

This study compares the health of 42 grandparent, 44 spouse, and 130 adult-child caregivers with 1,669 noncaregivers in 1994 and 1974. In 1994, all three caregiver groups had poorer mental health than the noncaregivers; grandparent caregivers also had poorer physical health and greater activity limitations. Spouse and adult-child caregivers had not differed from the noncaregivers 20 years prior, but grandparent caregivers had experienced poorer health than the noncaregivers and more stressful life events than the other caregivers. Caregiving appears to add new burdens to otherwise normal lives for spouse and adult-child caregivers, while being yet another aspect of a difficult life course for grandparent caregivers.

Key Words: Caregiver burden, Grandparent caregivers, Life course, Cohort study

New Burdens or More of the Same? Comparing Grandparent, Spouse, and Adult-Child Caregivers¹

William J. Strawbridge, PhD,² Margaret I. Wallhagen, PhD,³
Sarah J. Shema, MS,² and George A. Kaplan, PhD⁴

Caring for a disabled spouse or parent is generally viewed as stressful. Specific negative impacts of caregiving include increased levels of depression, anxiety, poor perceived physical health, increased health care utilization, and conflict between caregivers and other family members (Cantor, 1983; George & Gwyther, 1986; Poulshock & Deimling, 1984; Schulz, Visintainer, & Williamson, 1990; Strawbridge & Wallhagen, 1991). The stress of caregiving may also affect how caregivers view future care for themselves. Nearly half of the adult child caregivers interviewed in one study said the experience of caring for a parent had made them not want their family to care for themselves if they ever became dependent (Wallhagen & Strawbridge, 1995).

However, not all aspects of caregiving are negative. Some caregivers report increased gratification, feelings of usefulness, improved relationships with the person being cared for, or increased pride in their own abilities to meet new crises (Brody, 1985; Hoyert & Seltzer, 1992; Motenko, 1989; Schulz, Tompkins, & Rau, 1988; Stone, Cafferata, & Sangl, 1987). However, the more common experiences re-

ported in the literature are of negative impacts, both because of the strenuous demands made by caregiving and because of the experience of seeing a relative become increasingly disabled.

Recently a new type of caregiver has been identified with equally serious health consequences — grandparents raising grandchildren (Burton, 1992; Minkler & Roe, 1993; Roe, Minkler, & Barnwell, 1994). According to Minkler and Roe, grandparent caregivers may be at greater risk for health problems than other caregivers because they are frequently poor, are members of a minority, and are providing care because the biological parents (their children) are impaired themselves.

Minkler and her colleagues studied poor African American women caring for their grandchildren because the children's parents were incapacitated by extensive crack cocaine use. How well such findings can be generalized to other grandparent groups and caregiving situations is not clear, although there is evidence that grandparent caregivers are found in other population groups and for reasons other than drug addiction of the biological parents (Jendrek, 1994; O'Reilly & Morrison, 1993). Census estimates place the number of children being cared for by grandparents in the United States at more than 3 million (Saluter, 1992).

Although caregiving studies have frequently demonstrated associations between caregiving burdens and health outcomes, design aspects of many studies limit both their validity and generalizability. As Schulz (1990) has noted, many studies recruit subjects from caregiver programs and therefore are more likely to interview those who are distressed

¹This research was supported by Grant no. 1R37 AG-11375 from the National Institute on Aging. The authors gratefully acknowledge the contributions of Dr. Meredith Minkler and Dr. Catherine Roberts in structuring the grandchild caregiving questions used in the Alameda County Study data set.

²Human Population Laboratory, California Public Health Foundation, Berkeley, California. Address correspondence to William J. Strawbridge, PhD, Human Population Laboratory, 2151 Berkeley Way, Annex 2, Berkeley, CA 94704-1011.

³Department of Physiological Nursing, School of Nursing, University of California at San Francisco.

⁴Human Population Laboratory, California Department of Health Services.

and seeking help in the first place. In addition, outcomes assessed in most caregiving studies are specific to the caregiving situation, rather than being comparable across studies. The inclusion of more standardized and clinically oriented measures, such as standardized depression scales, self-reported health, and prevalence of chronic conditions, has been recommended to better assess the impact of caregiving in comparison with stressors in noncaregivers (George & Gwyther, 1986).

A few studies have included comparison groups of noncaregivers. Dura, Stukenberg, and Kiecolt-Glaser (1991) have shown that adult child caregivers of dementia patients experience more depression than matched noncaregiving spouses. Similar findings for spouse caregivers compared with matched controls were reported by Russo, Vitaliano, Brewer, Katon, and Becker (1995). Another study showed greater prevalence of depression among a mixed group of spouse and adult child caregivers compared with noncaregiving controls (Baumgarten et al., 1992). Kiecolt-Glaser, Dura, Speicher, Trask, and Glaser (1991) compared 69 spouse and adult-child caregivers with 69 sociodemographically matched noncaregiving controls and found both greater levels of depression and poorer immune system functioning among the caregivers. Another study compared 44 caregivers of demented relatives (mostly spouses and parents) with 44 noncaregiving controls and found significantly higher depression, poorer perceived health, more chronic conditions, less church attendance, and fewer other social activities for caregivers (Haley, Levine, Brown, Berry, & Hughes, 1987). However, controls were volunteers, some of whom were recruited from local churches, making it questionable how representative of noncaregivers they really were. Another study compared caregivers of persons over age 60, caregivers of younger adults (ages 18-59), and caregivers raising children with those reporting no dependent care (Neal, Chapman, Ingersoll-Dayton, Emlen, & Boise, 1990). In general, those with dependent care of any kind reported more work interruptions, more stress in family relationships, and more stress in combining work and family responsibilities. The two adult-child caregiver groups reported more stress from personal health. All subjects were full-time employees and were relatively young (mean age = 39.7).

The cross-sectional nature of most caregiving studies makes it difficult to know how much of the negative impacts on health observed for caregivers might have occurred before the caregiving actually began. One study of women's well-being found that prior life satisfaction moderated the effects of caregiving on subsequent self-esteem, depression, and role conflict (Moen, Robison, & Dempster-McClain, 1995). In the case of grandparent caregivers, Minkler and Roe (1993) noted that those they studied had experienced a difficult life of poverty and family instability before their caregiving duties began; such prior life experiences could account for at least some of the negative effects on health ob-

served. A fruitful question, then, is whether caregiving catches people in the midst of living otherwise normal lives and hence adds fresh burdens that seriously affect mental and physical health or whether caregiving is only one of many stressors in an already difficult life course. The answer to this question would have implications for the kind of community support services that would be most helpful in reducing caregiver stress.

The analyses reported here assess the relative impacts of caregiving for three different types of caregivers (grandparent, spouse, and adult child) compared with noncaregivers. All subjects were part of an ongoing community study, so their health could be analyzed both at the time of caregiving in 1994 and 20 years earlier. Comparative measures used for caregiver stress were instruments commonly used for assessing mental health, physical health, and activity limitations in general populations. Items measuring stressful life events assessed difficulties experienced with marriage, finances, serious illness, employment, and problems experienced by children. With this design it was possible to test both whether the three types of caregivers experienced more mental and physical health problems than noncaregivers, and whether observed burdens for caregivers were new or were reflecting problems occurring in a more difficult life course in general.

Methods

Sample

The sample was drawn from the Alameda County Study, a longitudinal study of health and mortality that has followed a cohort of 6,928 persons selected in 1965 to represent the adult noninstitutionalized population of Alameda County, California. Detailed design and sampling procedures for this study have been reported elsewhere (Berkman & Breslow, 1983; Hochstim, 1970). Subjects are followed regardless of subsequent location or disability status. Survivors have been interviewed in 1974, 1983 (50% sample), and 1994, with response rates of 85%, 87%, and 93%, respectively.

The analyses reported here are based upon self-reported data and include 1,885 subjects aged 46-75 who responded to questions asked about caregiving in the 1994 follow-up. Subjects older than age 75 were omitted because few reported any caregiving activity. There were 145 African Americans (7.7%), 80 Asian Americans (4.2%), 81 Hispanics (4.3%), and 30 Native Americans (1.6%) in the sample. Males numbered 816 (43.3%). The mean age was 61.5 years.

Caregiving and Demographic Measures

Caregivers were defined as follows:

Grandparent Caregivers. — Those who indicated in 1994 that they were raising a grandchild, great grandchild, grandniece, or grandnephew under 18

years old. The inclusion of grandnieces and grandnephews and the requirement that these caregivers be actually raising the child are consistent with Minkler and Roe (1993). Grandparents providing day-care services for grandchildren so that their parents could work full time were not included in this definition.

Adult-Child Caregivers. — Those who indicated in 1994 that they were helping to care for a parent and were either doing two or more assistive activities from a list of six items (provide financial assistance, run errands, provide transportation, do household chores, arrange for others to provide care, or help with financial matters) or were helping with personal care, medications, or treatments, or living with their parent.

Spouse Caregivers. — Those who indicated in 1994 that they were helping to care for a husband, wife, or partner and were also doing at least the same minimal activities as the adult-child caregivers described above. These minimal entry-level criteria are consistent with those used in other studies of adult-child and spouse caregivers (Stone, Cafferata, & Sangl, 1987).

Noncaregivers. — Those who indicated they were not providing care to anyone.

Demographic variables included age, gender, ethnicity, and education. Income data were missing for some of the older subjects and thus did not represent their wealth accurately. For these subjects, *having financial problems* was substituted for income and was defined as reported not having enough money in the past 12 months to buy clothing, fill a prescription, see a doctor, or pay the rent or mortgage, or not having enough money in the past 30 days to buy food.

1974 and 1994 Mental and Physical Health

Five dichotomously scored measures of physical health, mental health, and physical functioning that had been asked in both 1974 and 1994 were used to assess the caregiver burden:

- *Fair or poor health* versus health reported as good or excellent.
- *Not happy* versus "very happy" or "pretty happy."
- *One or more chronic conditions* included any of the following: arthritis, stroke, heart disease, chronic obstructive pulmonary disease (bronchitis or emphysema), cancer, diabetes, high blood pressure, or asthma.
- *Activity limitations* included one or more of the following problems: had trouble climbing stairs or getting outdoors, unable to work because of illness or injury, changed kind of work or cut down on number of hours of work because of illness or injury, and cut down on any other activity because of illness or injury.
- *One or more depressive symptoms* was based upon reports in 1994 of one or more depressive

criteria from the nine used in the *Diagnostic and Statistical Manual III-R* (American Psychiatric Association, 1987). These criteria had not been developed in 1974. For this earlier period, depression was measured by reports of one or more of 18 depressive symptoms from the depression scale developed by Roberts and O'Keefe (Kaplan, Roberts, Camacho, & Coyne, 1987; Roberts & O'Keefe, 1981).

1974 Stressful Life Events

The 1974 survey included questions about stressful life events occurring at any time in the last 8 years (i.e., since the baseline interview in 1965). Five categories of these events were used. *Marital problems* included separation, divorce, or "other marital problems or difficulties." *Financial problems* asked whether "serious financial difficulties or problems" had occurred. *Serious illness* asked about the occurrence of a serious illness, injury, or operation for self. *Child problems* included the occurrence of a serious illness, injury, operation, or anything else "happening to children that was bad for them." *Job problems* asked about job problems, job difficulties, or worries of oneself or spouse. All of these life event items were simply scored "yes" or "no." *Raising children* was measured by noting whether subjects reported any child under 18 years of age living at home.

Analyses

After summarizing the characteristics of the sample, similar strategies were used for both the 1994 and 1974 comparisons. Although specific caregiving questions had not been asked in 1974, the assumption was that few of the caregivers would have been caring for someone two decades earlier. Each of the three types of caregivers was compared with the noncaregivers on the five caregiver health measures using logistic regression models, with the health measures entered as dependent variables and the caregiver types entered as independent variables. Given the stronger differences observed between grandparent caregivers and noncaregivers at both time periods than between either spouse or adult-child caregivers and noncaregivers, comparisons on the 1974 stressful life events were then made between grandparent caregivers and the other two caregiver types combined, to further assess whether the grandparent caregivers had experienced a more difficult life course.

Caregiving analyses typically involve a number of conditioning or intervening variables, such as age, gender, socioeconomic status, social support, and the quality of the relationship between the caregiver and the person being cared for (Montgomery, Stull, & Borgatta, 1985; Pearlin, Mullan, Semple, & Skaff, 1990). The small number of grandparent and spouse caregivers made coefficient estimates unreliable with more than two control variables in the logistic regression analyses, so only age and education were included in each model. The decision to use age and education was based upon examining

the relationships between potential control variables (age, gender, ethnicity, education, and having financial problems) with all of the burden and life events measures. Age was most strongly and consistently associated with these measures, followed by education. As a further test all models were rerun using three sets of control variables: age and gender, age and ethnicity, and age and financial problems. These additional runs produced results similar to those presented here.

Results

Type of Caregiver Characteristics

Table 1 summarizes sample characteristics for the three types of caregivers and noncaregivers in 1994. Not surprisingly, spouse caregivers were the oldest, with a mean age of 64.6 years; parent caregivers were the youngest, with a mean of 57.8 years. Compared with noncaregivers, all three caregiver groups had lower proportions of males. Among the three caregiving groups the proportion of males was highest among the spouse caregivers. Grandparent and spouse caregivers had the lowest rates of employment. A higher proportion of grandparent caregivers reported the prevalence of one or more chronic conditions and were experiencing financial problems. The highest proportions of African Americans and those with fewer than 12 years of education were found among the grandparent caregivers.

1994 Mental and Physical Health

Age- and education-adjusted comparisons between each of the three caregiver groups and noncaregivers in 1994 on mental and physical health are shown in Table 2. Compared with the noncaregivers, grandparent caregivers had significantly poorer results on four of the five measures. At 1.74, the odds ratio comparing grandparent caregivers with noncaregivers on one or more chronic conditions is high but not statistically significant. Both spouse and adult-child caregivers had significantly

poorer results on the depression and unhappiness measures, but were similar to the noncaregivers with respect to chronic conditions, perceived health, and activity limitations.

1974 Mental and Physical Health

Table 3 presents comparisons on the five mental and physical health conditions between the three types of caregivers and noncaregivers for 1974. Results are adjusted for age and education. Grandparent caregivers had significantly poorer results on all measures compared with the noncaregivers. Unlike 1994, however, neither the spouse caregivers nor the adult-child caregivers had significantly poorer results on any of the health measures.

1974 Stressful Life Events

Table 4 presents comparisons in 1974 for stressful life events between the grandparent caregivers and the other two types of caregivers combined, again adjusting for age and education. Three of the measures indicate statistically significant differences: more grandparent caregivers reported marital, financial, and serious illness problems in 1974 than did the combined caregiver group of spouse and adult-child caregivers. The odds ratio of 1.55 for raising children in 1974 is relatively high for the grandparent caregivers, but this difference was not statistically significant. There were no meaningful differences observed for child or job problems.

Discussion

The results reported here indicate that grandparent, spouse, and adult-child caregivers experience significantly greater levels of both depressive symptoms and unhappiness than noncaregivers when age and education are taken into account. Because these caregivers were part of a long-running representative community study rather than having been selected by connections with service or support groups, the comparison of caregiver mental health

Table 1. Sample Characteristics in 1994 (N = 1,885)

1994 Variable	1994 Type of Caregiver			
	Grandparent	Spouse	Adult Child	Non-caregiver
Number	42	44	130	1,669
Mean age in years	60.9	64.6	57.8	61.8
Age range in years	49-73	51-75	48-74	46-75
Males (%)	26.2	36.4	33.9	44.6
African Americans (%)	26.2	6.8	6.9	7.3
Non-high school graduates (%)	23.8	9.1	7.7	13.8
Married or partnered (%)	69.1	100	66.2	73.8
Currently employed (%)	33.3	34.1	58.5	46.9
Having financial problems (%)	40.5	13.6	25.4	18.0
One or more chronic conditions (%)	78.6	70.5	61.5	68.6

Table 2. Odds Ratios* Comparing Three Types of 1994 Caregivers With Noncaregivers on Five Measures of Mental and Physical Health (N = 1,885)

1994 Condition	Type of Caregiver		
	Grandparent n = 42	Spouse n = 44	Adult Child n = 130
One or more depressive symptoms/none	3.20**	2.02*	1.37+
Not happy/happy	2.59*	3.71**	2.27**
One or more chronic conditions/none	1.74	0.92	0.95
Fair or poor health/good or excellent	2.78**	0.67	1.37
Activity limitations/none	2.34**	1.23	1.15

*Odds ratios compare prevalence of indicated condition for each type of caregiver with prevalence for 1,669 noncaregivers. All models adjust for age and education.

+ $p < .10$; * $p < .05$; ** $p < .01$.

Table 3. Odds Ratios^a Comparing Three Types of 1994 Caregivers With Noncaregivers on Five Measures of Mental and Physical Health in 1974 (N = 1,885)

1974 Condition	Type of Caregiver		
	Grandparent n = 42	Spouse n = 44	Adult Child n = 130
One or more depressive symptoms/none	2.23+	1.30	1.03
Not happy/happy	2.13*	0.95	1.16
One or more chronic conditions/none	3.10**	1.28	1.00
Fair or poor health/good or excellent	1.97+	0.88	1.15
Activity limitations/none	2.67**	1.25	1.24

^aOdds ratios compare prevalence of indicated condition for each type of caregiver with prevalence for 1,669 noncaregivers. All models adjust for age and education.

+p < .10; *p < .05; **p < .01.

Table 4. Odds Ratios^a Comparing 1994 Grandparent Caregivers With 1994 Combined Spouse and Adult-Child Caregivers on Stressful Life Events in 1974 (N = 216)

1974 Condition	
Financial problems	2.65*
Marital problems	2.42*
Serious illness	2.12*
Raising children	1.55
Child problems	1.28
Job problems	1.04

^aOdds ratios compare prevalence of indicated condition reported in 1974 for 42 grandparent caregivers, with prevalence for 174 spouse or adult-child caregivers. All models adjust for age and education.

*p < .05.

with that of noncaregivers should be generalizable to other groups of caregivers in the United States.

We found no differences between two of the caregiver groups (spouse and adult child) and the noncaregivers on three measures of physical health and functioning. These results support George and Gwyther's (1986) findings of differences in mental health but not physical health for spouse and adult-child caregivers compared with national norms. However, the grandparent caregivers in our study did evidence poorer physical health and functioning than noncaregivers, even with adjustments for age and education. These findings support those reported for African American grandparent caregivers in Oakland, California, by Minkler and Roe (1993), but broaden their results to other ethnic groups and to locations outside Oakland.

Because the grandparent caregivers analyzed in our study had their grandchildren actually living with them, the strong negative mental and physical health outcomes these caregivers experienced would not necessarily apply to all grandparent caregivers. Grandparents who watch their grandchildren so that the parents can work full time may not experience as much stress as those actually raising their grandchild-

dren. Watching small children during the day until they are old enough to attend school does not involve as much time or responsibility as raising children to adulthood. Such day-care grandparents formed the largest subgroup in the grandparent caregiving study conducted in Ohio by Jendrek (1994).

By using a life-course perspective, the results in our study extend the knowledge of caregiving impacts by comparing the three types of caregivers both while providing care in 1994 and while providing care 20 years earlier. In 1974 the grandparent caregivers evidenced problems similar to those they were experiencing in 1994, while the spouse and adult-child caregivers were not significantly different from noncaregivers on any of the health measures used. Furthermore, the grandparent caregivers were significantly more likely than the other two types of caregivers to have experienced negative life events, such as problems with marriages, finances, and physical health 20 years earlier.

These data suggest that caregiving comes in the midst of otherwise normal lives for most spouse and adult-child caregivers, so that the demands of care are experienced as new problems, with resulting increases in depressive symptoms and unhappiness. Such negative mental health outcomes should reverse when the caregiving and grieving end. Grandparent caregivers, however, have had difficult lives for some time and thus experience their new responsibilities as additional burdens for an already difficult life course. These new caregiving burdens further compound old burdens. One obvious prior stressor involves the situation that put these grandparents in the position of being parents. A tragedy of some sort has occurred that may bring its own weight to bear on present burdens.

In terms of assistance needed, the results reported here suggest that grandparent caregivers require more broad-based assistance in meeting life's challenges than do the other two types of caregivers. Support groups, respite, and day-care programs may be helpful for those experiencing caregiving as a new, added burden. In these programs the emphasis is upon assistance and support to meet specific burdens directly associated with caregiving — burdens that were not present before the caregiving began and that, with the possible exception of bereavement, will not remain when the caregiving ends. In addition to such services directly associated with caregiving, grandparent caregivers probably require more general support to meet broader demands that have been exacting a toll for some time. For them, caregiving burdens represent only one of many problems in a difficult life. Further research is needed to address the unique service needs of this vulnerable population.

References

- American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders* (3rd ed., rev.). Washington, DC: Author.
- Baumgarten, M., Barrista, R. N., Infante-Rivard, C., Hanley, J. A., Becker, R., & Gauthier, S. (1992). The physiological and physical health of family

- members caring for an elderly person with dementia. *Journal of Clinical Epidemiology*, 45, 61-70.
- Berkman, L. F., & Breslow, L. (1983). *Health and ways of living: The Alameda County Study*. New York: Oxford University Press.
- Brody, E. M. (1985). Parent care as a normative family stress. *The Gerontologist*, 25, 19-29.
- Burton, L. M. (1992). Black grandparents rearing children of drug-addicted parents: Stressors, outcomes, and social service needs. *The Gerontologist*, 32, 744-751.
- Cantor, M. H. (1983). Strain among caregivers: A study of experience in the United States. *The Gerontologist*, 23, 597-604.
- Dura, J. R., Stukenberg, K. W., & Kiecolt-Glaser, J. K. (1991). Anxiety and depressive disorders in adult children caring for demented parents. *Psychology and Aging*, 6, 467-473.
- George, L. K., & Gwyther, L. P. (1986). Caregiver well-being: A multidimensional examination of family caregivers of demented adults. *The Gerontologist*, 26, 253-259.
- Haley, W. E., Levine, E. G., Brown, S. L., Berry, J. W., & Hughes, G. H. (1987). Psychological, social and health consequences of caring for a relative with senile dementia. *Journal of the American Geriatrics Society*, 35, 405-411.
- Hochstim, J. R. (1970). Health and ways of living: The Alameda County population laboratory. In I. I. Kessler & M. L. Levin (Eds.), *The community as an epidemiologic laboratory* (pp. 149-176). Baltimore, MD: Johns Hopkins University Press.
- Hoyert, D. L., & Seltzer, M. M. (1992). Factors related to the well-being and life activities of family caregivers. *Family Relations*, 41, 74-81.
- Jendrek, M. P. (1994). Grandparents who parent their grandchildren: Circumstances and decisions. *The Gerontologist*, 34, 206-216.
- Kaplan, G. A., Roberts, R. E., Camacho, T. C., & Coyne, J. C. (1987). Psychosocial predictors of depression: Prospective evidence from the Human Population Laboratory studies. *American Journal of Epidemiology*, 125, 206-220.
- Kiecolt-Glaser, J. K., Dura, J. R., Speicher, C. E., Trask, J., & Glaser, R. (1991). Spousal caregivers of dementia victims: Longitudinal changes in immunity and health. *Psychosomatic Medicine*, 53, 345-362.
- Minkler, M., & Roe, K. M. (1993). *Grandmothers as caregivers: Raising children of the crack cocaine epidemic*. Newbury Park, CA: Sage Publications.
- Moen, P., Robison, J., & Dempster-McClain, D. (1995). Caregiving and women's well-being: A life course approach. *Journal of Health and Social Behavior*, 36, 259-273.
- Montgomery, R. J., Stull, D. E., & Borgatta, E. F. (1985). Measurement and the analysis of burden. *Research on Aging*, 7, 137-152.
- Motenko, A. K. (1989). The frustrations, gratifications, and well-being of dementia caregivers. *The Gerontologist*, 29, 166-172.
- Neal, M. B., Chapman, N. J., Ingersoll-Dayton, B., Emlen, A. C., & Boise, L. (1990). Absenteeism and stress among employed caregivers of the elderly, disabled adults, and children. In D. E. Biegel & A. Blum (Eds.), *Aging and caregiving. Theory, research, and policy* (pp. 160-183). Newbury Park, CA: Sage Publications.
- O'Reilly, E., & Morrison, M. L. (1993). Grandparent-headed families: New therapeutic challenges. *Child Psychiatry and Human Development*, 23, 147-159.
- Pearlin, L. I., Mullan, J. T., Semple, S. J., & Skaff, M. M. (1990). Caregiving and the stress process: An overview of concepts and their measures. *The Gerontologist*, 30, 583-594.
- Poulshock, S. W., & Deimling, G. T. (1984). Families caring for elders in residence: Issues in the measurement of burden. *Journal of Gerontology*, 39, 230-239.
- Roberts, R. E., & O'Keefe, S. J. (1981). Sex differences in depression re-examined. *Journal of Health and Social Behavior*, 22, 394-400.
- Roe, K. M., Minkler, M., & Barnwell, R. S. (1994). The assumption of caregiving: Grandmothers raising the children of the crack cocaine epidemic. *Qualitative Health Research*, 4, 281-303.
- Russo, J., Vitaliano, P. P., Brewer, D. D., Katon, W., & Becker, J. (1995). Psychiatric disorders in spouse caregivers of care-recipients with Alzheimer's disease and matched controls: A diathesis-stress model of psychopathology. *Journal of Abnormal Psychology*, 104, 197-204.
- Saluter, A. F. (1992). Marital status and living arrangements: March 1991. *Current Population Reports: Population Characteristics*, Series P-20, No. 461. Washington, DC: U.S. Government Printing Office.
- Schulz, R. (1990). Theoretical perspectives on caregiving: Concepts, variables, and methods. In D. E. Biegel & A. Blum (Eds.), *Aging and caregiving. Theory, research, and policy* (pp. 27-52). Newbury Park, CA: Sage Publications.
- Schulz, R., Tompkins, C. A., & Rau, M. T. (1988). A longitudinal study of the impact of stroke on primary support persons. *Psychology and Aging*, 3, 131-141.
- Schulz, R., Visintainer, P., & Williamson, G. M. (1990). Psychiatric and physical morbidity effects of caregiving. *Journal of Gerontology: Psychological Sciences*, 45, P181-191.
- Stone, R., Cafferata, G. L., & Sangl, J. (1987). Caregivers of the frail elderly: A national profile. *The Gerontologist*, 27, 616-626.
- Strawbridge, W. J., & Wallhagen, M. I. (1991). Impact of family conflict on adult child caregivers. *The Gerontologist*, 31, 770-777.
- Wallhagen, M. I., & Strawbridge, W. J. (1995). My parent — not myself: Contrasting themes in family care. *Journal of Aging Health*, 7, 552-572.

Received February 16, 1996
Accepted October 11, 1996

The 50th Annual
Scientific Meeting

THE GERONTOLOGICAL
SOCIETY OF AMERICA

November 14-18, 1997

Convention Center
Cincinnati, Ohio

Invitation to Exhibit

- 100 Exhibit Booths
- Combined Book Exhibits
- Free Literature Tables
- Grand Opening Reception
- Complimentary Coffee Breaks
- Frequent Non-competitive Breaks

These are just some of the advantages of exhibiting to the 3,000 decision makers who comprise this audience of clinicians, educators, administrators, researchers and other professionals.

Price—we offer low rates and substantial discounts.

Location—you can still snap up a prime spot.

GSA, 1275 K St. NW #350, Washington, DC 20005-4006 ~ 202/842-1275 ~ FAX 202/842-1150