Social Support and Depressive Symptoms: Differential Patterns in Wife and Daughter Caregivers

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This cross-sectional study examined how three types of social support — social participation, emotional support, and caregiving support — were related to depressive symptoms in wives caring for their elderly husband and daughters caring for their elderly parent. We investigated whether different dimensions of social support affect mental health via different mechanisms and whether the context in which the support is needed and received will temper its effects. We found that social participation had a main effect on depressive symptoms for daughters but not for wives. Emotional support buffered the stress emanating from the husband’s behavior problems for wives. For daughters, emotional support buffered the stress emanating from both the behavior problems and the ADL/IADL limitations of the parent care recipient. Using caregiving as the example, our data suggested that social support does not have uniform effects; rather, the type of stressor, the type of social support, and the individual context interact to result in the specific effect of support.

The stress of caregiving has been well-documented in the literature, with higher rates of depressive symptoms observed among caregivers than among their age peers who are not caring for aged relatives (Aneshensel et al., 1995; Dura, Stukenberg, and Kiecolt-Glaser, 1990; Haley et al., 1987b; Kiecolt-Glaser et al., 1991; Lawton et al., 1991; Pruchno, Peters, and Burant, 1995). Social support has been found to be beneficial to caregivers, as those who have access to the support of others have a lower level of depressive symptoms than those without social support. Specifically, caregivers who have more frequent contact with family and friends tend to have higher morale (Fengler and Goodrich, 1979) and lower levels of burden (Zarit, Reeves, and Bach-Peterson, 1980) than caregivers with less frequent contact with their social support network. A higher level of social participation has also been found to be associated with a greater degree of life satisfaction in caregivers (Haley et al., 1987a; Wilson et al., 1990). Conversely, perceived inadequacy of social support has been found to be related to poorer mental health (Fiore, Becker, and Coppell, 1983; George and Gwyther, 1986) and higher burden (Gilhooly, 1984).

However, there is little in the caregiving literature that clarifies the specific mechanisms by which social support reduces depression in caregivers. The general literature on social support (i.e., the literature not restricted to caregivers) is more informative in this regard, and specifically with respect to the conditions under which support either buffers the effect of stress or has a direct effect on psychological well-being. The buffering effects model posits that the beneficial effect of social support derives primarily from its protective properties in the presence of high levels of stress (e.g., Gerin et al., 1995; Kessler and Essex, 1982; Kessler and McLeod, 1985; Krause, 1986), while the direct effects model posits that social support enhances well-being irrespective of stress level (Bell, LeRoy, and Stephenson, 1982; Fryman, 1981; Lin, 1986; Seeman et al., 1994; Williams, Ware, and Donald, 1981).

In an effort to shed light on these contrasting models of social support, attention has turned to identifying the conceptual dimensions of social support and their potentially differential effects on well-being. In their review of research, Cohen and Wills (1985) made a distinction between structural and functional types of social support. Structural support refers to the existence of social ties and is operationalized by measures of the composition of one’s social network and degree of social participation (Murrell, Norris, and Chipley, 1992). In contrast, functional support refers to the availability of support to meet certain needs (Murrell, Norris, and Chipley, 1992), such as emotional support or assistance with major life roles such as caregiving. The main effect of support is more likely to be observed when structural support measures are used, whereas buffering effects have been found most commonly for functional measures of social support (Cohen and Wills, 1985; Kessler and McLeod, 1985;Thoits, 1995).

In an elaboration of the buffering hypotheses, Cohen and McKay (1984) proposed a stressor-support specificity model, based on the assumption that different stressors pose different coping requirements. They argued that buffering will occur only when there is a good fit between the demands imposed by the stressor and the type of support provided. Cutrona and Russell (1990) refined the optimal fit model by identifying dimensions of stressors, such as their duration, desirability, and controllability, that may influence the effect of stressful life events.

While the optimal matching or specificity model focuses on the fit between the type of stressor and the type of social support provided, an equally important but often overlooked factor is the fit between the context in which the stress arises and the type of support received (Hobfoll and Vaux, 1993; Pearlman, 1993; Vaux, 1988). The context is de-
fined by the characteristics and circumstances of the person receiving the social support.

The contextual factor that is conceptualized as most important for the present study is the type of kinship relationship between the caregiver and care recipient. There is evidence that the meaning and context of caregiving vary depending in part on the nature of the kinship relationship of the caregiver to the care recipient (George and Gwyther, 1986; Harper and Lund, 1990; Hoyert and Seltzer, 1992; Quayhagen and Quayhagen, 1988; Seltzer and Li, 1996). More specifically, there are fundamental differences in the relationship between a wife and her husband and between an adult daughter and her parent. Also, when the caregiver is a wife and the care recipient is her aged husband, the two generally coreside and are at a stage of life when the caregiver has few competing family and work demands. In contrast, when the caregiver is an adult child and the care recipient is her aged parent, they typically live apart, and the caregiving role often competes with multiple family and work roles. In addition, wife and daughter caregivers may differ in role saliency. Past research suggests that the wife role may be more salient than the role of adult daughter (Richards, Bengtson, and Miller, 1989; Rossi and Rossi, 1990). This is important because there is evidence that emotional support reduces the deleterious effects of stressors that arise in highly salient roles but is less effective for dealing with stressors that emerge in roles that are less central (Krause and Borawski-Clark, 1994).

Our study of social support in women providing care to an elderly relative focuses on the fit between the personal context in which stress is experienced and the type of support received. We examined the aspect of fit by contrasting social support effects in wives providing care to their elderly husband, and daughters providing care to their elderly parent. We hypothesized that caregiving is experienced differently by wives and daughters, as we describe in greater detail below, and that social support therefore has distinct effects in these two contexts.

We conceptualized the stress of caregiving to include the care recipient's limitations in activities of daily living (both personal and instrumental) and behavior problems, because when the care recipient is more functionally dependent and exhibits more problem behaviors, the demands of caregiving are greater and the caregiving role is more difficult (Aneshensel et al., 1995).

We investigated three dimensions of social support received by caregivers — social participation, emotional support, and caregiving support. First, social participation, which refers to the frequency with which an individual participates in social activities, is a structural support measure which has been shown in past research to have a main effect on psychological well-being (Cohen and Wills, 1985; Kessler and McLeod, 1985). Second, emotional support is defined as the receipt of reassurance and respect from members of an individual's personal network and having someone in whom to confide (Antonucci and Akizuma, 1987). Third, caregiving support is defined as instrumental support provided to the caregiver by others through the help they give directly to the care recipient with daily living activities. Both emotional support and caregiving support are functional support measures for which buffering effects have been suggested in past research (Cohen and Wills, 1985; Kessler and McLeod, 1985).

Level of depressive symptoms was used as the dependent measure in this study. Depression is particularly relevant in the study of caregiving because of the higher frequency of depressive symptoms among family caregivers (Dura, Stukenberg, and Kiecolt-Glaser, 1990). Also, as caregiving involves loss and deprivation, social support can promote feelings of control and self-worth that counteract depressive symptoms (George, 1989; Stoller and Pugliesi, 1989).

**Hypotheses**

We hypothesized that the effect of social support would depend upon the joint effects of (a) the specific dimension of social support (i.e., structural versus functional) and (b) the context under which support is received (i.e., by a wife who is caring for her aging husband, by a daughter who is caring for her aging parent). The specific dimension of social support is important because past research has shown that structural indicators of support tend to have a main effect on well-being, while functional indicators tend to have a buffering effect. The context in which support is received is important because, according to the optimal match or fit model, a different profile of social support effects is expected for wives and for daughters.

Specifically, we hypothesized that social participation, a measure of structural support, will be unrelated to the level of depressive symptoms in wives caring for their aging husbands because participating in social activities might compete with a wife's role as a caregiver. To participate in social activities, a wife may have to leave her husband at home, whereas previously they may have participated in these social occasions as marital partners. We posit that the beneficial effect of social participation reported in past research may be counterbalanced by a wife's worry about her husband when she is not with him, and by the reminder that she is increasingly alone in social contexts (Pearlin, Turner, and Semple, 1989).

In contrast, we hypothesized that social participation will have a main effect on depressive symptoms for daughter caregivers, as suggested by previous research (Haley et al., 1987a; Wilson et al., 1990). Participation in social activities may provide a break from the demands of caring for a parent and a vehicle for maintaining ongoing social relationships and roles. Further, as daughters tend not to socialize together with their aging parents in the same way that wives socialize with their husbands, we do not expect that the increasing infirmity of an aging parent will have the same disruptive effect on a daughter's social life as does the infirmity of a husband on a wife's social life. Thus, although daughters undoubtedly worry about their aging parent when they are participating in social activities, we do not expect the same level of disruption in the social participation of daughters as that of wives.

We hypothesized that emotional support would buffer the effect of caregiving stress for both wives and daughters, although we predicted that emotional support would account for more variance in level of depressive symptoms for wives. We base this hypothesis on the greater salience of...
the wife role, which is central to a woman’s self-concept and identity, particularly during the later years of the life course (Rossi and Rossi, 1990). Past research has shown that emotional support has a greater impact on stresses emerging from highly salient roles than those linked with less central roles (Krause, 1994; Krause and Borawski-Clark, 1994). In particular, anticipating the loss of the role of wife may challenge a woman’s sense of purpose and meaning of life (Skaff and Pearlin, 1992). Therefore, wife caregivers may be particularly in need of reassurance and support from others to reinforce feelings of self-worth. Moreover, a wife whose husband becomes ill or disabled may experience a loss of emotional support from the husband. Pearlin, Turner, and Semple (1989) described the loss of love, affection, and reciprocity of exchange with the spouse as one of the most painful losses and powerful sources of strain of spousal caregivers. The emotional support provided by a wife’s social support network can make her feel loved and cared for in the context of this loss. Therefore, we hypothesized that emotional support will buffer the stress of caregiving for wife caregivers.

For daughter caregivers, the buffering effect of emotional support was expected to account for less variance in depressive symptoms than for wives. This is because the daughter role is less central to a woman’s self-concept at this stage of life than other roles (Richards, Bengtson, and Miller, 1989). Unlike in the case of wives, a daughter’s loss of identity is less likely to lead one to question the purpose and meaning of life, even though a parent’s illness or decline tends to be experienced as a significant personal loss. Moreover, as daughters tend to be less reliant on their aging parents to fulfill their emotional needs than are wives on their husbands, there is less of an impact of the loss of emotional support from the care recipient on daughters than on wives. As noted earlier, Krause and Borawski-Clark (1994) found that emotional support has less of an effect on stressors that emerge from less salient roles. These results lead to the hypothesis that emotional support would account for less variance for daughters, although it is still expected to buffer the stress of caregiving for them.

Finally, caregiving support was hypothesized to be helpful to both wives and daughters under conditions of high stress (i.e., to have a buffering effect). For wives, we base this hypothesis on the day-to-day stress that emanates from having a husband with declining functional abilities and aberrant behaviors. Under such conditions of high stress, having someone else to help with caregiving may provide the wife with much needed respite, lessen the workload, make the situation more manageable, and increase the wife’s sense that she is not alone.

For daughters, the caregiving role imposes competing demands, as daughters generally have multiple responsibilities for their own husband, children, and career. Daughter caregivers have limited time and energy, so help with the caregiving tasks may be particularly beneficial to them, especially when faced with high levels of caregiving stress. Similar to the rationale given for wives, the assistance provided by others might lessen the caregiving workload and increase the sense of control for daughter caregivers. Thus, we hypothesized a buffering effect of received caregiving support for daughter caregivers.

To summarize our hypotheses, for wives caring for their aging husbands, both emotional and caregiving support were hypothesized to have a buffering effect on stress. Social participation was not expected to have any effect for wife caregivers. For daughters caring for their aging parent, both emotional support and caregiving support were hypothesized to buffer the effect of stress on depressive symptoms, but to a lesser extent than for wives. Social participation was hypothesized to have a direct effect on stress for daughter caregivers.

In testing these hypotheses, it was necessary to control for potentially confounding factors that might alter the relationship between social support and depressive symptoms. We included five characteristics of the caregiver as control variables: age, employment status, education, health, and duration of caregiving, all of which have been shown to influence psychological well-being. Age has generally been found to be positively related to depression (Kessler et al., 1992; Mirowsky and Ross, 1989), although the evidence is inconclusive because of methodological limitations and the wide diversity in the measurement of depression (Newmann, 1989). Research also suggests that rates of depression are higher among unemployed persons and those with less education (Gove and Geerken, 1977; Mirowsky and Ross, 1989; Pearlin et al., 1981). Furthermore, there is good evidence that poor physical health is a risk factor for depression (Berkman et al., 1986; Hayes and Ross, 1986). Finally, there is some evidence that the caregiver’s well-being is related to the duration of caregiving. However, past studies on the effect of duration of care have not been conclusive. Some found that the longer the duration of care, the poorer the caregiver well-being (e.g., Hoyert and Seltzer, 1992; Skaff and Pearlin, 1992), while others showed that, over time, some caregivers develop adaptive abilities to cope with the caregiving role (e.g., Townsend et al., 1989; Zarit, Todd, and Zarit, 1986). Still others reported that duration had no effect on the psychological well-being of caregivers (e.g., Pagel, Becker, and Coppel, 1985; Schulz, Tompkins, and Rau, 1988) or had a different effect for wives and for daughters (Seltzer and Li, 1996). We decided to control for duration in our analysis so as to rule out the possibility of confounding by this variable.

METHODS

Sample
We recruited a probability sample of caregivers in Wisconsin. The sample was a subset of a larger probability sample drawn by random-digit-dialing techniques for the State of Wisconsin Bureau on Aging in 1991. The larger sample consisted of 2,250 persons age 60 or older. In addition, 500 persons younger than age 60 who provided out-of-home care to a relative age 60 or older were included. To ensure a sufficiently large pool of caregivers, we supplemented this base with an additional 1,000 households also contacted through random-digit-dialing procedures.

We telephoned all of these persons in 1993 and screened them to determine their current caregiving status. If a wife or a daughter provided assistance to a husband or a parent (due to his or her aging or illness or disability) with at least
one of the following tasks, she was included in our study: housework, preparing meals, finances, yard work, shopping, taking medications, getting around inside the house, eating, dressing, bathing, using the toilet, and getting in and out of bed. This broad definition of caregiving was used to identify family members in the beginning of the caregiving role as well as those who were further along in this process. In addition, this approach generated a group of care recipients who were extremely heterogeneous in their reason for needing care, including dementia, heart disease, stroke, arthritis, diabetes, and many nonspecific sources of dependency. Of the wives and daughters who met study criteria, 73.8 percent agreed to participate. Only caregivers of care recipients who lived in community-based settings (noninstitutional) were included in this analysis.

The sample for this analysis consists of 103 wife caregivers and 149 daughter caregivers. They were predominantly White (99.1% of the wives and 96.0% of the daughters), married (all wife caregivers were married, whereas 86.8% of the daughters were married), and well educated (72.0% of the wives and 94.0% of the daughters had either high school graduates or had more education). The wives were older than the daughters (mean ages for wives and daughters were 70.9 and 57.5 respectively), less likely to be employed (24.3% wives and 54.3% daughters were employed), and had been providing care for a shorter duration (mean duration was 7.1 years for wives and 9.4 years for daughters). The care recipients of both groups were elderly (mean age was 75.8 for husband recipient and 84.2 for parent recipient) and needed care for a variety of reasons (e.g., dementia, arthritis, asthma, cancer, blindness). There was no difference in the prevalence of medical problems that caused the need for care between husband and parent care recipients, with approximately 17 percent of both groups having dementia, 10 percent reporting heart disease, and 10 percent having a stroke. Fewer than 10 percent of the others reported any single diagnosis, reflecting the heterogeneity of this community-based probability sample. As noted earlier, owing to the structure of the study, all husband recipients were male, married, and living with the caregiver, while among the parent recipients, only 15.9 percent were male, 21.2 percent were married, and 11.3 percent were living with the caregiver.

**Data Collection and Measures**

All data were collected through personal interviews with caregivers in their home. Caregivers also completed a set of self-administered questionnaires. Caregiving stress was indicated by limitations in personal and instrumental activities of daily living (ADL/IADL limitations) and behavior problems of the care recipient. ADL/IADL limitations were measured by a modification of the Barthel Index (Mahoney and Barthel, 1965) which assesses how capable the care recipient is in 14 activities of daily living (e.g., walking, dressing, preparing meals, shopping). Caregivers were asked to rate the functional level of the care recipient from 0 (not at all) to 2 (independent) on each activity. The ADL/IADL scale has a range of 0 to 28; a higher score indicates higher levels of independence. (Note that the ADL/IADL measure, an indicator of caregiving stress, is reverse scored, so that a high score signifies fewer limitations, and thus less stress.) The alpha reliability of the scale was .87 for both wives and daughters.

Behavioral problems were measured by a 14-item scale (Pearlin et al., 1990). Sample items include how often the care recipient hides belongings and forgets about them, dresses the wrong way, and swears or uses foul language. Respondents rated each item from 0 (never) to 2 (usually), with a range from 0 to 28. A higher score indicates more behavioral problems. For wife and daughter caregivers, the scale's reliability was .85 and .78, respectively.

Three dimensions of social support were examined in this study. The first dimension, social participation, was indicated by the frequency of social activities engaged in by the caregiver, such as spending social time with friends and relatives, going to church or synagogue, and participating in social recreational groups. Using a modified version of a measure developed for the National Survey of Families and Households (Sweet and Bumpass, 1987), respondents rated the frequency of participating in five types of social activities from 0 (never) to 4 (more than once a week). These included spending social time with relatives, with people with whom the respondent works, or with friends and neighbors; attending a social event at church or synagogue; and participating in a group recreational activity. The sum of the ratings of the five types of social activities was used to indicate social participation. A higher score indicates that the respondent is a more frequent participant in her social environment. The possible range of social participation is from 0 to 20.

Emotional support, the second dimension of social support, was measured by the convoy model developed by Antonucci and Akiyama (1987). Respondents were first asked to list up to 10 persons in their network who were important to them. Then they indicated whether each person provided them with the following four types of emotional support (each coded as yes = 1 or no = 0): someone in whom they could confide; a source of reassurance when feeling uncertain; someone to talk with when upset, nervous, or depressed; and someone to show them respect. A total score of emotional support was obtained by summing the availability of these four types of support from all members in the network. The score has range of 0 to 40. The reliability of the emotional support measure was .83 for wife caregivers and .87 for daughter caregivers.

Although we conceptualized emotional support as a functional aspect of social support, it could be argued that our measure also contains structural components because it reflects the size of a respondent's network, which is generally viewed as a structural dimension of social support. Therefore, we developed an alternative coding of emotional support by dividing the score described above by the number of persons listed as sources of this type of support. Thereby we controlled for network size and eliminated the structural component of the measure. We used this constrained measure in the analysis of emotional support in addition to the measure described above. As it produced the same pattern of findings as the original measure as developed by Antonucci and Akiyama (1987), we retained the original measure in the final set of analyses. Tables based on the constrained measure are available from the authors.
Caregiving support, the third dimension of social support, was measured by whether there was anyone else who helped the caregiver by providing assistance to the care recipient. The help could be from either informal sources, such as relatives and friends, or formal sources, such as aides and service providers. When someone else in addition to the caregiver helped the recipient with any of 14 ADL or IADL activities, caregiving support was coded 1. If no one else helped with caregiving, caregiving support was coded 0.

Five characteristics of the caregivers were used as control variables: age (in years); education (1 = below high school, 2 = high school graduate, 3 = some college education but no degree, and 4 = college degree or more); employment status (0 = unemployed, 1 = employed full or part-time); duration of providing care (in years); and self-rated health (1 = poor to 4 = excellent).

The dependent variable, depressive symptoms, was measured by the CES-D scale (Radloff, 1977). Respondents were asked how often the 20 symptoms of depression occurred in the week before; for instance, had they felt depressed, talked less than usual, and/or had restless sleep. Each item was rated on a 4-point scale (0 = rarely to 3 = most of the time). Its alpha reliability was .86 and .90 for wife and daughter caregivers, respectively.

Data Analysis

We analyzed the wife and daughter caregiver samples separately because of their distinct demographic profiles, particularly with respect to marital status, gender of the care recipient, coresidence, and their different positions in the life course. For these reasons, we examined variation within each sample separately, rather than conducting between-sample comparisons.

Multiple regression was the primary method of data analysis. Each of the regression models consisted of three sets of variables: characteristics of the caregiver (included for control purposes), sources of stress, and one measure of social support. The analysis of each type of social support was conducted in a separate model. We checked to see if adding controls for the other two types of social support changed the findings. Since the pattern of findings was the same in all analyses, these controls were not retained in the final models. Tables portraying the analyses with these additional controls included are available from the authors.

We first tested the main effect of social participation with controls for the characteristics of the caregiver (age, education, employment status, duration of care, and health status) and the two stressor variables — ADL/IADL level and behavior problems.

Next, in order to test the buffering effect of emotional support and caregiving support, we created two interaction terms for each of the two types of stress (Type of stress × Emotional support, Type of stress × Caregiving support). The variables used to create the interaction terms were centered (i.e., deviation scores from the mean were used in place of raw scores) in order to minimize the problem of multicollinearity that can be introduced into a regression equation by an interaction term (Aiken and West, 1991; Jaccard, Turrisi, and Wan, 1990). Only significant interactions were retained in the final models. For each significant interaction term, we used the procedures suggested by Aiken and West (1991) to examine the direction of the interaction. Specifically, we transformed the type of stress variable according to three preselected values, that is, one standard deviation above the mean, mean value, and one standard deviation below the mean and ran the interaction model at these three values, respectively. The results indicate the effect of the support measure on depressive symptoms at low stress (1 standard deviation below the mean), medium stress (mean value), and high stress (1 standard deviation above the mean).

Although the analyses described here were designed to examine direct and buffering effects of social support, the data are cross-sectional and thus do not permit causal inferences. Therefore, our use of the term “effects” does not imply that social support had a causal influence on depression, but rather that a certain type of relationship (direct, interaction) was found between social support and depressive symptoms.

Throughout these analyses, the .05 level of statistical significance was used. Trends are reported for coefficients at the .06 level.

Results

Descriptive Findings

Table 1, which presents means and standard deviations for all study variables, shows that the wives had been providing care for a shorter period of time than the daughters. In addition, the wives were significantly older than the daughters.

Table 1. Means and Standard Deviations (in parentheses) of Study Variables for Wife and Daughter Caregivers

<table>
<thead>
<tr>
<th></th>
<th>Wife Caregivers (n = 103)</th>
<th>Daughter Caregivers (n = 149)</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>70.93 (7.38)</td>
<td>57.53 (9.45)</td>
<td>12.78***</td>
</tr>
<tr>
<td>Education</td>
<td>2.17 (.98)</td>
<td>2.63 (.87)</td>
<td>-3.88***</td>
</tr>
<tr>
<td>Employment</td>
<td>.24 (.43)</td>
<td>.54 (.50)</td>
<td>-5.15***</td>
</tr>
<tr>
<td>Duration</td>
<td>8.05 (6.58)</td>
<td>10.40 (7.73)</td>
<td>-2.63**</td>
</tr>
<tr>
<td>Health</td>
<td>2.85 (.83)</td>
<td>3.09 (.73)</td>
<td>-2.35*</td>
</tr>
<tr>
<td>ADL/IADL of care recipient</td>
<td>20.30 (5.51)</td>
<td>21.46 (4.95)</td>
<td>-1.73</td>
</tr>
<tr>
<td>Behavior problems of care recipient</td>
<td>6.67 (4.63)</td>
<td>6.68 (3.99)</td>
<td>-.01</td>
</tr>
<tr>
<td>Emotional support</td>
<td>20.00 (8.63)</td>
<td>22.08 (9.31)</td>
<td>-1.84</td>
</tr>
<tr>
<td>Caregiving support</td>
<td>.42 (.50)</td>
<td>.90 (.30)</td>
<td>-8.92***</td>
</tr>
<tr>
<td>Social participation</td>
<td>6.57 (2.87)</td>
<td>7.56 (3.03)</td>
<td>-2.66**</td>
</tr>
<tr>
<td>Depressive symptoms</td>
<td>11.90 (9.79)</td>
<td>9.31 (8.96)</td>
<td>2.16*</td>
</tr>
</tbody>
</table>

*p < .05; **p < .01; ***p < .001.
daughters, had less education, were less likely to be employed at the time of the study, and had poorer health. This distinct profile of wives and daughters reflects generational differences, and therefore these five factors were controlled for wives. Thus, in all three dimensions of social support, the behavior problems of the care recipient were prominent predictors of a daughter’s level of depressive symptoms. Those in poor health whose husband had more behavior problems had higher levels of depressive symptoms.

In contrast, for daughter caregivers, social participation was found to be a significant predictor of depressive symptoms. The more active the level of social participation, the less depressed they were. In total, 37.4 percent of the variance in daughters’ depressive symptoms was accounted for by this model, with 2.7 percent attributed to the main effect of social participation, net of all other variables in the model. Age of the caregiver, her health status, and the behavioral problems of the care recipient were prominent predictors of a wife caregiver’s level of depressive symptoms. Those in poor health whose husband had more behavior problems had higher levels of depressive symptoms.

The results of our multivariate analysis of emotional support are reported in Table 4. In Model 1, the main effect of emotional support is shown, while Model 2 and Model 3 present the buffering effects of emotional support. For wife caregivers, Model 2 shows that the interaction term of Behavior problems by Emotional support was a significant predictor of depressive symptoms. To examine the direction of the interaction effect, we ran the interaction model at three levels of stress: high (1 SD above the mean value of behavior problems), medium (mean level), and low correlations among the support measures suggested that they were relatively distinct from one another.

### Table 2: Intercorrelations of Study Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
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<tbody>
<tr>
<td>1. Age</td>
<td></td>
<td>-.28***</td>
<td>-.47***</td>
<td>-.07</td>
<td>.00</td>
<td>-.30***</td>
<td>.06</td>
<td>.03</td>
<td>.18*</td>
<td>-.08</td>
<td>-.23**</td>
</tr>
<tr>
<td>2. Education</td>
<td>-.06</td>
<td></td>
<td>.30***</td>
<td>-.09</td>
<td>-.07</td>
<td>.04</td>
<td>.01</td>
<td>.19*</td>
<td>.04</td>
<td>.07</td>
<td>.00</td>
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<td>3. Employment</td>
<td>-.40***</td>
<td>.17</td>
<td></td>
<td>-.12</td>
<td>.09</td>
<td>.18*</td>
<td>-.12</td>
<td>.08</td>
<td>.00</td>
<td>.25**</td>
<td>-.06</td>
</tr>
<tr>
<td>4. Duration</td>
<td>.03</td>
<td>.07</td>
<td>.10</td>
<td></td>
<td>-.01</td>
<td>-.00</td>
<td>.10</td>
<td>-.03</td>
<td>-.12</td>
<td>.03</td>
<td>.18*</td>
</tr>
<tr>
<td>5. Health</td>
<td>-.11</td>
<td>.21</td>
<td>.15</td>
<td>-.08</td>
<td></td>
<td>.04</td>
<td>-.27</td>
<td>.20</td>
<td>.07</td>
<td>.15</td>
<td>-.35***</td>
</tr>
<tr>
<td>6. ADL/IADL</td>
<td>.02</td>
<td>.02</td>
<td>.14</td>
<td>.03</td>
<td>.08</td>
<td></td>
<td>-.31***</td>
<td>.01</td>
<td>-.23**</td>
<td>.17*</td>
<td>-.04</td>
</tr>
<tr>
<td>7. Behavior problems</td>
<td>-.32***</td>
<td>.00</td>
<td>.13</td>
<td>.02</td>
<td>-.07</td>
<td>-.20*</td>
<td></td>
<td>-.05</td>
<td>.06</td>
<td>.05</td>
<td>.43***</td>
</tr>
<tr>
<td>8. Emotional support</td>
<td>.00</td>
<td>.35***</td>
<td>-.11</td>
<td>-.05</td>
<td>.18</td>
<td>-.16</td>
<td></td>
<td>.18</td>
<td>.01</td>
<td>.29**</td>
<td>-.18*</td>
</tr>
<tr>
<td>9. Caregiving support</td>
<td>.12</td>
<td>-.07</td>
<td>-.13</td>
<td>-.04</td>
<td>-.12</td>
<td>-.44***</td>
<td>.15</td>
<td>.16</td>
<td></td>
<td>.08</td>
<td>-.09</td>
</tr>
<tr>
<td>10. Social participation</td>
<td>.08</td>
<td>.12</td>
<td>-.11</td>
<td>-.11</td>
<td>.08</td>
<td>.27**</td>
<td>-.15</td>
<td>.10</td>
<td>-.20*</td>
<td></td>
<td>-.17*</td>
</tr>
<tr>
<td>11. Depressive symptoms</td>
<td>-.13</td>
<td>-.17</td>
<td>.00</td>
<td>-.02</td>
<td>-.47***</td>
<td>-.05</td>
<td>.29**</td>
<td>-.25**</td>
<td>.02</td>
<td></td>
<td>-.19*</td>
</tr>
</tbody>
</table>

The lower half is for wife caregivers and the upper half is for daughter caregivers. *p < .05; **p < .01; ***p < .001.
Table 3. Effects of Social Participation on Depressive Symptoms for Wife and Daughter Caregivers

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Wife Caregivers</th>
<th>Daughter Caregivers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n = 103) Beta</td>
<td>(n = 149) Beta</td>
</tr>
<tr>
<td>Age</td>
<td>-1.37 (-1.77)</td>
<td>-2.88*** (-2.66)</td>
</tr>
<tr>
<td>Education</td>
<td>-0.04 (-0.396)</td>
<td>-0.72 (-0.723)</td>
</tr>
<tr>
<td>Employment</td>
<td>-0.017 (-0.370)</td>
<td>-0.68 (-1.195)</td>
</tr>
<tr>
<td>Duration</td>
<td>-0.054 (-0.080)</td>
<td>0.12 (1.137)</td>
</tr>
<tr>
<td>Health</td>
<td>-0.451*** (-5.160)</td>
<td>-1.97*** (-5.160)</td>
</tr>
<tr>
<td>ADL/IADL of care recipient</td>
<td>0.039 (0.037)</td>
<td>0.055 (0.097)</td>
</tr>
<tr>
<td>Behavior problems of care recipient</td>
<td>0.200** (0.415)</td>
<td>0.417*** (0.910)</td>
</tr>
<tr>
<td>Social participation</td>
<td>-0.136 (-0.449)</td>
<td>-1.78* (-5.141)</td>
</tr>
<tr>
<td>R²</td>
<td>3.12 (-4.826)</td>
<td>3.74 (-2.371)</td>
</tr>
<tr>
<td>F</td>
<td>5.331*** (5.160)</td>
<td>10.469*** (5.160)</td>
</tr>
</tbody>
</table>

Note: Beta = Standardized regression coefficient; (b) = Unstandardized regression coefficient.
*p < .05; **p < .01; ***p < .001.

Table 4. Effects of Emotional Support on Depressive Symptoms for Wife and Daughter Caregivers

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Wife Caregivers</th>
<th>Daughter Caregivers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1 Beta</td>
<td>Model 2 Beta</td>
</tr>
<tr>
<td></td>
<td>(b)</td>
<td>(b)</td>
</tr>
<tr>
<td>Age</td>
<td>-1.35 (-1.73)</td>
<td>-1.16 (-1.49)</td>
</tr>
<tr>
<td>Education</td>
<td>0.027 (0.271)</td>
<td>0.038 (0.375)</td>
</tr>
<tr>
<td>Employment</td>
<td>-0.040 (-0.873)</td>
<td>-0.028 (-0.619)</td>
</tr>
<tr>
<td>Duration</td>
<td>-0.055 (-0.081)</td>
<td>-0.064 (-0.094)</td>
</tr>
<tr>
<td>Health</td>
<td>-0.422*** (-4.826)</td>
<td>-0.414*** (-4.742)</td>
</tr>
<tr>
<td>ADL/IADL of care recipient</td>
<td>-0.031 (-0.058)</td>
<td>-0.021 (-0.038)</td>
</tr>
<tr>
<td>Behavior problems of care recipient</td>
<td>0.253** (0.525)</td>
<td>0.339*** (0.704)</td>
</tr>
<tr>
<td>Emotional support</td>
<td>-0.232* (-2.58)</td>
<td>-0.229* (-2.55)</td>
</tr>
<tr>
<td>Behavior problems × Emotional support</td>
<td>-0.238** (-0.258)</td>
<td>-0.140* (-0.052)</td>
</tr>
<tr>
<td>ADL/IADL × Emotional support</td>
<td>(0.027)</td>
<td>(0.006)</td>
</tr>
<tr>
<td>R²</td>
<td>.338 (0.804)</td>
<td>.339 (0.804)</td>
</tr>
<tr>
<td>F</td>
<td>6.001*** (6.541)</td>
<td>5.292*** (6.541)</td>
</tr>
</tbody>
</table>

Note: Beta = Standardized regression coefficient; (b) = Unstandardized regression coefficient.
* p < .05; ** p < .01; *** p < .001.

For daughter caregivers, emotional support buffered the effect of stress of the behavior problems and ADL/IADL limitations of their parent. Model 2 (Table 4) shows that the Behavior problems by Emotional support interaction term was significant. Model 3 shows that there was a trend for emotional support to buffer the stress of ADL/IADL limitations (p = .058).

Figure 1 (bottom panel) illustrates the interaction effect of behavior problems and emotional support for daughters.
graphically. When the aging parent’s behavior problems were high, daughters who received more emotional support had lower levels of depressive symptoms than daughters who had less emotional support. However, under conditions of medium or low stress, emotional support was not related to daughters’ depressive symptoms. In total, 36.7 percent of the variance in daughters’ depressive symptoms was accounted for, with the behavior problems by emotional support buffering effect contributing 1.8 percent of this variance, net of all other variables.

Regarding the interaction effect of ADL/IADL and emotional support for daughters, under the high stress condition (i.e., when the aging parent had poor ADL/IADL skills), daughters who received higher levels of emotional support had lower levels of depressive symptoms. However, under medium or low stress conditions, emotional support was not related to daughters’ depressive symptoms. (Graphical illustration of this interaction effect is available from the authors.) In total, 36.6 percent of the variance in daughters’ depressive symptoms was accounted for in the model, with the ADL/IADL by emotional support buffering effect contributing 1.7 percent of this variance.

To summarize, emotional support buffered the stress emanating from husbands’ behavior problems for caregiving wives, and from aging parents’ behavior problems for daughter caregivers. Under these specific circumstances of stress, receiving emotional support was associated with a lower level of depressive symptoms in caregivers. However, the buffering effect of emotional support on stress accounted for a substantially greater amount of the variance in predicting depressive symptoms among wives than daughters (5.0% vs 1.8%, respectively), indicating that emotional support had stronger buffering effects for wives.

In addition, there was a trend for emotional support to buffer daughters’ stress associated with their parents’ ADL/IADL limitations ($p = .058$).}

**Caregiving support.** — As shown in Table 5, for neither wife nor daughter caregivers did caregiving support have a main or buffering effect on depressive symptoms. Thus, our hypothesis that caregiving support would have a stress-buffering effect was not supported.

**DISCUSSION**

As hypothesized, we found a different pattern of effects depending on the type of support and the type of kinship relationship between caregiver and care recipient. Social participation had a main effect on depressive symptoms for daughters but not for wives. For both wives and daughters, emotional support buffered the stress emanating from the behavior problems of the family member to whom care was provided. In addition, for daughters, there was a trend for emotional support to buffer the stress emanating from the ADL/IADL limitations of the parent. Caregiving support was not found to be a significant buffer for either wives or daughters. Except for caregiving support, these findings were supportive of our hypotheses, which were derived from a consideration of the distinct context of caregiving by a wife versus a daughter and from past research on the different types of effects that functional and structural dimensions of social support can have (Cohen and Wills, 1985; Kessler and McLeod, 1985).

To amplify, we found that social participation, which is a structural component of social support, had a main effect on the mental health of daughter caregivers, but not of wives. That is, regardless of the level of stress associated with caregiving, participating in social activities was associated with lower levels of depressive symptoms for daughters. Social participation may give daughters a break from the demands of caregiving and may allow them to continue ongoing social relationships. This finding is consistent with
past research that has shown the main effect of structural dimensions of social support (Kessler and McLeod, 1985). For wives, however, we speculate that the potential benefits of social participation were counterbalanced because participating in social activities may have posed role conflicts for them; in many cases, the husband to whom they now must provide care may have joined them in the past as a marital partner in these social activities.

We found that emotional support had a buffering effect for both wives and daughters. When wives care for husbands who have higher levels of behavioral problems, they are at risk for elevated levels of depressive symptoms. However, if wives receive emotional support from family and friends, taking care of a husband with behavioral problems has less of a negative impact. We interpret this finding in the context of the lower level of emotional support that is available from the husband to the wife when he has behavioral problems. This is a particularly significant loss in cases in which the husband had been a source of emotional support to the wife prior to his illness. In this situation, emotional support from others may compensate at least to some extent for the stress of the husband’s behavioral problems and the loss of the husband’s emotional support.

For daughters, emotional support from family and friends was found to have a buffering effect when the aging parent had higher levels of behavioral problems or poor ADL/IADL skills. While daughters are at risk for higher levels of depressive symptoms, the stress is experienced less negatively if they receive emotional support. We interpret this finding in the context of role reversal. When an aging parent experiences substantial decline in functional abilities and depends on the daughter for care, there is a role reversal between parent and child. Also, when a parent has behavioral problems which the daughter caregiver may have to regulate, she increasingly assumes a parent-like role. This exchange of roles may be disturbing for the adult daughter, but emotional support may provide the needed comfort and buffer the stress.

Counter to our hypothesis, caregiving support was not found to be a significant buffer for either wives or daughters. This finding may reflect limitations in our measure of caregiving support, a dichotomous variable which classified a caregiver as receiving this type of support if she received help from someone else with at least one caregiving task. However, we recognize that this variable may have failed to capture several important aspects of caregiving support, such as the amount of support provided or whether the support provided was needed or desired by the caregiver. These aspects may be critical in determining whether caregiving support buffers the effect of stress. Future research is needed using more refined and precise measures of caregiving support in order to investigate under what conditions this type of support has a main or a stress-buffering effect.

According to past research (Krause and Borawski-Clark, 1994), functional support provided in the context of highly
salient roles has more of an effect than support provided in the context of roles more marginal to one's identity. Our findings were consistent with this observation. Stronger stress-buffering effects were found for wives, for whom the caregiving role was conceptualized as more salient than for daughters, for whom caregiving was conceptualized as a less central role.

Although our analysis focused on the fit between the type of support and the caregiving context (i.e., the kinship relationship between caregiver and care recipient), the data suggest the importance of also taking into consideration the type of stressor, as suggested in previous research (Krause, 1986). The fit between the caregiving context and the type of support was important in determining whether the caregiver would benefit from social participation (daughters did; wives did not), whereas the fit between the caregiving context, the type of stress, and the type of support was important in determining how emotional support would have its buffering effect (i.e., in reaction to the behavior problems of the husband for wives and to either the behavior problems or functional limitations of the parent for daughters). Thus, the effect of support is not uniform; rather, in order to detect its effects it is necessary to consider the fit between type of stress, the type of support, and the context (defined here as kinship relationship) in which stress and support are experienced.

We found that daughters were much more negatively affected by the stress of caring for a parent with high levels of behavioral problems than were wives whose husbands had similarly high levels of behavioral problems. This was evident in the multivariate models, in which the effect of behavioral problems on the care recipient was much greater for daughters than for wives. It is possible that the higher role salience of the caregiving role for wives is the reason why the behavioral limitations of the care recipient took less of a toll on them than on daughter caregivers. Perhaps the sense of satisfaction associated with carrying out the highly salient wife role reduces the wife's negative reaction to the husband's behavioral problems. Daughters may derive less of a sense of purpose in life from the caregiving role; hence, the objective demands of taking care of an aging parent with behavioral problems are not counterbalanced by the perception of the importance of this role (Seltzer and Li, 1996).

We found that health status of the caregiver was a predictor of depressive symptoms for both wives and daughters. Poorer health was associated with higher levels of depressive symptoms, as has been found in much past research (Brief et al., 1993; Heidrich and Ryff, 1993; Trans, Wright, and Chatters, 1991). Age was also found to be a predictor of depressive symptoms in daughter caregivers, as younger daughter caregivers had considerably higher levels of depressive symptoms than older daughter caregivers. This finding is consistent with past research on caregiving (Greenberg, Seltzer, and Greenley, 1993; Young and Kahana, 1989) and may reflect the distress of "off-time" (i.e., younger age) caregiving. It is not surprising that daughters in young adulthood and midlife, who are faced with competing demands of parenting young children and establishing or building a career, may find caring for an aging parent to be more difficult than older daughters who are further along in their life course and who may have peers in similar caregiving circumstances.

Our data suggest that younger daughters caring for an aging parent who had high levels of behavioral problems are a group at particular risk of elevated levels of depression.

The findings of the study should be interpreted cautiously due to a number of limitations of our study methods. First, we are limited by the use of cross-sectional data. We conceptualized that social support preceded depressive symptoms, but it is also possible that more depressed persons turn others away and thus have less social support. Also, prior levels of distress or another third factor, such as personal competence, may affect both social support and depressive symptoms, which would make the observed relationship between social support and depression spurious. These questions will be addressed with our longitudinal data.

Second, although our hypotheses about the buffering effects of emotional support were largely confirmed statistically, we note that the magnitude of the effects was modest, especially for daughters. Nevertheless, the effects reflect the unique variance in depressive symptoms that was associated with the buffering effect of social support, once all other factors were controlled. From this perspective, the magnitude of the effect was not inconsequential. Furthermore, the larger magnitude of the effect for wives than for daughters was consistent with our hypothesis, based on the differential salience of the wife and daughter roles. Third, our samples were modest in size, which may have posed a problem of statistical power in detecting buffering effects. Replication of these findings with larger samples is therefore needed.

Lastly, among the many elements comprising the differential context of caregiving for wives and for daughters, several warrant further investigation: namely, coresidence, marital status, and the gender of the care recipient. In our sample, all of the wives lived with their husbands to whom they provided care, whereas only 11.3 percent of the daughters shared a household with their aging parent. All wives were married, but 13.2 percent of the daughters were not. All care recipients of the wives were male, but 84.1 percent of the care recipients of the daughter were female. Although we interpreted contextual effects as reflecting the differential kinship relationship between the care recipient and either a wife or a daughter, we recognize that coresidence, marital status, and gender are other potentially influential factors in defining the context. To assess whether these factors conditioned the effects of social support in our sample of daughter caregivers, we did further analysis controlling for coresidence, marital status, and gender. We found that there was no differential pattern of social support effects depending on these three controls (results available from the authors). Thus, in this study, these factors did not appear to confound the relationship between social support and depressive symptoms. Nevertheless, these are issues which should be investigated in future research.

These limitations were counterbalanced by notable strengths of the research. First, our investigation was carried out with a probability sample of caregivers, which was not preselected on the basis of the diagnosis of the care recipient or the participation of the caregiver in support groups or other services, as has been the case in much caregiving research in the past. Thus, generalizability
should be greater. Also, our data included multiple measures of stress and support, and the comparative analysis of caregiving in two contexts (daughters and wives), all of which are needed to fully investigate the "appropriateness of fit" hypothesis. Using caregiving as the example, this analysis provided evidence supportive of the "fit" hypothesis. Our data suggested social support does not have uniform effects. Rather, support is beneficial to well-being when the specific type of support fits with both the need and the individual context.

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REFERENCES


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