

Impact of Self-Assessed Hearing Loss on a Spouse: A Longitudinal Analysis of Couples

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Objectives. Hearing loss is increasingly common among older persons and is negatively associated with health and well-being. Its impact on spouses, however, is poorly researched. This study analyzed the relationship between a spouse's self-assessed hearing loss and his or her partner's physical, psychological, and social well-being 5 years later.

Methods. Subjects were 418 older married couples from the Alameda County Study. Hearing loss and adjustment variables were assessed in 1994 and outcomes in 1999. Longitudinal analyses included multivariate statistical models using generalized estimating equations to adjust for paired data and partners' hearing loss, age, gender, chronic conditions, and financial problems.

Results. Spouse hearing loss increased the likelihood of subsequent poorer physical, psychological, and social well-being in partners. The negative impact of husbands' hearing loss on wives' well-being appears stronger than the reverse.

Discussion. Findings suggest that early diagnosis and treatment of hearing loss constitute important clinical strategies to enhance the well-being of both hearing-impaired individuals and their spouses and support policy change to cover hearing devices by insurance. Further research incorporating theoretical perspectives from communication theory and qualitative methodology would enhance understanding of how hearing loss impacts older couples and support refinement of interventions to promote quality of life.

ONE of the most prevalent chronic conditions in older persons, hearing loss is experienced by >25% of those age 65-74 and >40% of those age 75 and older (Rees, Duckert, & Carey, 1999; Schick & Schick, 1994). It has also shown a near doubling over the last 30 years in the United States, is higher at all adult ages for males than for females in frequencies above 1000 Hz, and is becoming increasingly prevalent at younger ages (Benson & Marano, 1994; Jackson, 1968; Jerger, Chmiel, Stach, & Spretnjak, 1993; Morrell, Gordon-Salant, Pearson, Brant, & Fozard, 1996; Pearson et al., 1995; Ries, 1994; Wallhagen, Strawbridge, Cohen, & Kaplan, 1997).

In spite of the prevalence of hearing loss, older adults and health care providers do not necessarily place much emphasis on its treatment because it is often considered a normal age-related change and not a life-threatening condition (Kochkin, 1999). Yet hearing loss has significant implications for health and functioning in old age as it is associated with multiple negative outcomes in physical, psychological, and social domains. These include diminished functional status and physical disability, depression, altered self-esteem, and loneliness (Chen, 1994; Mulrow et al., 1990; Rudberg, Furner, Dunn, & Cassel, 1993; Wallhagen, Strawbridge, Shema, Kurata, & Kaplan, 2001).

The negative effects of hearing loss are not difficult to understand if they are considered within the context of social relationships. Individuals are embedded in a social and cultural context that includes meaningful relationships and shared understandings. Social connectedness and strong social ties are shown repeatedly to be important factors in the health and well-being of older adults. As early as 1979, lack of strong social relations was associated with increased mortality (Berkman & Syme, 1979), a finding supported by additional animal

as well as human data (House, Landis, & Umberson, 1988). A recent comprehensive review that focused specifically on the positive effects of friends and family on health outcomes in older adults reaffirmed this association and documented associations between social relationships and physical health, mental health, and recovery from illness (Seeman, 2000). This latter review acknowledged, however, the potential negative effects of poor relationships, an issue that emphasizes the importance of interactive patterns (Rook, 1984) and the complex nature of social ties (Kawachi & Berkman, 2001; Wallhagen, 1999).

Communication is essential to relationships. Cronen, Pearce, and Harris (1982) noted that ordinary communication is "the locus of powerful forces through which persons cocreate, maintain, and alter social order, personal relationships, and individual identities. . . . [It] is not simply one of many things that persons do in relationships; it is the process of maintaining and creating relationships" (pp. 64-65). Hummert and Nausbaum (2001) even suggested that communication provides the essential link between health and successful aging. However, with the onset of hearing loss, long-standing patterns of communication can be altered and patterns previously taken for granted may no longer work. When communication breaks down, all persons involved in a relationship are affected.

Unfortunately, although studies have investigated the impact of hearing loss on the affected person, minimal data are available on its effects on the person's family or spouse. Some studies focus on families with hearing-impaired or deaf children (Calderon, Bargones, & Sidman, 1998; Lederberg & Everhart, 1998; Nybo, Scherman, & Freeman, 1998). However, if family members are included in studies of older adults, the focus is

usually on the family member's perception of the impact of hearing loss on the affected person rather than the family member. For example, a recent small study ($N = 40$) showed that when a significant other was involved in the pre-hearing aid fitting discussions, patients reported improved hearing aid benefit in terms of ease of communication and the aversiveness of sounds (Hoover-Steinwart, English, & Hanley, 2001); data were not collected on how this process affected the significant other. Newman and Weinstein (1988) studied the effects of a hearing aid on elderly hearing-impaired men and their spouses using the Hearing Handicap Inventory for the Elderly (HHIE) and the HHIE-SP (spouse version). The reduction in hearing handicap was greater for the hearing-impaired person than for the spouse, but the questionnaire asked the spouse to rate her husband, not herself (e.g., "Does your spouse feel handicapped by a hearing problem?"). Similarly, the McCarthy-Alpiner Scale of Hearing Handicap designed for a family member also requests information about the hearing-impaired individual (e.g., "He gets upset if he cannot hear or understand a conversation"; McCarthy & Alpiner, 1983). Guides addressing hearing loss that do discuss family interactions tend to emphasize assisting the family member to help the hearing-impaired individual join in or understand. Thus, the impact of one spouse's hearing loss on the other usually goes unexplored.

One Canadian study did assess the effects of hearing loss on intimate relationships, but in a working adult sample (Hétu, Jones, & Getty, 1993). Most of the article was a theoretical discussion of the problem, but some descriptive data on interviews held with both partners were included. The data highlight the stress, effort/fatigue, frustration, anger, resentment, and guilt that are experienced by the unimpaired partner, emphasizing the importance of interviewing partners as well as the person with the loss. Yet the authors pointed out that the impact on the unimpaired partner is rarely acknowledged.

In a recently published study from England, Morgan-Jones (2001) explored the effects of hearing loss in 11 couples and five single/divorced individuals. Her findings demonstrate the importance of the dyadic relationship in the management of hearing loss but also the potential of the hearing loss to disrupt this relationship. Several of the older single/divorced participants blamed hearing loss for the breakup of their marriages, and one couple divorced after the interviews were complete. However, the study is limited in providing an understanding of hearing loss in older adults and their spouses, because eight of the couples were young or middle-aged adults (aged 26–47), and five were married after the hearing loss was established in the affected individual.

Further supporting the potential effect that hearing loss in one family member can have on another are data suggesting that treating hearing loss may diminish caregiver burden (Desbiens, Mueller-Rizner, Virnig, & Lynn, 2001; Palmer, Adams, Bourgeois, Durrant, & Rossi, 1999). To our knowledge, however, no systematic study has been made of older husbands and wives where both have been directly assessed. Further, most studies are cross-sectional and thus limit the assessment of causality.

The purpose of the current study was to analyze the longitudinal impact of hearing loss experienced by a husband or wife on the well-being of the respective spouse. Domains of well-being explored parallel those found to be affected by

hearing loss in hearing-impaired individuals: physical, psychological, and social. Because gender differences are common in many aspects of gerontologic research and data suggest that marriage and relationships have a differential impact on men and women (Greeff, 2000; Moen, 1996), results are examined for spouses in general and for husbands and wives specifically. Findings are discussed in relationship to their implications for future research, clinical practice, and health policy.

Data are from a longitudinal study of health and well-being that has a sufficiently large sample size to allow for inclusion of potential confounding variables, adjustments for paired data, and statistical significance testing of any observed gender differences.

Specific research questions were the following: (a) To what extent does hearing loss in an older spouse affect the physical, psychological, and social well-being of his or her partner? and (b) Are any observed effects different for husbands than for wives?

METHODS

Sample

Designed to assess the longitudinal effects of a wide range of health behaviors and demographic characteristics on health and well-being, the Alameda County Study began in 1965 by enrolling 6,928 residents aged 17–94 selected by means of a random sample of households (Berkman & Breslow, 1983). Including the cities of Berkeley and Oakland, Alameda County was selected partly because its population was typical of other American urban areas in a variety of ways including age and ethnicity. Five follow-up surveys were conducted in 1974, 1983, 1994, 1995, and 1999 with response rates of 78–95%. Data for the analyses reported here were drawn from the 1994 and 1999 surveys.

Because all members of selected households were eligible to take part in the survey, 72% of those originally enrolled were married couples. Attrition because of mortality, divorce, separation, or other loss to follow-up reduced the proportion of intact couples over the length of the study, but the 1994 and 1999 follow-ups included 852 respondents (426 couples) who were still married to each other and living together. One or both members of 8 couples were missing data on hearing loss or adjustment variables and so were omitted, making the final sample size 418 couples. Missing data for individual outcome variables were few (mean = 4.5 couples). Mean age of the husbands and wives in 1994 was 65.4 and 62.8, respectively. Mean length of marriage was 39.7 years; 88.5% of the husbands and 89.0% of the wives were in their first marriage.

Measures

Hearing loss and adjustment variables were based on measures from 1994, with outcome measures based on the 1999 follow-up survey.

Hearing loss.—Hearing loss was self-assessed: Subjects were asked how much difficulty they had (even with a hearing aid) hearing and understanding words in a normal conversation, hearing words clearly over the telephone, and hearing well enough to carry on a conversation in a noisy room. Response sets and scores for level of difficulty for each of the three

questions were a great deal (3), some (2), a little (1), or none (0). Scores were summed. The resulting scale had a range from 0 to 9; higher scores indicate greater hearing loss. In a previous analysis of Alameda County Study data, this scale predicted subsequent poor mental health and well-being for subjects with increased levels of hearing loss (Wallhagen, Strawbridge, & Kaplan, 2001).

Health and other adjustment variables.—Chronic conditions included a count of the prevalence in the last 12 months of 11 conditions: arthritis, asthma, bronchitis, cancer, diabetes, emphysema, heart disease, high blood pressure, osteoporosis, peripheral artery disease, and stroke. Financial hardship included any one of the following: not having enough money in the last 12 months to buy clothing, fill a prescription, see a doctor, pay rent or mortgage, or (in the last 30 days) buy food.

Outcome Measures

Based on previous data regarding the widespread impact of hearing loss on the person with a hearing loss, outcome measures were chosen that assessed three areas of well-being: physical, psychological, and social.

Physical well-being included energy level, self-rated physical health, physical disability, and physical frailty. Energy level was assessed by asking subjects whether they had more or less energy than most people their age. Responses were coded as (1) a little or a lot less versus (0) a little or a lot more. Self-rated physical health was assessed by asking subjects whether their health was excellent, good, fair, or poor. Responses were coded as (1) fair or poor versus (0) good or excellent. Physical disability was assessed using seven variables: getting up from a stooping, kneeling, or crouching position; lifting or carrying a weight over 10 lb; pulling or pushing a large object; reaching or extending arms above the shoulder; standing up after sitting in a chair; stooping, crouching, or kneeling; and writing or handling small objects (Nagi, 1976; Rosow & Breslau, 1966). Those reporting having a lot of difficulty or needing help on one or more of the items were coded as (1) physically disabled versus (0) not physically disabled. Physical frailty was assessed with four questions asking how frequently in the last 12 months subjects had experienced a sudden loss of balance, weakness in their legs, weakness in their arms, and dizziness or fainting when they stood up quickly. Responding often or very often to any of the items was coded as (1) physically frail versus (0) not physically frail.

Psychological well-being included depression, self-rated mental health, negative affect, and happiness. Depression was measured using the 12 items that operationalize the diagnostic criteria for a major depressive episode outlined in *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., rev.; American Psychiatric Association, 1994). Designated the DSM-12D, the items were adapted from the PRIME-MD mood disorders section of the manual. Subjects experiencing five or more symptoms of depression almost every day for the last 2 weeks, including disturbed mood (feeling sad, blue, or depressed) or anhedonia (loss of interest or pleasure in most things), were coded as (1) experiencing a major depressive episode versus (0) not experiencing a depressive episode. Self-rated mental health followed the same format as self-rated physical health: Responses were coded as (1) fair or poor

versus (0) excellent or good. Negative affect was measured using the eight-item Bradburn Affect Balance Scale (Bradburn, 1969); those whose negative affect scores were higher than their positive affect scores were coded as (1) having negative affect versus (0) not having negative affect. Happiness was assessed using a single item, coded as (1) not too happy versus (0) pretty or very happy.

Social well-being was assessed by questions covering four topics: frequency of going out for entertainment, enjoyment of free time, feeling close to others, and marital quality. Frequency of going out for entertainment asked subjects how often they went out for entertainment, plays, or movies. Responses were coded as (1) never versus (0) sometimes or often. Enjoyment of free time asked subjects how much enjoyment they got out of their free time; responses were coded as (1) not very much or some versus (0) a lot. Feeling close to others was worded as "It's hard for me to feel close to others" and involved a true/false format. Coding was (1) true versus (0) false. Marital quality was measured by a question asking subjects whether their spouses gave them as much understanding as they needed; responses were coded as (1) no versus (0) yes but not completely or yes completely.

Analysis Strategy

Logistic regression was used to estimate the effects of the hearing loss of the spouse measured in 1994 on physical, psychological, and social well-being of his or her partner as measured in 1999. Each 1999 outcome for the partner was regressed on the hearing loss score of his or her spouse; covariates included the partner's age, gender, number of chronic conditions, financial hardship, and own hearing loss score in 1994.

Analyses of data from couples require special adjustments because the assumption of independent observations is not met. Husbands and wives married to each other share more attributes than would a sample of unrelated husbands and wives. The generalized estimating equation (GEE) method of Liang and Zeger (1986) can be used with logistic regression to deal with the correlations between members of a couple. Therefore, all logistic regression analyses were conducted using this method.

To first assess the impact of spouses' hearing loss on their partners' physical, psychological, and social well-being independent of gender, statistical models were run with gender included as an adjustment variable. Differences in outcomes between husbands and wives were then assessed by adding gender-by-spouse hearing loss interaction terms to each model. Owing to the reduced power associated with the use of such interaction terms, a less stringent significance level than .05 may be used to assess the likelihood that interaction is present (Greenland, 1989). We therefore used a .10 level to assess statistical significance of tests of gender differences. All other statistical tests used .05 (two-tailed) significance levels. To allow both the strength and the precision of the relationships to be better assessed, results are presented as odds ratios with their associated 95% confidence intervals. Calculations were performed using SAS software (PROC GENMOD) Version 8.2 (SAS, 1999).

RESULTS

Baseline characteristics are shown separately for husbands and wives in Table 1. The age range is broad, with over one

Table 1. 1994 Characteristics for 418 Couples

Characteristic	Husbands		Wives	
	No.	%	No.	%
Age (years)				
46-59	130	31.1	162	38.8
60-69	147	35.2	162	38.8
70-89	141	33.7	94	22.5
Ethnicity				
Black, Asian, Hispanic, other	51	12.2	52	12.4
White	367	87.8	366	87.6
Recent financial problems				
Yes	44	10.5	50	12.0
No	374	89.5	368	88.0
No. of chronic conditions				
0	182	43.5	181	43.3
1	150	35.9	131	31.3
2	50	12.0	68	16.3
≥3	36	8.6	38	9.1
Hearing loss scale score				
0	164	39.0	254	61.2
1	62	14.8	70	16.8
2	42	10.1	37	8.9
3	41	9.8	26	6.2
4	23	5.5	8	1.9
5	17	4.1	5	1.2
6	26	6.2	9	2.2
7	17	4.1	6	1.4
8	16	3.8	1	0.2
9	10	2.4	2	0.5

third of the husbands and nearly one fourth of the wives aged 70 or older. At follow-up in 1999, all subjects were, of course, 5 years older than the 1994 ages represented in the table. Recent financial problems were reported by 10% of the husbands and 12% of the wives. Over half of the subjects reported one or more chronic conditions. Consistent with the national figures discussed in the introductory section, the men scored higher on the hearing loss scale than did the women.

Results of the regression analyses are shown in Table 2. The odds ratios indicate the increased odds of each outcome for the partner for each 1 point increase in his or her spouse's hearing loss score 5 years earlier. All coefficients are adjusted for gender, age, financial problems, number of chronic conditions, and the partner's own hearing loss score.

The first set of results presents the outcomes for partners regardless of their gender. With the exceptions of two social variables (never go out for entertainment and not much understanding from spouse), all of the results are statistically significant and indicate that hearing loss of a spouse predicts poorer physical, psychological, and social well-being in his or her partner even when the partner's own hearing loss is taken into account.

The other two sets of odds ratios and associated confidence intervals in Table 2 present results for husbands based on their wives' hearing loss and for wives based on their husbands' hearing loss. All coefficients for the wives are statistically significant compared with none for the husbands. For understanding from spouse, the difference in outcomes between husbands and wives was statistically significant as tested by the gender interaction test.

DISCUSSION

Limitations of the analyses presented here include the use of self-assessed measures for hearing loss and the relatively wide age range of the subjects. Self-report data are useful for measuring a subject's own sense of hearing loss in the world in which he or she functions, but validation by and comparison with audiometric testing would add another dimension. Further, because there is a wide age range of over 40 years, it would be useful to use a larger data set to analyze whether the findings vary across different age cohorts. Given these limitations, these findings contribute to our current understanding of the impact of hearing loss on individuals and their spouses.

Previous data demonstrate the negative impact that hearing loss has on the affected individual. Still, although audiology texts note the importance of including family in the assessment and treatment process (Weinstein, 2000), minimal data are available on the impact of hearing loss on the hearing-impaired individual's family or spouse. This study begins to address this gap in our knowledge and demonstrates that the hearing loss of a spouse impacts the well-being of his or her partner across a wide range of domains. Further, whereas the odds ratios do not appear large, each odds ratio is based upon only a 1-point increase in the spouse's hearing loss score. Although the current data do not allow a clear delineation of the mechanisms by which hearing loss in one partner affects well-being across such a broad range of domains, some data inform the findings and suggest areas for future research as well as potential clinical and policy implications.

As noted earlier, communication is central to the formation and maintenance of relationships. Greeff (2000) found that the marital characteristic that was most important to well-functioning families was effective communication between spouses. However, communication usually evolves into a specific pattern or relational schema within any relationship (Koerner & Fitzpatrick, 2002). Additionally, individuals often have specific expectations regarding communication with different individuals and within different settings (termed "communication standards") and can experience discrepancies between these standards and what actually occurs (Caughlin, 2003). In the setting of long-term marriages, the onset of hearing loss creates a need to change potentially long-standing patterns of relating and can create unmet needs and affect quality of life. Further research is needed to gain a better understanding of how older adults negotiate changing roles and relationships in the context of hearing loss.

Another influencing factor may be the hearing-impaired individual's own altered well-being. Hearing loss is consistently found to impact the well-being of the affected individual, and data suggest that the psychological well-being of a spouse influences the psychological well-being of his or her partner (Dufouil & Alperovitch, 2000; Townsend, Miller, & Guo, 2001). In addition, if a spouse serves as a confidant, hearing loss alters the extent to which he or she can fulfill this role. Further, activities carried out as a couple are potentially constricted; for example, if the hearing-impaired spouse no longer wants to go to concerts or plays. This is reflected in the item "do not enjoy free time."

Of additional interest is the finding that although the gender interaction test identified only one statistically significant

Table 2. Longitudinal Impact of 1994 Spouse's Hearing Loss on Mental Health and Well-Being of Partner in 1999

Outcomes	Models Adjusting for Gender		Gender Interaction Models				
	Partners' Outcomes Associated With Spouses' Hearing Loss		Husbands' Outcomes Associated With Wives' Hearing Loss		Wives' Outcomes Associated With Husbands' Hearing Loss		Gender Differences Test <i>p</i> Value
	OR	95% CI	OR	95% CI	OR	95% CI	
Less energy than others own age	1.14	1.06-1.22	1.10	0.96-1.25	1.15	1.07-1.25	.50
Fair or poor physical health	1.12	1.02-1.23	1.06	0.89-1.26	1.15	1.04-1.28	.39
Physical disability	1.12	1.04-1.21	1.03	0.88-1.21	1.16	1.06-1.27	.21
Physical frailty	1.15	1.06-1.26	1.11	0.96-1.30	1.18	1.06-1.31	.58
Depressed	1.14	1.03-1.27	1.17	0.97-1.41	1.13	1.00-1.28	.77
Fair or poor mental health	1.17	1.07-1.29	1.05	0.87-1.28	1.24	1.10-1.38	.15
Not happy	1.20	1.06-1.37	1.17	0.95-1.43	1.22	1.05-1.42	.73
Negative affect	1.18	1.06-1.32	1.09	0.90-1.33	1.23	1.08-1.41	.32
Never go out for entertainment	1.06	0.98-1.15	0.97	0.83-1.14	1.11	1.00-1.22	.19
Do not enjoy free time	1.08	1.00-1.17	1.06	0.93-1.21	1.10	1.01-1.19	.63
Hard to feel close to others	1.11	1.03-1.20	1.11	0.97-1.26	1.11	1.02-1.22	.96
Not much understanding from spouse	1.07	0.96-1.20	0.75	0.46-1.22	1.14	1.02-1.28	.09 ^a

Notes: Odds ratios (OR) and confidence intervals (95% CI) are based upon a 1-point increase in the spouse's hearing loss score. All models adjust for age, gender, financial problems, number of chronic conditions, and hearing loss of the partner. Confidence intervals that do not cross 1.0 are statistically significant at the .05 level.

^aGender difference is statistically significant using a gender-by-spouse hearing loss interaction test.

difference between husbands and wives and thus focuses attention back on the noninteraction models, the gender-specific results suggest that the findings of the combined models are driven by the impact of a husband's hearing loss on his wife rather than on both partners equally. More research is needed to further support these findings, but data from communication theory as well as other literature provide a perspective that may explain the differential impact of hearing loss on a wife and suggest directions for future investigations.

Communication and relationship needs may differ across the life span between men and women (Greeff, 2000; Moen, 1996; White, 1989). Thus, hearing loss may differentially influence communication, relationships, and well-being in older couples. Moen (1996) noted that research has shown a curvilinear relationship between the family's life stage and the perceived marital quality of both men and women, but that, in general, men often derive more social and emotional support from within marriage than do women, who have broader social ties. Greeff (2000) found that women at several stages in their lives were less satisfied than men with the type and level of communication in their marriage.

Acitelli (2002) found that for wives, both marital and life satisfaction were related to the proportion of time that was spent talking about the marital relationship; this was not true for husbands. Both men's and women's relationship talk was negatively correlated with both partners' depression and positively correlated with sense of equity in the marriage. However, for women, relationship talk was also associated with six additional outcomes including greater satisfaction with the relationship and feeling cared for in the relationship. Further, Acitelli (2002) noted that studies have consistently demonstrated that variables emphasizing the connections between partners are more important to the well-being and relationship satisfaction of wives than of husbands.

These data suggest that communication may be more important for women in marriage than for men. They also suggest that women may enter a relationship with communica-

tion standards that differ from men. Acitelli (2002) suggested that men view relational talk as important in problematic situations and as a means to an end. In contrast, women may feel that relational talk is an end in and of itself and thus important in both problematic and normal situations. If communication is more central to marital and life satisfaction for women, alterations in the ability to communicate effectively and easily with a hearing-impaired spouse may have a more detrimental impact on wives than husbands.

Alternatively, if women value communication more than men (Garstecki & Erler, 1999), they may be more willing to acknowledge hearing loss and utilize strategies to minimize their deficit. Some data do suggest that women are less likely to return hearing aids than men (Northern & Beyer, 1999). This would minimize the impact of a woman's hearing loss on her husband. In addition, several epidemiologic studies found that whereas men experience greater high frequency loss, women may exceed men in low frequency loss (≤ 1 kHz), although these differences may be the result of testing artifact (Jerger et al., 1993; Pearson et al., 1995). If true, these findings could suggest that men and women may have difficulty hearing in different settings and may differ in their experience of hearing loss. However, data regarding the effects of gender on the response to hearing loss are not consistent (Erdman & Demorest, 1998), and only minimal data exist addressing any differences in terms of their implications for outcomes or approaches to care.

Hearing loss is a significant problem for older adults and their partners, affecting communication and quality of life. To date, few studies have focused on the partner of the person with hearing loss, even though it is stressed that interventions should involve the family. Our data document the impact of an individual's hearing loss on his or her partner but suggest that this effect is predominantly on a wife rather than a husband. Further research is needed in this area to replicate these findings. To date, much of the literature on communication has occurred in isolation of the research on aging. Utilizing theoretical perspectives from communication theory may facilitate an

understanding of changing relationships with age, especially in the context of hearing loss. In addition, research using qualitative methods would contribute to our understanding of the meaning of hearing loss in older couples, strategies used to deal with hearing loss, and how they negotiate changes in long established communication patterns. Further, more research using both quantitative measures of hearing loss and qualitative assessments is also needed to investigate potential differences in the experience of hearing loss between men and women. Such data are needed to better target interventions to the families of hearing-impaired individuals and to promote the quality of life of older adults.

Although further research is needed, the findings from the current study have clinical and policy implications. As noted earlier, most health care providers pay minimal attention to hearing deficits because they are not immediately life threatening. Further, when problems are addressed interventions are generally aimed at the affected person with less attention paid to family members (Fisher & Weihs, 2000; Moen & Forest, 1995). Prior data demonstrated the impact of hearing loss on the well-being of older adults; data from the current study demonstrate that hearing loss has broader implications, affecting not only the person with hearing loss but also his or her spouse. This emphasizes the importance of treating hearing loss to promote the health and well-being of both affected individuals and their partners.

Addressing hearing loss has other potential clinical ramifications. The management of chronic illness occurs within the context of the family, and the characteristics of family relationships can influence disease management (Fisher & Weihs, 2000). Because hearing loss influences communication and can affect relationships, improving hearing capacity may facilitate the management of other chronic conditions. It can also facilitate communication with health care providers and promote understanding of treatment strategies. Additional research is needed to further understand these relationships.

Finally, policy changes are also needed. As Moen and Forest (1995) noted, whereas policies tend to focus on families in their childrearing phase, what we need are policies that promote the effective functioning of families and family members at all stages of life. Currently, Medicare and most other insurance policies do not cover the cost of routine hearing evaluations or hearing aids, and Medicaid limits who is eligible and covers only one aid. These policies ignore the wide-ranging impact of hearing loss and are not designed to assist families with changing communication needs across the life span. More data are needed on the cost implications of not providing the resources necessary to facilitate communication.

In summary, hearing loss has a significant effect not only on older adults but also on their spouses. Because altered communication affects a broad range of daily activities, policies and interventions designed to enhance hearing capacity and promote effective communication strategies may have an important effect on the well-being of older adults and their partners.

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