San Diego: Singular Publishing Group.
- Moscicki, E., Elkins, E., Baum, H., & McNamara, P. (1985). Hearing loss in the elderly: An epidemiologic study of the Framingham Heart Study Cohort. *Ear and Hearing, 6*, 184-190.
- Newman, C., & Weinstein, B. (1989). Test-retest reliability of the Hearing Handicap Inventory for the Elderly using two administration approaches. *Ear and Hearing, 10*, 190-191.
- Sanders, D. (1993). *Management of hearing handicap: Infants to elderly*. Englewood Cliffs, NJ: Prentice-Hall.
- Schow, R., & Nerbonne, M. (1980). Hearing levels among elderly nursing home residents. *Journal of Speech and Hearing Disorders, 45*, 124-132.
- Schow, R., Smedley, T., & Longhurst, T. (1990). Self-assessment and impairment in adult/elderly hearing screening - Recent data and new perspectives. *Ear and Hearing, 11* (Suppl.), 17-27.
- Schum, D., & Matthews, L. (1992). SPIN test performance of elderly hearing-impaired listeners. *Journal of the American Academy of Audiology, 3*, 303-307.
- Silliman, E., & Lamanna, M.L. (1986). Interactional dynamics of turn disruption: Group and individual effects. *Topics in Language Disorders, 6*, 28-43.
- Stach, B. (1990). Central auditory processing disorders and amplification applications. In E. Cherow (Ed.), *Proceedings of the Research Symposium on Communication Sciences and Disorders and Aging. ASHA Reports, 19*, 150-156.
- Stach, B., Spretnjak, M., & Jerger, J. (1990). The prevalence of central presbycusis in a clinical population. *Journal of the American Academy of Audiology, 1*, 109-115.
- Tobias, J., Bilger, R., Brody, H., et al. (1990). Speech understanding and aging. In E. Cherow (Ed.), *Proceedings of the Research Symposium on Communication Sciences and Disorders and Aging. ASHA Reports, 19*, 134-142.
- Tolson, D., & McIntosh, J. (1992). Hearing impairment in elderly hospital residents. *British Journal of Nursing, 1*, 705-710.
- Tye-Murray, N. (1991). Repair strategy usage by hearing-impaired adults and changes following communication therapy. *Journal of Speech and Hearing Research, 34*, 921-928.
- Ventry, I., & Weinstein, B. (1982). The hearing handicap inventory for the elderly: A new tool. *Ear and Hearing, 3*, 128-134.
- Voeks, S., Gallagher, C., Langer, E., & Drinka, P. (1993). Self-reported hearing difficulty and audiometric thresholds in nursing home residents. *The Journal of Family Practice, 36*, 4-58.
- West, C., & Zimmerman, D. (1983). Small insults: A study of interruptions in cross-sex conversations between unacquainted persons. In B. Thorne, C. Kramarae, & N. Henley, (Eds.), *Language, gender, and society*. Rowley, MA: Newbury House.
-