Journal of Gerontology: PSYCHOLOGICAL SCIENCES
2007, Vol. 62B, No. 5, P253–P260

The Importance of Family Relationships With Nursing Facility Staff for Family Caregiver Burden and Depression

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We explore the association between family caregiver depression and the quality of staff–family relationships, and we test burden as a mediator of this relationship. Using structural equation modeling, we used data from a representative sample of 932 family members from 20 nursing homes in Central New York to examine the association between staff–family relationship quality and family caregiver depression. We then tested family caregiver burden as a mediator of the relationship between staff–family relationship quality and family caregiver depression. Staff–family relationship quality, specifically perceived conflict with staff, is significantly associated with family caregiver depression. Further, caregiver burden mediates this relationship. Interventions to improve staff–family relationships may impact family caregiver depression by reducing the stress that family caregivers experience.

CONTRARY to a "myth of abandonment," which suggests that family caregivers of older adults relinquish this responsibility after the care recipient is institutionalized, it is well documented that relatives actively maintain their role as caregivers even after formal care begins (Davis & Buckwalter, 2001; Garity, 2006, Gaugler, 2005; Gaugler, Leitsch, Zarit, & Pearlin, 2000; Port et al., 2005). In fact, nursing home placement often occurs reluctantly, only after serious deterioration of the physical and cognitive health of the older person (Buhr, Kuchighatla, & Clipp, 2006; McCallum, Simons, Simons, & Friedlander, 2005). Family burden changes after placement because in addition to continuing to provide direct care, family caregivers assume the added responsibility of maintaining the dignity of their relatives in the nursing homes and mediating and monitoring their care (Bowers, 1988; Brody, Dempsey, & Pruchno, 1990; Janzen, 2001; Port et al). Fortunately, positive interactions with nursing staff can facilitate family caregivers' coping with postplacement stresses such as role disruption, guilt, and uncertainty about the future (Garity, 2006), but negative interactions with staff may place family caregivers at greater risk for outcomes such as frustration, caregiver burden, and depression. In this article, we explore this potential influence on family caregiver well-being in long-term-care settings: the quality of relationships with facility staff. Using a large and representative sample of families from 20 nursing homes, we examine the effect of these relationships on caregiver burden and depression.

Impact of Placement on Burden and Depression

Counter to expectations of relief, placement in a long-term-care facility does not reduce caregiver burden (Bowman, Mukherjee, & Fortinsky, 1998; Stephens, Kinney, & Ogrocki, 1991; Stephens, Ogrocki, & Kinney, 1991; Vinton & Mazza, 1994). Instead, family caregivers of institutionalized patients generally experience equal levels of stress as home caregivers (Stull, Cosbey, Bowman, & McNutt, 1997; Zarit & Whitlach, 1992, 1993), although there is a shift in the nature of the burden (George, 1984; Spark & Brody, 1970; Zarit & Whitlach, 1992). New sources of burden may include greater financial worries (Moody, 2002), the desire to remain responsible and to mitigate the sense of guilt over having placed the relative in an institutional setting (George, 1984), and interactions with formal care providers (Brody et al., 1990), which is the specific interest of this article.

In addition to persisting burden, family caregivers may experience negative mental health consequences after placing their relative in long-term care (Brandwein & Postoff, 1980; Haley, Levine, Brown, Berry, & Hughes, 1987; Ross, Rosenthal, & Dawson, 1997; Stephens et al., 1991; Zarit & Whitlach, 1992). In particular, researchers have found family caregiver depression to be a correlate of nursing home care (Townsend, Deimling, & Noelker, 1988; Whitlach, Feinberg, & Stevens, 1999). Evidence of continuing distress remains even though the primary responsibility for day-to-day care shifts to the nursing home staff (Davis & Buckwalter, 2001; Stephens et al., 1991). High rates of depression are of particular concern because of its association with negative social, economic, and health consequences for family caregivers (Gray, 2003). Studies suggest that some families are ill prepared psychologically for a nursing home placement (Brody and Spark 1966; Kellett, 1999b; Ryan and Scullion, 2000), after which time emotional turmoil may continue and lead to psychological distress.

Impact of Relationships With Staff on Burden and Depression

We hypothesize that a contributing source of the burden and psychological distress experienced by family members who

place a relative in long-term care lies in the concrete, day-to-day interactions family members have with facility staff. The research showing that many family members experience considerable stress in negotiating relationships with the nursing home is extensive (Bowers, 1987; Gaugler et al., 2000; Grau, Teresi, & Chandler, 1993; Hertzberg & Ekman, 1996; Pillemer, Hegeman, Albright, & Henderson, 1998; Pillemer et al., 2003; Whitlach et al., 1999). More specifically, considerable evidence exists that problematic staff–family relations are endemic to nursing home care (Pillemer et al., 2003), because opportunities for negative interactions are frequent in the nursing home (Drysdale, Nelson, & Wineman, 1993; Ehrenfeld, Bergman, & Alpert, 1997; Levine & Murray-Thomas, 2004; Nolan & Dellasega, 1999; Pillemer et al., 2003; Vinton, Mazza, & Kim, 1998), including verbal and even physical aggression (Vinton & Mazza, 1994; Vinton et al., 1998). A long line of research has shown that negative interactions are substantial sources of upset and distress for individuals in all settings, and they have even greater effects for persons who are already undergoing stress (for a review on this topic, see Rook, Sorkin, & Zettel, 2004).

The issue of interpersonal interaction may be especially important for family members who place a relative in institutional care. In addition to the direct effects of negative interaction with staff on family caregivers, interaction quality may be perceived by family to also reflect the quality of care provided to their relative. Further, it is not unusual for family members to feel that staff do not listen to them or that they lack interest in their insights about the family member (Grau et al., 1993; Hertzberg, Ekman, & Axelsson, 2001; Townsend et al., 1988). There is also evidence that, for staff, family members operate more as a backdrop to the nursing process (Kellett, 1999a; Nolan, Grang, & Keady, 1996; Robinson, 1994), and that staff rarely seek feedback from family caregivers (Hertzberg & Ekman, 2000; Hertzberg et al., 2001; Kellett, 1999). Consequently, family members often wonder about the ways the staff interact with their relative; feel they have trouble obtaining information about their relative; and they undergo considerable stress and anxiety in their efforts to negotiate aspects of their relative's care with staff.

At the same time, it is through their relationships with staff that family caregivers convey the unique personality, preferences, and worth of their relatives (Duncan & Morgan, 1994; Robinson, 1994). By communicating such information, families expect to increase the likelihood that staff will provide sensitive and individualized care (Krause, Grant, & Long, 1999). Further, family members are keenly aware that the staff's ability to deliver personalized care depends on a collaborative process involving ongoing contacts with the family (Bowers, 1987, 1988; Duncan & Morgan; Hertzberg & Ekman, 2000; Hertzberg et al., 2001) and that this type of care is a key factor in the successful adjustment of their relative.

Taken together, the literature indicates that caregiver burden and depression are a common experience for family caregivers of institutionalized relatives. We hypothesize that negative relationships with staff are a major predictor of both burden and depression. Although there are strong grounds to suggest that this relationship exists, to our knowledge no study has empirically investigated this issue. We further expect that the mechanism through which the association between nursing home placement and depression is manifested may lie in the experience of caregiver burden resulting from more negative and fewer positive interactions with nursing facility staff.

Specifically, we hypothesize that negative interactions with staff after placement may increase caregiver burden, which may in turn increase caregiver depression. The potential for such a mediated relationship is suggested by research on burden and depression in caregivers of individuals with Alzheimer's disease. Clyburn and colleagues (Clyburn, Stones, Hadjistavropoulos, & Tuokko, 2000) found indirect effects of low informal support on depression through caregiver burden. Low informal support from family and friends was related to higher burden, which in turn led to more depressive symptoms. As family members continue in their caregiving role after placement, staff–family relationships may serve similar functions around formal support. Our goal in the present study is to better understand the process leading to depression in family caregivers of persons living in nursing homes in reference to relationships with facility staff, so that remedies can be tested and promoted.

Methods

Participants

For our analyses we use data collected as part of the Partners in Caregiving study, a controlled trial of an intervention designed to improve family and staff relationships in nursing homes. Participants in the Partners in Caregiving study included family members in 20 nursing homes in the Central New York region. The sampling frame for facilities was the membership of the New York Association of Homes and Services for the Aging, which is the state association of not-for-profit nursing homes. We categorized all New York Association of Homes and Services for the Aging facilities in a nine-county area, a total of 60, according to metropolitan or nonmetropolitan location and size (80–150 beds vs more than 151 beds). Of these, 52 (87%) agreed to participate in the study. We selected 20 facilities for the study by the use of stratified randomization methods resulting in an even distribution over these two categories (5 facilities in each of the four metropolitan or nonmetropolitan areas by size groups). Because our primary purpose was to evaluate an intervention, two units (one control and one intervention) participated from 10 of the facilities and one unit (control only) participated from the remaining 10 facilities. We randomly selected all units from within the 20 participating facilities.

Within each of these units, we invited the family member of every resident who was designated by the facility as the "responsible relative" to participate in the study. The majority of the relatives (53%) identified themselves as having been the primary caregiver prior to nursing home placement, and 27% considered themselves to have been assisting someone else who was the primary caregiver. The remaining 20% of the respondents described other situations, with the majority reporting that there was no primary caregiver prior to placement (the resident lived independently) or that the original primary caregiver had died over the course of the placement.

Of the 1,208 family members contacted, 932 (77%) completed interviews. The analyses we describe in this article use data only from baseline, prior to the introduction of the intervention. The majority of family members who participated

were adult children of the resident (56%). Approximately 10% of the family members were spouses (wives 4%, husbands 6%), and the remaining 34% were other relatives. There is a relatively large proportion of "other relatives" because the study includes all residents in the research, rather than focusing only on individuals with active family members, as other studies have done. For this reason, a higher number of more distant relatives are found in the sample. Family members reported that 49% of care recipients exhibited some evidence of dementia or Alzheimer's disease (formal diagnosis was not available in this study).

Measures

Dependent variables.—The two outcomes under study are depression and caregiver burden. We assessed depression with the Center for Epidemiological Studies–Depression scale (CES-D), a commonly used self-report measure of depressive symptomatology. In this study we used the seven-item short form of the CES-D, developed by Ross and Mirowsky (1989), which has been used in a number of longitudinal studies and shows reliability similar to the entire scale. This shorter measure includes items assessing the following symptoms: couldn't get going; felt sad; sleep was restless; felt everything you did was an effort; felt lonely; could not shake off the blues; trouble keeping your mind on what you were doing ($\alpha = 0.87$).

We assessed caregiver burden by using six items from the Zarit Burden Interview (Zarit, Todd, & Zarit, 1986). Time constraints in the interview required a shortened form of the 22-item Zarit Burden Interview. In piloting phases of the study, we conducted focus groups with family members of nursing home residents (subsequently detailed). On the basis of these data, we selected six items that emerged as particularly relevant to nursing home caregivers: did not have enough time for themselves; were stressed; were afraid; felt strained; indicated that their health had suffered; and felt they needed to do more for their family member. Although this scale evidenced acceptable internal reliability ($\alpha = 0.66$), this coefficient is lower than that which has generally been found for the entire scale (typically 0.85–0.90), which one would expect when fewer items compose a scale.

Independent variables.—We developed two measures to assess the quality of the staff–family relationship: the degree of interpersonal conflict experienced with staff (interpersonal conflict with staff, or ICS), and the degree to which family members perceive staff as supportive (perceived staff supportiveness, or PSS). Given the absence of existing measures in this area, we used extensive survey and focus group pilot studies to identify important dimensions, which provided the basis of the scale items. The survey involved Directors of Social Services in 218 nursing homes in New York State, who were asked questions regarding major areas of staff – family conflict, as well as about staff behaviors that family members perceive as supportive and understanding. We conducted the focus groups with 36 family members and with 41 direct care staff. In these focus groups, interviewers asked respondents to identify major conflict areas as well as positive staff behaviors as perceived by families. After we derived the two measures from these data-collection activities, facility staff and family members, as well as several experts in the field of long-term care, reviewed the instrument and provided feedback. We addressed content validity by pretesting the interview multiple times and then using it in a pilot intervention study of the Partners in Caregiving program (Pillemer et al., 1998). Both the ICS and the PSS proved responsive to change over time as a result of the intervention.

ICS is a seven-item measure of the frequency with which family caregivers experience arguments or perceive conflict with staff members (typically certified nursing assistants and nurses) over personal care, meals or food, administrative rules, laundry or clothing, resident's appearance, toileting and attentiveness to resident's needs. We derived the format of the scale items from a well-established model for the measurement of interpersonal conflict, developed by Straus and colleagues (Straus, 2005). Participants were asked the following question: "When a person enters a nursing home and their primary care is taken over by the staff rather than the family, arguments or conflicts may occur over different issues. How often do you have arguments or conflicts with the staff members over the following items?" Possible responses were as follows: never (0), once a month (1), a few times a month (2), a few times a week (3), or every day (4). The reliability coefficient for the scale is $\alpha = 0.79$.

The second measure is the three-item PSS scale, which measures the degree to which family caregivers perceive staff as understanding of the family caregiver, easy to talk to, and helpful to the family caregiver. The answer categories are 1 = never, 2 = rarely, 3 = sometimes, and 4 = almost always. The reliability coefficient for this scale is $\alpha = 0.87$.

Statistical Models and Analytic Method

We used structural equation modeling (SEM) to examine the association between staff–family relationship quality and family caregiver depression, adjusting for covariates (i.e., the length of time the caregiver had been involved in caregiving, and his or her race, gender, education, and age; and the care recipient's functional status, length of time in the facility, and the presence of Alzheimer's disease). We then used SEM to test the hypothesis that family caregiver burden mediates the relationship between staff–family relationship quality and family caregiver depression by using an approach outlined by Holmbeck (1997). We used the software package MPlus to conduct all SEM analyses.

We included a total of 932 observations in the analyses. Between 0.7% and 3.1% of the data were missing on any of the primary variables of interest. To address missing data, we used multiple imputation to estimate missing values by using PROC MI in SAS. Multiple imputation is a strategy for dealing with missing data that replaces each missing value with a set of plausible values. An advantage of imputing a set of plausible values is in the degree of variability representing the uncertainty about the "correct" estimate for a missing value that can be inserted as part of the imputed set of values (Rubin, 1987). Thus, imputed values are more conservative than a direct imputation of a single value. The standard PROC MI procedure involves the creation of five sets of imputed variables for the missing data. For variables that were categorical or ordered categorical, we rounded the values resulting from the imputation to the nearest whole number. We created five

Table 1. Means and Standard Deviations of the Measured Variables at Baseline

Variable	*M*	*SD*	Range
Depression (CES-D)	4.07	4.41	7–28
Caregiver burden	6.15	4.43	0–22
Interpersonal conflict with staff	1.66	2.88	0–28
Perceived staff supportiveness	11.37	1.37	3–12

Notes: Here, $N = 932$. CES-D = Center for Epidemiological Studies–Depression scale; *SD* = standard deviation. Higher scores indicate more of the construct such that they are favorable for supportiveness but not favorable for depression, burden, or perceived conflict.

Table 2. Pearson's Correlations among the Latent Variables

Variable	1	2	3	4
1. Depression (CES-D)	—	0.30****	0.13****	−0.05
2. Caregiver burden		—	0.28****	−0.17****
3. Interpersonal conflict with staff			—	−0.26****
4. Perceived staff supportiveness				—

Notes: Here, $n = 920$–931. CES-D = Center for Epidemiological Studies–Depression scale.

*$p < .05$; **$p < .01$; ***$p < .001$; ****$p < .0001$.

separate data sets through the multiple imputation process and used them for subsequent analyses. We tested measurement and structural models by aggregating the five imputed data sets. However, because MPlus does not currently have the ability to aggregate imputed data sets for chi-square difference tests and tests of the indirect effect, we conducted separate analyses on each of the five imputed data sets for the tests of the mediational model. Although not shown in figures, by creating paths between these covariates and depression, all models controlled for the effect of the resident's functional status, the presence of Alzheimer's disease, the time at which the resident entered the facility, and the caregiver's race, gender, education, age, length of time involved in caregiving, and frequency of visits to the facility. We allowed all predictor variables to covary.

Results

Table 1 presents the means and standard deviations for the measured variables of interest. The mean depression score in our sample was 4.07 ($SD = 4.41$), which is consistent with that of other similar populations (Andresen, Malmgren, Carter, & Patrick, 1994; Lewinsohn, Seeley, Roberts, & Allen, 1997). The mean burden score was 6.15 ($SD = 4.43$). The mean level of perceived conflict was low (1.66 on a scale of 0–28) and the mean for staff supportiveness was high (11.37 on a scale of 3–12). Table 2 presents bivariate correlations for all of the latent variables used in our models.

Structural Equation Modeling

As the first step in our analyses, we constructed and tested a measurement model of four latent factors with 23 measured indicator variables. The latent construct of perceived ICS consisted of its 7 observed variables; the latent variable of perceived PSS consisted of the 3 indicator variables of the structural equation models; the caregiver burden latent variable consisted of the 6 variables; and the latent variable depression was measured by the 7 variables from the CES-D. The measurement model produced by the combination of the five imputed data sets provided a strong fit to the data and the basis for the structural models (Comparative Fit Index or CFI = 0.993; Tucker Lewis Index or TLI = 0.995; and root mean square error of approximation or RMSEA = 0.037).

We first tested the model for the presence of a direct effect of (a) staff supportiveness and (b) perceived conflict with staff on caregiver depression. This model was obtained from the combination of the five imputed data sets and controlled for family caregiver and care recipient characteristics. The overall model was significant (CFI = 0.966; TLI = 0.971; RMSEA = 0.041). Although the ICS latent variable showed significant positive associations with the latent variable of depression ($\beta = 0.109$, $p < .01$), the PSS latent variable did not demonstrated a significant association with the latent variable of depression (see Figure 1).

Next, we tested a model that examined the direct effects between the staff–family relationship quality measures and depression, as well as indirect effects of the staff–family relationship quality measures on depression through caregiver burden. This model was obtained from the combination of the five imputed data sets and had a strong fit to the data as indicated by a CFI of 0.949, a TLI of 0.958, and an RMSEA of 0.048. The nonstandardized parameter estimates and significance levels for the structural paths among the latent constructs are presented in Figure 2. Although this is not shown in the diagram, we allowed all predictor latent variables to covary and they evidenced significant covariation ($p < .0001$ for all relationships). Results from the analyses indicate that perceived ICS was positively associated with caregiver burden ($\beta = 0.26$, $p < .001$). Staff supportiveness was also negatively associated with caregiver burden ($\beta = -0.11$, $p < .05$). Additionally, when we included caregiver burden in the model, the relationship between perceived staff conflict and depression became nonsignificant. Finally, caregiver burden demonstrated a significant positive association with depression ($\beta = 0.39$, $p < .0001$).

We compared the mediation model with a model that constrained the path between caregiver burden and depression to zero. As we expected, constraining the paths linking caregiver burden to depression led to significant changes in model estimation. The model fit worsened (CFI = 0.949 vs 0.933 and RMSEA = 0.048 vs 0.058) and there was a significant change in the regression coefficient for the effect of perceived conflict ($\beta = -0.03$, *ns*, vs $\beta = 0.43$, $p < .0001$) on depression.

Because we used imputed data, we could not conduct the traditional testing of nested models with the effect of caregiver burden on depression constrained to zero. MPlus does not provide an option for comparing chi-square values across imputed models. In order to address this issue, we performed a chi-square difference test for each of the five models. As a result of the ordered categorical nature of the data, the simple subtraction of chi-square values obtained by using the weighted least squares with mean variance adjustment estimation method results in values that are not distributed as a chi-square (Muthen & Muthen, 2006). Therefore, we used the DIFFTEST procedure in MPlus to obtain an adjusted chi-square difference test of nested models. Table 3 contains the results from each of the five DIFFTEST results run individually for each of the five imputed data sets. These results clearly indicate a significantly

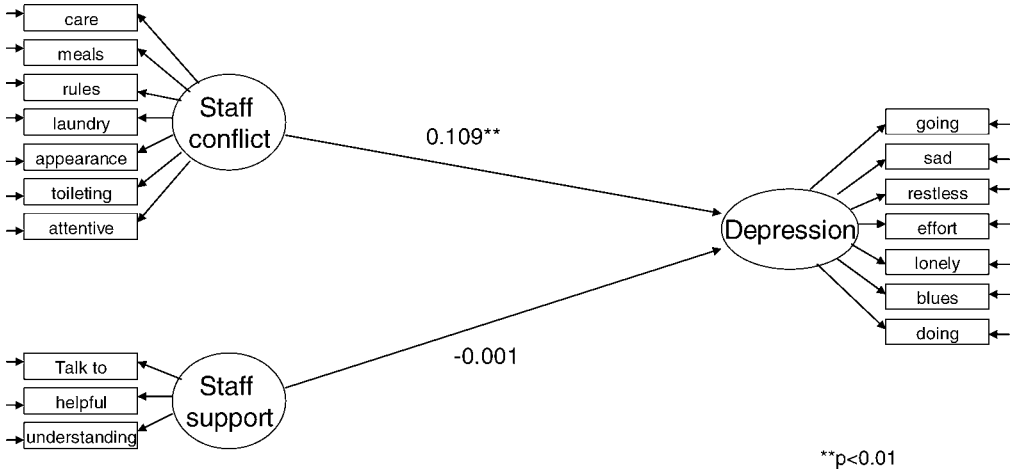

Figure 1. Direct effects model of staff relationship quality and family caregiver depression. (Note: Although it is not shown here, the model controlled for the effect of the resident's functional status, the presence of Alzheimer's disease, and the time at which the resident entered the facility. It also controlled for the caregiver's race, gender, education, and age; the length of time the caregiver had been involved in caregiving; and the frequency of family visits to the facility.)

better model fit for the mediation models than the models with the effect of caregiver burden on depression constrained to zero for all five of the imputed data sets.

In a final test of the mediation model, we conducted a series of analyses to obtain the parameter estimate and the standard error for the indirect effects of both of the staff–family caregiver relationship quality variables on caregiver depression. We ran separate analyses for each of the imputed data sets; the results of each were roughly identical and are shown in Table 4. As we expected, the results confirm the presence of significant indirect effects of perceived staff conflict on caregiver depression, but a significant indirect effect of supportiveness on caregiver depression in only three of the five imputed data sets.

Thus, the results clearly indicate that the effect of caregiver burden on depression can be explained in the context of a mediation-effect model significantly better than in the context of a direct-effect model. The addition of a path between staff relationship quality and caregiver burden contributed uniquely to this mediation.

Discussion

The analyses presented here confirm our hypothesis that relationships between facility staff and family caregivers are significantly associated with family caregiver depression. This is an important finding, especially in the context of the decision to place a family member in a nursing home, which often results in worry and anxiety among family caregivers about the care that their family members receive. The quality of staff and family interactions can serve to reassure family caregivers that their family members are being cared for in a compassionate way, or it can exacerbate anxiety about the quality of care.

The current analyses indicate that although perceived staff supportiveness did not show significant relationships with

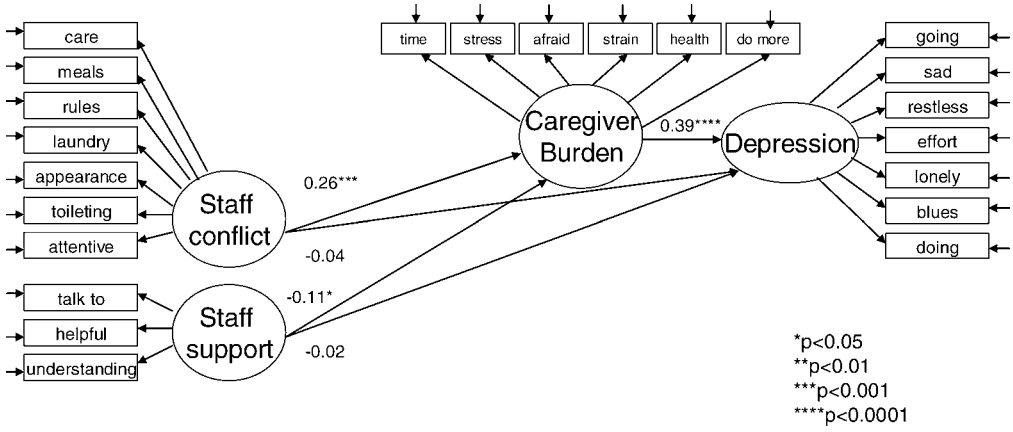

Figure 2. Indirect effect model of relationship quality on family caregiver depression through caregiver burden. (Note: this model controlled for the same effects as the model in Figure 1.)

Table 3. Chi-Square Difference Tests Comparing the Mediational Model With Nested Models for Each Imputed Data Set

Imputation Model	χ^2		
	Value of Full Model	Difference	p
1	$\chi^2(154) = 482.47$	$\chi^2(1) = 61.65$	<.0001
2	$\chi^2(158) = 493.33$	$\chi^2(1) = 60.24$	<.0001
3	$\chi^2(158) = 490.57$	$\chi^2(1) = 59.69$	<.0001
4	$\chi^2(153) = 479.64$	$\chi^2(1) = 90.78$	<.0001
5	$\chi^2(158) = 494.79$	$\chi^2(1) = 59.43$	<.0001

Note: Here, $N = 932$.

Table 4. Indirect Effects of Perceived Conflict and Supportiveness on Caregiver Depression

Imputation Model	Staff Conflict	Staff Supportiveness
1	0.095****	−0.052*
2	0.103****	−0.040
3	0.101****	−0.044*
4	0.110****	−0.037
5	0.098****	−0.045*

Notes: Here, $N = 932$.
*$p < .05$; ****$p < .0001$.

family caregiver depression, perceived family caregiver conflict with facility staff was a significant predictor of caregiver depression. Staff supportiveness was operationalized as the degree to which family members found staff to be easy to talk to, helpful, and understanding. Perceived staff conflict was a measure of the frequency of family arguments or disagreements with staff around the resident's various personal care needs and the staff's attentiveness to the resident's needs. Our findings suggest that lower levels of perceived conflict around key areas of resident care and facility life are associated with lower levels of family caregiver depression.

We note that this conclusion is consistent with interpersonal theories of the etiology of depression, which indicate that depression may be linked to interpersonal role disputes and nonreciprocal expectations around the nature of a relationship (Weissman, Markowitz, and Klerman, 2000). The interpersonal theory of depression conceptualizes depressive symptoms as a phenomenon that has social processes at its foundation. One of the key beliefs is that social phenomena (such as losses, role transitions, interpersonal disputes, or the lack of significant relationships) result in depressive symptoms. Interpersonal psychotherapy for depression, one of the two primary empirically validated treatments for depression, has this conceptualization at the heart of the intervention design (Elkin, Shea, Watkins, & Imber, 1989; Frank, Kupfer, Wagner, McEachran, & Cornes, 1991; Scocco & Frank, 2002).

However, it is important to recognize that these processes are undoubtedly reciprocal, such that individuals who have more interpersonal conflict in their lives are likely to become depressed, and also that the irritability and agitation that is sometimes associated with depression would likely result in more strained interpersonal interactions. Thus, because the causal ordering of the concepts under study is not known, it is possible that caregiver depression contributes to perceptions of conflict as well. A longitudinal study is indicated so that researchers may better understand this phenomenon. Our findings further suggest that, for family caregivers of individuals residing in institutional settings, difference in expectations about the care provided may play a key role in the development or maintenance of depressive symptoms.

Results also indicate that staff supportiveness has less of a relationship with depression than does a perception of conflict. It may be that families are highly concerned about the residents' instrumental needs and therefore conflicts around the meeting of these needs are more salient than feelings of support. The stronger impact of perceptions of conflict on depression is consistent with literature indicating that although negative interactions may be less frequent than positive ones, the negative interactions that do occur have a greater effect on well-being in all domains of life (Finch, Okun, Pool, & Ruehlman, 1999; Krause & Rook, 2003; Rook, 2003). The strong relationship between negative interactions and well-being is also consistent with research indicating that individuals tend to evaluate the significance of negative events more strongly than that of positive events (Newsom, Rook, Nishishiba, Sorkin, & Mahan, 2005).

Thus, as family caregivers evaluate their relationships with staff, a greater salience may be placed on the negative interactions that occur. Caregivers who perceive conflict with staff may then experience greater anxiety, concern, and stress around the care their relatives receive. In light of research indicating that negative interactions are more related to negative feelings and that positive interactions are more related to positive feelings (Ingersoll-Dayton, Morgan, & Antonucci, 1997; Newsom, Nishishiba, Morgan, & Rook, 2003), staff supportiveness may be expected to have a stronger effect on positive outcomes such as family satisfaction with care or family caregiver happiness. These possible relationships were not studied in this analysis, and so additional work is needed to elucidate whether positive aspects of staff–family relationships may be associated with positive caregiver outcomes.

The analyses exploring the process through which perceptions of staff conflict relate to caregiver depression found that caregiver burden mediated this relationship. Thus, the impact that perceived conflict with staff has on depression operates through the caregiver's experience of burden. Caregivers who perceive conflict with staff around the care their family member receives are more likely to feel stressed, strained, and worried that they should be doing more for their family members. These findings are consistent with our hypothesis that these feelings of burden negatively affect caregiver mood and may contribute to depressive symptoms. However, it is possible that burdened caregivers are more likely to engage in or perceive conflictual relationships with staff or that these relationships are in fact bidirectional. Once again, additional longitudinal work would help to clarify the nature of these relationships.

Several limitations of this study should be noted. The first is that there is no measure of the family caregiver's feelings about nursing home placement or their preadmission depression and burden; thus, we could not adjust the analyses for these variables. Additionally, and as already noted, the cross-sectional nature of the data precludes the ability to make causal inferences. Longitudinal studies that examine the relationship between staff–family relationships and the trajectory of family caregiver mental health status following family member institutionalization are necessary to determine the direction of the

relationships among these variables. Another limitation is that we conducted this study exclusively in not-for-profit facilities, which constitute only one third of all nursing homes. Numerous studies have identified differences between profit and not-for-profit nursing homes (Hillmer, Wodchis, Gill, Anderson, and Rochon, 2005), and, to the extent that for-profit facilities tend to have poorer quality, the distribution of depression, burden, conflict and supportiveness might be worse than those reported in these not-for-profit facilities; however, the relationships between variables would not be expected to differ.

Despite the absence of longitudinal data, the associations themselves suggest that this is a fruitful area for future research and in particular for intervention studies. On one hand, interpretations suggesting that burden and depression result from a pattern of microlevel interactions between family members and staff (a finding consistent with several other studies; see Gaugler & Ewen, 2005; Pillemer et al., 2003; Robison & Pillemer, 2005) encourage interventions that involve explicit discussion and negotiation of care expectations between family caregivers and staff, as well as programs that teach evidence-based methods of conflict resolution (Pillemer et al.). On the other hand, interpretations suggesting that family depression instigates conflict encourage interventions to directly address this depression, as well as conflict resolution. Either way, findings suggest that interventions designed to improve staff and family relationships may help family caregiver depression by reducing the stress that family members experience.

Acknowledgments

This research was supported by Edward R. Roybal Center Grant 1P30AG022845 from the National Institute on Aging (Karl Pillemer, Principal Investigator); Cory K. Chen's time was supported by Grant 1T32 AG00272-01 A1 from the University of North Carolina Institute on Aging, Carolina Program in Healthcare and Aging Research Fellowship Program; and Dr. Zimmerman's time was supported by Grant K02 AG00970 from the National Institute on Aging. We are grateful to Yasamin Miller, Director, and the staff at the Cornell Survey Research Institute who performed data-collection activities, as well as to Leslie Schultz, Rhoda Meador, and Carol Hegeman for invaluable assistance with the study.

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Received June 7, 2006
Accepted April 3, 2007
Decision Editor: Karen Hooker, PhD