Does Type of Disease Matter? Gender Differences Among Alzheimer's and Parkinson's Disease Spouse Caregivers

Karen Hooker, PhD,¹ Margaret Manoogian-O'Dell, MEd,¹ Deborah J. Monahan, PhD,² Leslie D. Frazier, PhD,³ and Kim Shifren, PhD⁴

Purpose of study: Mental health outcomes are widely reported among spouse caregivers, with wives generally faring worse than husbands. We hypothesized that gender differences would not be as strong in a cognitively intact group because caring for cognitively intact spouses may involve less severe reciprocity losses. We also examined gender differences in coping strategies within each group. Design and method: 175 spouse caregivers for patients with Alzheimer's disease (AD; n = 88) and Parkinson's disease (PD; n = 87) were interviewed. Participants completed perceived stress (PSS), depression (CES-D), state anxiety (STAI, Form Y), and coping strategies (WCCL-R) measures. Results: Wives in the AD group reported significantly worse mental health outcomes than husbands, while wives and husbands in the PD group showed no differences. AD caregiving wives were less likely than husbands to use problem-focused coping strategies. There were no significant gender differences in either group for social support or emotion-focused coping. Implications: Loss of reciprocity in marital relationships may affect women more negatively than men. Future studies that address underlying mechanisms of gender differences and focus on similar caregiving situations and contexts deserve attention.

Key Words: Mental health, Coping strategies, Women, Gender differences

Researchers who study caregivers have been intrigued by the findings in the caregiving literature that seem to suggest that men experience fewer negative outcomes than women regarding mental and physical health, social participation, and financial stability when caregiving for older family members (e.g., Barush & Spaid, 1989; Fitting, Rabins, Lucas, & Eastham, 1986; Gold, Franz, Reis, & Senneville, 1994). Specifically, researchers have reported that female caregivers experience higher levels of burden when compared with male caregivers (e.g., Barush & Spaid, 1989; Gold et al., 1994; Miller & Cafasso, 1992; Pruchno & Resch, 1989a; Rose-Rego, Strauss, & Smyth, 1998) and appear to be at higher risk for depression (e.g. Collins, Stommel, Wang, & Given, 1994; Dura, Haywood-Niler, & Keicolt-Glaser, 1990; Fitting et al., 1986; Pruchno & Resch, 1989a; Stuckey, Neundorfer, & Smyth, 1996). However, differences reported by male and female caregivers could be due to methodological reasons such as a greater proportion of women than men in most studies (Miller, 1990; Miller & Cafasso, 1992) and less attentiveness to emotions resulting in a lack of recognition or reporting of distress among male caregivers (Lutzky & Knight, 1994). The fact that women report depression more than men is widely known (e.g. Nolen-Hoeksma, 1987) and implies that gender differences in caregiving research may have nothing to do with caregiving per se, but rather with gender differences seen in the general population. However, in a comprehensive synthesis of 31 empirical research articles on gender differences in caregiving, Yee and Schulz (2000) conclude that female caregivers report greater excess psychiatric morbidity than male caregivers when compared with noncaregiving community samples.

It is also difficult to sort out the possible reasons behind gender differences when studies have included mixed caregiver-care recipient relationships (e.g., spouses, parent-child, other), mixed disease status of care recipients, and residential situations that varied widely (e.g., living with the care recipient and providing round-the-clock care vs care recipient living outside the household). Caregiving research has reached the point where more clearly defined samples are necessary to advance knowledge further. The purpose of this study was to examine gender differences among sets of cleanly defined caregiving groups. Specifically, spouses in two distinct disease categories, one that involved cognitive impairment and one

This research was supported by the National Institute of Mental Health (Grant R03-MH46637).

Address correspondence to Karen Hooker, Oregon State University, Human Development and Family Sciences, 323-A Milam Hall, Corvallis, OR 97331-5102. E-mail: hookerk@orst.edu

¹Department of Human Development and Family Sciences, Oregon State University, Corvallis, OR.

²School of Social Work, Syracuse University, NY.

³Department of Psychology, Florida International University, Miami.

⁴Psychology Department, Towson University, MD.

that involved physical impairment, were utilized. Although our samples are neither large nor nationally representative of all caregivers, they are appropriate for an exploratory study and no smaller than many studies of gendered caregiving in the literature (see Yee & Schulz, 2000).

The most common disorder in caregiving studies is dementia (Murrel & Meeks, 1992), and those that have focused on gender differences are also disproportionately based on dementia caregiving samples (Yee & Schulz, 2000). It may be that giving care to someone who is losing his or her mental capacities is especially burdensome for wife caregivers. One eventual outcome of a dementing illness on the marital relationship is that the relationship loses the potential for reciprocity and shared meaning (Wright 1991, 1993). Women are more distressed in inequitable exchanges than men (Sprecher, 1992).

This loss of shared meaning and reciprocity in the marital relationship may affect overall psychological well-being more greatly for women than for men. Research on long-term marriages has found that wives' physical and psychological health are correlated more highly with marital satisfaction than are husbands' (Gilford, 1986; Levenson, Carstensen, & Gottman, 1993). Acitelli and Antonucci (1994) provide data to support this idea, as perceptions of social support in marriage were more strongly related to the marital satisfaction and general well-being of wives than of husbands. This is not to deny the pain that men experience in losing the reciprocity of social support in their long-term marital partner. However, based on the studies cited above, it appears that men may be able to "compartmentalize" this loss more effectively so that the negative effect on their overall well-being is not as damaging as it is for women. This "loss of shared meaning" hypothesis, and expected gender differences therein, is a plausible explanation for gender differences among spouse caregivers caring for a partner. A comparison caregiving sample that specifically excluded dementia would be necessary to examine this idea. Hence, we selected a sample that contained dementia and nondementia groups of spouse caregivers.

Some researchers have identified the use of coping skills as a potential explanation for the mental health differences that women and men express in the caregiving relationship (Pruchno & Resch, 1989b). In their study of coping skills utilized among spouses caring for persons with Alzheimer's disease, Rose, Strauss, Neundorfer, Smyth, and Stuckey (1997) reported that caregivers exhibiting higher distress utilized the emotion-focused coping skill of wishfullness, a strategy more often utilized by wives. Low-distress caregivers reported greater use of acceptance and the problemfocused strategy of instrumental coping, demonstrated more often by husbands. According to Lutzky and Knight (1994), gender differences in caregiver distress appear to be related to differential coping styles, especially when trying to escape or avoid a problem. Thus, a secondary focus of our study was to examine coping strategies for each caregiving sample because coping is a mediator between stress and mental health.

We chose to contrast Alzheimer's disease (AD) spouse caregivers with Parkinson's disease (PD) spouse caregivers. These disease groups were targeted because there are many potentially confounding variables that are controlled for with these populations. Both AD and PD are chronic diseases in which later life onset is most common and both show variable and unpredictable patterns (which can be stressful for caregivers). Neither disease is one in which there is immediate danger of death and yet symptoms manifested in both AD and PD are intrusive and would affect a caregiver's daily routine (e.g., Levin & Weiner, 1987; Vernon & Stern, 1988). In addition, both diseases are progressive and irreversible. In AD, the most common symptoms are the loss of cognitive capacities, especially memory. In contrast, PD produces progressive degeneration of motoric function and primary symptoms include tremor, rigidity, bradykinesia (slowness in activating movement), stiffness, difficulty with balance, and difficulty with walking (Delwaide & Gonce, 1988; Stern, 1988). Although a subset of PD patients develops dementia, for the purposes of this study, only caregivers of PD patients without coexisting dementia were included in order to make a clean comparison of dementia caregivers with caregivers of spouses exhibiting only physical disabilities.

In sum, we were primarily interested in determining if there was a pattern of reported differences in stress, depression, and anxiety among female and male caregivers in the AD and PD groups. Because the literature suggests that gender differences in mental health outcomes may be due to gender differences in coping differences, a secondary focus of our study was to determine if women and men utilize significantly different sets of specific coping strategies.

Methods

Sample

The analyses presented in this article are based on data gathered from 175 spouse caregivers (88 AD, 87 PD) recruited from newspaper solicitations, physician referrals, support groups, and a hospital-based dementia evaluation clinic in upstate New York. Screening criteria of participants selected for the study included: (a) confirmation of diagnosis of AD or PD; (b) one year (minimum) since spousal diagnosis of AD or PD; (c) coresidence of couple in same household; and (d) intact cognitive function among PD patients. Both AD and PD patients were screened with the Folstein Mini-Mental State Exam (MMSE; Folstein, Folstein, & McHugh, 1975) to determine cognitive abilities. Three of the PD patients who scored below 24 on the MMSE were not considered cognitively intact and were consequently not included in the data analyses.

Alzheimer's disease group.—As shown in Table 1, 52 (59.1%) of the 88 AD caregivers were female.

Most were Caucasian, 3 were African American, and 1 was Asian. Caregivers ranged in age from 39 to 89 years, with the average age of wife caregivers being 68.1 years (SD = 9.7) and of husband caregivers being 73.1 years (SD = 8.5). The average age of the female care recipients was 73.9 years (SD = 10.1) and the male care recipients was 73.5 years (SD = 9.4), with ages ranging from 40–93 years. Caregivers had been married an average of 43.4 years (SD = 13.8), with wives caring for their spouse an average of 3.8 years (SD = 2.7) and husbands caring for their spouse an average of 5.3 years (SD = 4.7). Female caregivers averaged 13.2 years of education (SD = 3.1) and male caregivers averaged 13.4 years of education (SD = 4.2).

Parkinson's disease group.—Of the 87 PD caregivers, 55 (63.2%) were female. All respondents were Caucasian except for 1 African American. Caregivers' ages ranged from 41 to 82 years with the average age of the wife caregivers being 65.9 years (SD = 9.4years) and of the husband caregivers being 68.7 years (SD = 7.3). The average age of the female care recipients was 70.2 years (SD = 9.2) and the average age of the male care recipients was 66.6 years (SD =7.5), with ages ranging from 45–85 years. Married an average of 39.6 years (SD = 12.6 years), caregivers had been caring for their spouses an average of 7.6 years (SD = 7.1 years), with wives caring for 7.7 years (SD = 8.5) and husbands caring for 7.5 years (SD = 4.8). Female caregivers averaged 14.3 years of education (SD = 2.7 years) and male caregivers averaged 13.4 years of education (SD = 3.0).

Measures

Perceived stress.—The Perceived Stress Scale (PSS), an often-used, psychometrically sound measure designed to assess the degree to which situations are appraised as stressful (Cohen, Kamarck, & Mermelstein, 1983), was utilized for this study. An example item from this 14-item scale is: "In the last month, how often have you been able to control the way you spend your time?" Response categories are never (4), almost never (3), sometimes (2), fairly often (1), and very often (0), with higher scores indicating more perceived stress. Cronbach's alpha for the PSS used in this study was .87.

Depression.—To determine levels of depression among caregivers, we used the Center for Epidemiological Studies–Depression Scale (CES-D; Radloff, 1977), a 20-item scale used to assess the overall level of depression experienced in the past week. It has shown strong psychometric characteristics in many studies, including studies specifically using samples of spouse caregivers (e.g., Hooker, Monahan, Shifren, & Hutchinson, 1992; Pruchno & Resch, 1989a). Higher scores on this scale indicate more depressive symptomatology. The Cronbach's alpha for the CES-D with this sample was .86.

State anxiety.—Spielberger's State-Trait Anxiety Inventory (STAI, Form Y; Spielberger, 1980) was used to measure state anxiety. Each scale (trait and state) contains 20 items and has been shown (e.g., Buros, 1978; Levitt, 1967) to have strong psychometric properties. Higher scores indicate higher levels of anxiety. Cronbach's alpha for this sample was .92.

Coping strategies.—A revised version of the Ways of Coping Checklist (WCCL-R; Vitaliano, Russo, Carr, Maiuro, & Becker, 1985), which has been shown to have better psychometric properties than the original version, was used to assess five coping strategies: Problem-Focused Coping, Social Support Coping, Blamed Self, Avoidance, and Wishful Thinking. The scales Blamed Self, Avoidance, and Wishful Thinking were combined into one scale labeled Emotion-Focused Coping (as done in Vitaliano, DeWolfe, Maiuro, Russo, & Katon, 1990). By combining these three coping strategies, we were able to examine the

Table	1. Demographic	Characteristics and	Mental Health	Outcomes of A	Alzheimer's	Disease and	Parkinson's	Disease (Caregivers

	Type of Disease					
	Alzheime	r's Disease	Parkinson's Disease			
Variable	Wives $(n = 52)$	Husbands $(n = 36)$	Wives $(n = 55)$	Husbands $(n = 32)$		
Mean age	68.1 (9.7)	73.1 (8.5)	65.9 (9.4)	68.7 (9.7)		
Mean age of care recipient	73.9 (10.1)	73.5 (9.4)	70.2 (9.2)	66.6 (7.5)		
Gender (%)	52 (59.1)	36 (40.9)	55 (63.2)	32 (36.8)		
Years of education	13.2 (3.1)	13.4 (4.2)	14.3 (2.7)	13.4 (3.0)		
Years caregiving	3.8 (2.7)	5.3 (4.7)	7.7 (8.5)	7.5 (4.8)		
Years married	41.1 (14.9)	46.6 (11.6)	38.4 (13.2)	40.6 (11.6)		
MMSE of spouse	8.0 (8.4)	6.5 (8.2)	27.8 (3.0)	27.8 (4.0)		
CES-D	16.6 (12.0)	12.8 (9.3)	9.1 (7.1)	11.1 (8.1)		
Stateanx	43.0 (13.7)	37.1 (12.4)	35.4 (11.4)	34.1 (10.7)		
PSS	24.8 (11.3)	20.0 (7.6)	19.9 (8.1)	18.7 (8.2)		

Notes: Values are means with standard deviations in parentheses. MMSE = Mini-Mental State Exam; CES-D = Center for Epidemio-logic-Depression Scale; Stateanx = State Anxiety Inventory; PSS = Perceived Stress Scale.

within-group shows how potentially misleading these overall regressions can be. Specifically, we found that there were no significant gender effects for caregivers in the PD group. Wives and husbands did not differ significantly from one another on depressive symptomatology, perceived stress, or state anxiety. However, consistent with our prediction, we found that there were significant gender differences among wives and husbands in the AD caregiving group. AD caregiving wives tended to report greater depression and were significantly more stressed and anxious than were AD caregiving husbands. *Gender and Coping Strategies* As suggested by the literature, a secondary focus of this study was to examine whether it was plausible

ferences on stress and anxiety. However, looking

As suggested by the literature, a secondary focus of this study was to examine whether it was plausible that gender differences in coping strategies underlie differences in outcome measures. In this set of regression analyses, we controlled for number of years caregiving, age, and socioeconomic status. We were surprised to find no significant differences in coping strategies by women or men in either the AD or PD caregiving groups for social support and emotion-focused coping. However, in the AD caregiving group, wives reported using significantly less problem-focused coping than did husbands (*t* [78] = 2.04, *p* < .05, two-tailed).

Discussion

Many caregiving studies that examine gender differences suggest that female caregivers, when compared with male caregivers, experience higher levels of burden (e.g. Barush & Spaid, 1989; Gold et al., 1994; Miller & Cafasso, 1992; Pruchno & Resch, 1989a; Rose-Rego et al., 1998) and are at higher risk for depression (e.g., Collins et al., 1994; Dura et al., 1990; Fitting et al., 1986; Pruchno & Resch, 1989a;

Table 2. Gender Regressed on Mental Health Variables

	Parameter		2
Dependent Variable	Estimate (SE)	t Value	p^{a}
CES-D: Depression			
Overall sample	-1.77 (1.5)	-1.16	.246
PD group only	1.22 (1.64)	0.74	.460
AD group only	-4.83 (2.58)	-1.87	.064*
PSS: Perceived Stress			
Overall sample	-3.49 (1.46)	-2.38	.018***
PD group only	-1.46 (1.85)	-0.79	.433
AD group only	-5.76 (2.33)	-2.47	.015***
Stateanx: State Anxiety			
Overall sample	-4.31 (2.01)	-2.14	.034**
PD group only	-2.04 (2.55)	-0.80	.426
AD group only	-6.78 (3.25)	-2.09	.040**

Notes: For overall sample, number of years caregiving, age, and group were entered into regressions in addition to gender. For group only, number of years caregiving and age were entered into the regressions in addition to gender. PD = Parkinson's disease; AD = Alzheimer's disease.

^aSignificance tests are two-tailed.

*p < .10; **p < .05; ***p < .02.

construct of "emotion-focused coping" referred to so often in the literature (e.g., Folkman & Lazurus, 1980; Pearlin & Schooler, 1978). Additionally, having a single measure for this coping strategy is more parsimonious and reduces the number of variables for analytic purposes. Cronbach's alpha for the combined scale (Emotion-Focused Coping) was .84, Problem-Focused Coping was .79, and Social Support Coping was .80.

Procedure

Potential participants who agreed to participate in the study received a phone call from a member of the research team to describe the study and answer questions. Potential participants were also screened during this phone conversation to ensure that the study criteria were met. Once it was determined that participants met the study requirements, trained female doctoral students in psychology interviewed caregivers in their homes. Interviews typically lasted 1.5 hours and participants also completed a mail-back instrument on their own that was sent to the investigators in the week following the interview. Caregivers were paid \$25.00 for their participation in the study.

Data were analyzed using multivariate analysis of variance (MANOVA) to check for differences between caregiving groups on demographic variables. Gender effects were analyzed using sets of regression analyses. All analyses were conducted using SAS (SAS Institute, 1985).

Results

MANOVA results indicated that AD caregivers and spouses were significantly older than PD caregivers and spouses. The PD caregivers had known of their spouse's diagnosis for a significantly longer period of time than had AD caregivers. There were no other significant demographic differences between these groups.

Gender and Mental Health

We predicted gender to have a stronger effect, with women affected more negatively, in the AD caregiving group. We ran a series of multiple regression analyses to examine the effect of gender in the whole sample (both groups combined) and then to focus more specifically on gender effects within caregiving groups. Our intent here was to focus on the effect of gender on mental health, not to find the best set of predictors for mental health. Because previous research, however, had shown that age and number of years caregiving were important variables to consider, these were included in regressions. Accordingly, the gender effect was partialled for these variables (i.e., we "controlled for" age and years caregiving).

As shown in Table 2, the effect of gender on mental health is dependent on which caregiving group is in the analysis. The overall sample regressions (where groups were combined) showed no gender difference on depression, but did show significant gender difStuckey et al., 1996). However, because of the distinct delineation of our sample into two specific disease groups, we found that our data indicated that only wives in the dementia caregiving group fared significantly worse than husbands in terms of their mental health. The data in the nondementia group indicated that female and male spousal caregivers showed no significant differences in any of the mental health variables. Simply, women appeared to be no worse off than men in spousal caregiving relationships unless the impairment was cognitive.

Because dementia caregiving studies are disproportionately represented in the literature (Murrell & Meeks, 1992), they may present a skewed picture of gender differences in caregiving. Data from the National Long-Term Care Channeling Demonstration (Mui, 1995) also support this interpretation. Wife caregivers had significantly higher emotional strain scores than husband caregivers, and in that data set, husband care recipients had greater cognitive impairment than wife care recipients. A recent study of PD caregivers for patients with mental impairments as well as physical impairments showed that mental symptoms of the PD patients were the most powerful predictors of distress in caregivers (Aarsland, Larsen, Karlsen, Lim, & Tandberg, 1999). We suggest that the negative sequelae of marital relationship losses in the dementia caregiving context (Wright 1991, 1993) may spill over into general well-being to a greater extent for wives than for husbands. Studies that have utilized intensive interviews have hinted at both the costs of managing emotions when caring for a person with dementia (MacRae, 1998) and the potential emotional strain that wives may experience in the caregiving role when they assume authority positions over their husbands (Miller, 1987). Clearly, we see a need for more gualitative research in this area as we attempt to more fully understand why women and men differ in mental health outcomes when caring for a spouse with cognitive impairments.

As a secondary focus of our study, we examined coping strategies as possible contributing factors to the gender differences of reported mental health outcomes of the caregiving experience. Our results indicated that, with the exception of problem-focused coping among AD caregivers, women and men in our study did not differ in their use of social support or emotion-focused coping strategies. Although other studies have indicated that women caregivers tend to use more emotion-focused coping methods (Pruchno & Resch, 1989b) with a consequential higher level of distress (Pruchno, Burant, & Peters, 1997; Rose et al., 1997), our data did not substantiate this conclusion. Rose and colleagues (1997) also found that the use of problem-focused coping strategies was associated with lower levels of caregiving distress. Although we did not find strong evidence that differential coping strategies among female and male caregivers in the AD group explained the differences in mental health variables between women and men, practitioners may want to target caregiving AD wives as good candidates for training in problem-focused coping strategies.

The present study utilized samples that were small and fairly homogeneous in demographic characteristics so that generalization to caregivers of other races and living in different geographic areas is not possible. Like many caregiving studies, all of the measures were based on self-report. These limitations are balanced by the exploratory goals of this initial study and by the fact that the samples were well defined in terms of relationship and disease of the impaired care recipient. In studies where relationship status and/or disease of the care recipient are not considered (i.e., a mixed group of caregivers), there is a potential for a confused understanding of the possible mechanisms underlying any gender differences that are manifested. Thus, the clear delineation of groups is an important strength of our study. Additionally, although there were fewer men than women in our samples, we had similar proportions of each sex in each disease group. We had multiple measures of mental health, and findings were consistent across measures, lending weight to our conclusions.

Ultimately the meaning of caregiving is constructed in the relationships and contexts within which the care recipients and caregivers interact. Marital relationships exist and flourish to serve a variety of individual and family functions. Anecdotally, many of our PD caregivers resisted the term "caregiver" probably because that term has come to signify dependence and loss of reciprocity. None of our AD caregivers hesitated to use this term for themselves. To the extent that women are more likely than men to fuse marital satisfaction with general well-being, they will be at a disadvantage in the dementia caregiving scenario because of the loss of reciprocity. This phenomenon may be more common among women, but is certainly not specific to them. Caregiving research is becoming increasingly theoretically driven (e.g. Aneshensel, Pearlin, Mullan, Zarit, & Whitlatch, 1995; Hooker, Monahan, Bowman, Frazier, & Shifren, 1998), though writings about gender differences generally remain at the descriptive level. We urge researchers interested in exploring gender differences to design research that can address the mechanisms that are hypothesized to be operating in producing the differences and to structure studies that look at gender differences within similar caregiving situations and contexts.

References

- Aarsland, D., Larsen, J. P., Karlsen, K., Lim, N. G., & Tandberg, E. (1999). Mental symptoms in Parkinson's disease are important contributors to caregiver distress. *International Journal of Geriatric Psychiatry*, 10, 866–874.
- Acitelli, L. K., & Antonucci, T. C. (1994). Gender difference in the link between marital support and satisfaction in older couples. *Journal of Personality and Social Psychology*, 67, 688–698.
- Aneshensel, C. S., Pearlin, L. I., Mullan, J. T., Zarit, S. H., & Whitlatch, C. J. (1995). Profiles in caregiving: The unexpected career. San Diego, CA: Academic.
- Barusch, A. S., & Spaid, W. M. (1989). Gender differences in caregiving: Why do wives report greater burden? *The Gerontologist*, 29, 667–676.
- Buros, O. K. (1978). The eighth mental measurements year book. Highland Park, NJ: Grython.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24*, 385–396.
- Collins, C., Stommel, M., Wang, S., & Given, C. W. (1994). Caregiving

- Delwaide, P. J., & Gonce, M. (1988). Pathophysiology of Parkinson's signs.
 In J. Jankovic & E. Tolosa (Eds.), *Parkinson's disease and movement disorders* (pp. 59–73). Baltimore: Urban and Schwarzenberg.
- Dura, J. R., Haywood-Niler, E., Kiecolt-Glaser, J. K., (1990). Spousal caregivers of persons with Alzheimer's and Parkinson's disease dementia: A preliminary comparison. *The Gerontologist*, 30, 332–336.
- Fitting, M., Rabins, P., Lucas, M. J., & Eastham, J. (1986). Caregivers for dementia patients: A comparison of husbands and wives. *The Gerontologist*, 26, 248–252.
- Folkman S., & Lazarus, R. S. (1980). An analysis of coping in a middleaged community sample. *Journal of Health and Social Behavior, 21*, 219–239.
- Folstein, M. F., Folstein, S. E., & McHugh, P. R. (1975). "Mini-mental state": A practical method for grading the cognitive state of patients for the clinician. *Journal of Psychiatric Research*, 12, 189–198.

Gilford, R. (1986). Marriages in later life. Generations, 10, 16-20.

- Gold, D. P., Franz, E., Reis, M., & Senneville, C. (1994). The influence of emotional awareness and expressiveness on care-giving burden and health complaints in women and men. *Sex Roles*, *31*, 205–224.
- Hooker, K., Monahan, D. J., Bowman, S. R., Frazier, L. D., & Shifren, K. (1998). Personality counts for a lot: Predictors of mental and physical health of spouse caregivers in two disease groups. *Journal of Gerontol*ogy: Psychological Sciences, 53B, P73–P85.
- Hooker, K., Monahan, D. J., Shifren, K., & Hutchinson, C. (1992). Mental and physical health of spouse caregivers: The role of personality. *Psychology and Aging*, 7, 367–375.
- Levenson, R. W., Carstensen, L.L., & Gottman, J. M. (1993). Long-term marriage: Age, gender, and satisfaction. *Psychology and Aging*, 8, 301–313.
- Levin, B. E., & Weiner, W. J. (1987). Psychosocial aspects. In W. O. Koller (Ed.), Handbook of Parkinson's disease (pp. 465–474). New York: Marcel Dekker.
- Levitt, E. E. (1967). The psychology of anxiety. Indianapolis: Bobbs– Merrills.
- Lutzky, S. M., & Knight, B. G. (1994). Explaining gender differences in caregiver distress: The roles of emotional attentiveness and coping styles. *Psychology and Aging*, 9, 513–519.
- MacRae, H. (1998). Managing feelings: Caregiving as emotion work. *Research on Aging, 20,* 137–160.
- Miller, B. (1987). Gender and control among spouses of the cognitively impaired: A research note. *The Gerontologist*, 27, 447–453.
- Miller, B. (1990). Gender differences in spouse caregiver strain: Socialization and role explanations. *Journal of Marriage and the Family, 52*, 311–321.
- Miller, B., & Cafasso, L. (1992). Gender differences in caregiving: Fact or artifact? *The Gerontologist*, 32, 498–507.
- Mui, A. (1995). Multidimensional predictors of caregiver strain among older persons caring for frail spouses. *Journal of Marriage and the Family*, *57*, 733–740.
- Murrell, S. A., & Meeks, S. (1992). Depressive symptoms in older adults: Predispositions, resources, and life experiences. In K. W. Schaie & M. P. Lawton (Eds.), Annual review of gerontology and geriatrics (pp. 261– 286). New York: Springer.
- Nolen-Hoeksema, S. (1987). Sex differences in unipolar depression: Evidence and theory. *Psychological Bulletin, 101,* 259–282.
- Pearlin, L. I., & Schooler, C. (1978). The structure of coping. *Journal of Health and Social Behavior, 19,* 2–21.

- Pruchno, R. A., Burant, C. J., & Peters, N. D. (1997). Coping strategies of people living in multigenerational households: Effects on well-being. *Psychology and Aging, 12*, 115–124.
- Pruchno, R. A., & Resch, N. L. (1989a). Husbands and wives as caregivers: Antecedents of depression and burden. *The Gerontologist*, 29, 159– 165.
- Pruchno, R. A., & Resch, N. L. (1989b). Mental health of caregiving spouses: Coping as mediator, moderator, or main effect? *Psychology* and Aging, 4, 454–463.
- Radloff, L. S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1, 385–401.
- Rose, S. K., Strauss, M. E., Neundorfer, M. M., Smyth, K. A., & Stuckey, J. C. (1997). The relationship of self-restraint and distress to coping among spouses caring for persons with Alzheimer's disease. *Journal of Applied Gerontology*, *16*, 91–103.
- Rose-Rego, S. K., Strauss, M. E., & Smyth, K. A. (1998). Differences in the perceived well-being of wives and husbands caring for persons with Alzheimer's disease. *The Gerontologist, 38*, 224–230.
- SAS Institute, Inc. (1985). SAS Users Guide: Basics, Version 5 Edition. Cary, NC: Author.
- Spielberger, C. D. (1980). *Manual for the State-trait Anxiety Inventory*. Palo Alto: CA: Consulting Psychologists Press.
- Sprecher, S. (1992). How men and women expect to feel and behave in response to inequity in close relationships. *Social Psychology Quarterly*, 55, 57–69.
- Stern, M. B. (1988). The clinical characteristics of Parkinson's disease and Parkinsonian syndromes: Diagnosis and assessment. In M. B. Stern & H. I. Hurtig (Eds.), *The comprehensive management of Parkinson's disease* (pp. 3–50). New York: PMA Publishing Corp.
- Stuckey, J. C., Neundorfer, M. M., & Smyth, K. A. (1996). Burden and wellbeing: The same coin or related currency? *The Gerontologist*, 36, 686– 693.
- Vernon, G. M., & Stern, M. B. (1988). The comprehensive approach to Parkinson's disease. In M. B. Stern & H. I. Hurtig (Eds.), *The comprehensive management of Parkinson's disease* (pp. 103–115). New York: PMA Publishing Corp.
- Vitaliano, P. P., DeWolfe, D. J., Maiuro, R. D., Russo, J., & Katon, W. (1990). Appraised changeability of a stressor as a modifier of the relationship between coping and depression: A test of the hypothesis of fit. *Journal of Personality and Social Psychology*, 59, 582–592.
- Vitaliano, P. P., Russo, J., Carr, J. E., Maiuro, R. D., & Becker, J. (1985). The ways of coping checklist: Revision and psychometric properties. *Multi*variate Behavioral Research, 20, 3–26.
- Wright, L. K. (1991). The impact of Alzheimer's disease on the marital relationship. *The Gerontologist*, *31*, 224–237.
- Wright, L. K. (1993). Alzheimer's disease and marriage: An intimate account. Newbury Park, CA: Sage Publications.
- Yee, J. & Schulz, R. (2000). Gender differences in psychiatric morbidity among family caregivers: A review and analysis. *The Gerontologist*, 40, 147–164.

Received January 20, 2000 Accepted May 19, 2000 Decision Editor: Laurence G. Branch, PhD