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Research Article

Family Involvement in the Nursing Home and Perceived Resident Quality of Life

Amy Restorick Roberts, PhD, MSSA, LSW,*[,1] and Karen J. Ishler, PhD, LSW[2]

[1]Department of Family Science and Social Work and Scripps Gerontology Center, Miami University, Oxford, Ohio. [2]Jack, Joseph and Morton Mandel School of Applied Social Sciences, Case Western Reserve University, Cleveland, Ohio.

*Address correspondence to: Amy Restorick Roberts, PhD, MSSA, LSW, Department of Family Science and Social Work and Scripps Gerontology Center, Miami University, 101J McGuffey Hall, 201 E. Spring Street, Oxford, OH 45056. E-mail: rober128@miamioh.edu

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Abstract

Purpose of Study: This study focuses on the relationship between family involvement and family perceptions of nursing home residents' quality of life (QOL).

Design and Methods: Resident and family variables from the 2012 Ohio Family Satisfaction Survey were merged with facility information from the Certification and Survey Enhanced Reports (CASPER). Hierarchical linear modeling was used to examine the association between family involvement and other predictors with perceived resident QOL.

Results: Although most of the variability in family member perceptions of resident QOL was observed at the individual level (residents and families), characteristics of the facilities were also significantly associated with perceived resident QOL. Family involvement was a strong predictor of perceived resident QOL: Families who visited frequently and provided more help with personal care perceived lower resident QOL, while those who communicated frequently with facility staff had higher perceptions of resident QOL. Interestingly, the negative association between helping with more personal care and perceiving lower resident QOL was attenuated when family members communicated more regularly with facility staff. However, as family member age increased, the positive association between communication with facility staff and resident QOL diminished. Family members who are spouses, older, non-White, and highly educated perceived resident QOL as lower.

Implications: Meaningful family involvement is a modifiable factor that can potentially enhance resident QOL. Facilities can become more family-oriented through encouraging communication between staff and families, helping spouses and other family members fulfill their desired caregiving role, and discussing the family's motivations for providing personal care during visits.

Keywords: Family caregiving, Nursing home, Family-staff communication, Personal care, Visiting

Most research regarding quality of life (QOL) for nursing home residents has focused on the experiences of residents within nursing homes (NHs) and the quality ratings of facilities, without including the perspective of family members. QOL in long-term care is complex and encompasses the social, psychological, environmental, and functional aspects of residents' lives (Kane, 2003; Shippee, Henning-Smith, Kane, & Lewis, 2015). In addition to residents themselves, families can also provide a unique point of view and a valuable perspective regarding residents' QOL, especially among residents with low cognition, dementia, or severe physical impairments who may have difficulty articulating QOL for themselves.

Family Involvement Within NHs

Although family involvement is thought to enhance resident QOL, the effects of family involvement on resident outcomes such as better QOL is understudied (Gaugler, 2005). Research has suggested that families are integral to promoting social engagement (Kiely, Simon, Jones, & Morris, 2000), and bolstering the identity and dignity of relatives living in NHs (Kolb, 2000; Tilse, 1997). Families often remain in their caregiving role and stay involved after NH placement for the purpose of improving the QOL of their resident loved ones, through visiting relatives and fulfilling a variety of caregiving responsibilities such as providing and monitoring care (Gaugler, 2005). In fact, families of NH residents are usually involved with overseeing, arranging, and providing care between 4 and 9 hr per week (Gaugler, Anderson, Zarit, & Pearlin, 2004; Port et al., 2005), and families often help their relatives with daily tasks (Durkin, Shotwell, & Simons, 2014).

A conceptual model of family involvement in residential long-term care proposed by Gaugler (2005) illustrates how and why family involvement may be related to resident outcomes. In this model, families are a psychosocial resource for NH residents and their involvement is thought to improve resident QOL through reducing the negative outcomes from stressors arising from the family caregiving context prior to or after NH admission (e.g., caregiving stress or distance from facility), living in the facility (e.g., policies), resident characteristics (e.g., functional status), or interactions with staff (e.g., quality of staff-resident relationships). Family members can be involved in the care of their loved ones after NH placement through visiting, giving personal care, interacting with staff, and providing socio-emotional care (Gaugler, 2005, p. 114). In this study, we examined three types of family involvement: visiting, providing care, and communication with staff.

Visiting

Visiting has been associated with promoting the well-being of residents (Greene & Monahan, 1982). When families visit, they often maintain family connections, help the staff to get to know the resident better, and oversee the quality of care (Bern-Klug & Forbes-Thompson, 2008). Visits from family tend to decrease as the residents' length of stay increases (Gaugler, Anderson, & Leach, 2004; Port et al., 2001), but families' visiting patterns can change over time (Gaugler, Zarit, & Pearlin, 2003). Families may reduce NH visits as they become more emotionally difficult, feelings of guilt subside, or other demands on life increase (Gladstone, Dupuis, & Wexler, 2006).

Personal Care

While the "dual specialization" model suggests that staff provide the technical, hands-on care and families provide psychosocial support (Litwak, 1985), staff and families can have different expectations for care tasks and responsibilities (Rubin & Shuttlesworth, 1983; Schwartz & Vogel, 1990). In addition to providing social support, families may continue to help the NH resident complete activities of daily living, such as grooming, bathing, or eating, depending on the needs and preferences of their relative. For instance, families of residents with advanced dementia often assisted with eating, mobility, and discussing care with staff, while families of residents with higher cognitive functioning focused on activities to promote social and community engagement (Cohen et al., 2014).

Communication With Staff

Families communicate with NH staff in order to monitor care and advocate for their relatives. The reciprocal exchange of information is one factor that supports positive relationships between families and staff (Haesler, Bauer, & Nay, 2007). Communication is important in establishing and negotiating the roles and responsibilities that bring together families and staff as care partners. Constructive staff-family relationships depend on communication to build trust, encourage involvement, and provide for the emotional and practical needs of family members (Bauer, Fetherstonhaugh, Tarzia, & Chenco, 2014). Interactions between staff and families can be positive or negative, depending on past experiences and the family's view of the competency of staff (Gladstone, Dupuis, & Wexler, 2007).

Study Aims

Although prior research has identified and quantified different aspects of family involvement in residential settings, there is a dearth of empirical data regarding how such involvement is related to NH resident QOL. Thus, the primary aim of the present study was to examine how the three types of family involvement (visiting the NH, providing personal care, and communicating with NH staff) are related to resident QOL, as perceived by the family. Our secondary aim was to identify the resident, family member, and facility characteristics that are associated with family perceptions of higher resident QOL. Finally, we explored the extent to which the relationship between perceived resident QOL and a given type of family involvement might vary as a function of other types of family involvement or family member characteristics.

Research Design and Methods

The 2012 Ohio Nursing Home Family Satisfaction Survey collected data from family members of residents in 947 Ohio NHs. This survey, completed by mail or internet, was sent to the most involved family member from a census-proportionate, random sample of residents. The survey assessed the family member's satisfaction with care overall and within specific departments (e.g., administration or

dining). It also collected background information about the family member and the facility resident. Nearly all (99%) facilities in Ohio participated in the 2012 survey, with an average family member response rate of 45% statewide (Straker et al., 2013).

Facility-level characteristics were drawn from CASPER data collected during the most recent recertification survey prior to the second quarter of 2012. Data were not available from 44 facilities. CASPER contributed data about the general features of each facility (e.g., ownership, size, casemix), staffing variables (e.g., staffing levels), and quality indicators (e.g., deficiencies).

The combined dataset comprised 26,204 responses from 903 facilities. For the present study, we excluded cases and facilities based on the following criteria: (a) residents or family members under the age of 18; (b) legal guardians (because whether the guardian was a court-appointed volunteer, attorney, or family member was unknown); (c) cases with missing data on family or resident predictors or with more than 20% of items missing on the dependent variable; (d) facilities with missing data on facility predictors; and (e) facilities with fewer than 5 respondents. Our final sample consisted of 14,979 family respondents from 839 NHs in Ohio (see flow chart in Supplementary Appendix).

Measures

Dependent Variable: Family Perception of Resident QOL

The Family Perception of Resident Quality of Life (FPRQOL) measure was created using 25 items that assess resident QOL from the 48-item Ohio Nursing Home Family Satisfaction scale. The measure assessed the most involved family members' perception of their resident loved one's QOL. Example items are "Does the resident have enough to do in the facility?" and "Is the resident encouraged to make decisions about his/her care routine?" Agreement was measured using a four-point Likert-type scale, ranging from *no, never* (0) to *yes, always* (3). The average item response (from at least 20 items) was multiplied by 25 to yield a total score that was then re-scaled to range from 0 to 100, with higher scores indicating higher perceived resident QOL. All items loaded over .40 in an exploratory factor analysis, and the scale demonstrated excellent internal consistency ($\alpha = .94$).

Family Involvement

Family involvement included visiting, providing personal care, and communicating with staff. Family members were asked how often, on average, they visit their resident loved one, with response options of *few times a year* (0), *one time per month or less* (1), *2 to 3 times per month* (2), *once per week* (3), *several times per week* (4), and *daily* (5). Visiting was dichotomized (weekly or less often) in the analysis. Family members indicated how often they helped their relative during visits in each of five areas: feeding, dressing, toileting, grooming, and going to activities on a scale of *never* (0), *sometimes* (1), or *always* (2). Responses were summed to indicate involvement in personal care. Family members were also asked how often they talked with five categories of facility staff: nurse aides, nurses, social worker(s), physician(s), and administrator(s) on a scale of *never* (0), *sometimes* (1), and *always* (2). A measure of the overall level of communication with staff was created as a sum of these responses.

Resident, Family Member, and Facility Characteristics

The QOL of NH residents has been associated with the sociodemographic and health-related characteristics of residents, along with organizational characteristics of the facility (Degenholtz et al., 2006; Kane et al., 2004; Shippee et al., 2015; Xu, Kane, & Shamliyan, 2013). In the current study, we included the resident age, gender, cognitive and physical functioning, the anticipated length of stay, payment source, and previous living arrangement that may account for differences in perceived resident QOL. Family member gender, age, educational attainment, race, and relationship role (e.g., spouse, adult child/in-law, other) were also included, although evidence regarding their relationship to resident QOL is lacking. We included general features of the facility (e.g., ownership, size, and casemix), staffing (e.g., staffing levels and retention), and quality indicators (e.g., number and severity of regulatory deficiency citations). These facility characteristics are thought to affect perceived resident QOL due to differences in available resources, care delivery, and resident populations.

Data Analysis

Univariate frequencies and descriptive statistics were calculated for all variables. Multivariate analysis utilized multilevel modeling, performed with HLM software, version 7 (Raudenbush & Bryk, 2013). Multilevel modeling was appropriate given the clustered (i.e., nonindependent) nature of the data. We utilized a random intercept model, in which the mean level of perceived resident QOL was allowed to vary across facilities. In this way, total variability in perceived resident QOL was partitioned into individual-level variability (i.e., related to resident and family member characteristics) and facility-level variability (i.e., related to facility characteristics).

We report the results from two models: Model 1, in which the family member involvement variables were entered after controlling for resident, family member, and facility characteristics; and Model 2, which includes significant interaction effects involving family involvement variables and selected family member and resident characteristics. We initially tested three interaction terms—to explore whether the relationship between perceived

resident QOL and each type of family involvement (e.g., visiting) might vary as a function of another type of family involvement (e.g., personal care). In the course of testing and probing these effects, we witnessed sizeable and/or substantive changes in model estimates for family member age and resident cognitive functioning. This prompted us to test additional interaction terms involving these variables. We also tested for a possible interaction between family member age and relationship (spouse vs. non-spouse) in order to better understand our findings.

Results

Descriptive Statistics

Resident and Family Member Characteristics

Table 1 displays characteristics of the residents and their most involved family members. On average, residents were 82.5 years old (*SD* = 11.85, Range = 19–109) and two-thirds were female. Residents had varying levels of cognitive and physical functioning (*M* = 4.85, *SD* = 1.49, Range 0–6 and *M* = 5.99, *SD* = 3.63, Range 0–12, respectively), with higher scores indicating better functioning. The main funding source used by residents for care was Medicaid (67%), followed by private pay or private insurance (19%), and Medicare (14%). Most family members (91%) expected the resident to require a stay of 3 months or longer. Prior to moving to the current NH, approximately half of residents lived in their own homes (45%). About a quarter (22%) moved to the NH from a hospital, 14% moved from another NH, and 19% moved from another location (e.g., group home or a relative's home).

Family members, on average, were in their early 60s (*M* = 61.5, *SD* = 10.82). Two-thirds (68%) were female and the majority was Caucasian (92%). Most were adult children\in-laws (63%), however 11% were spouses, and 26% were other relatives or close friends. More than half (55%) held a high school diploma or less, 31% had a college degree, and 14% had a graduate degree.

In terms of family member involvement, most family members (82%) visited the NH at least weekly. On average, family members more than "sometimes" communicated with staff (*M* = 5.87, *SD* = 1.91), but they provided personal care to their relative between "never" and "sometimes" (*M* = 2.73, *SD* = 2.04).

Perceived Resident QOL

Overall, family members perceived the QOL of their resident loved ones as generally good. As shown at the bottom of Table 1, Resident QOL scores ranged from 8 to 100, with an average of 83.49 (*SD* = 14.07).

Facility Characteristics

Table 2 shows that most NHs were owned by for-profit entities (79%), affiliated with a multi-facility chain (65%), and located in urban areas (71%) with higher levels of market competition. On average, facilities had 100.5 residents (*SD* = 42.82) and an occupancy rate of 86%. Approximately 29% of NHs had a high occupancy level (i.e., over 92%). Facility revenue (the payer-mix) was made

Table 1. Descriptive Statistics for Resident and Family Member Characteristics, Family Member Involvement, and Perceived Resident Quality of Life (*N* = 14,979)

	M	*SD*	Observed range
Resident characteristics			
Male	0.25	0.43	0–1
Age	82.50	11.82	19–109
Cognitive functioning[a]	4.85	1.49	0–6
Physical functioning[a]	5.99	3.63	0–12
Primary payment source			
Medicaid	0.67	0.47	0–1
Private pay or private insurance	0.19	0.39	0–1
Medicare	0.14	0.35	0–1
Expect short-term stay (3 months or less)	0.09	0.28	0–1
Prior living location			
Own home	0.45	0.50	0–1
Hospital	0.22	0.42	0–1
Other nursing home	0.14	0.35	0–1
Other (e.g., group home, relative's home)	0.19	0.39	0–1
Family member characteristics			
Male	0.32	0.47	0–1
Age	61.51	10.82	19–99
Relationship to resident			
Spouse	0.11	0.31	0–1
Adult child/in-law	0.63	0.48	0–1
Other family/friend	0.26	0.44	0–1
Race			
Caucasian/White	0.92	0.27	0–1
African American/Black	0.06	0.24	0–1
Other	0.02	0.13	0–1
Highest level of education completed			
HS diploma or less	0.55	0.50	0–1
College degree	0.31	0.46	0–1
Graduate degree	0.14	0.34	0–1
Family member involvement			
Frequency of visiting			
Daily	0.21	0.40	0–1
Several times per week	0.40	0.49	0–1
Once per week	0.21	0.41	0–1
2–3 times per month	0.10	0.30	0–1
1 time per month or less	0.08	0.28	0–1
Direct care provided to resident[a]	2.73	2.04	0–10
Communication with facility staff[a]	5.87	1.91	0–10
(Perceived) Resident quality of life[a]	83.49	14.07	8–100

Note: [a]Variables coded such that higher values = higher levels of each construct.

Table 2. Descriptive Statistics for Facility Characteristics: General Features, Staffing Variables, and Quality Indicators (*N* = 839)

	M	*SD*	Observed range
General features			
Ownership			
Not for profit or government-owned	0.21	0.41	0–1
For-profit	0.79	0.41	0–1
Part of multi-facility chain	0.65	0.48	0–1
Part of CCRC	0.14	0.35	0–1
Urbanicity of location			
Urban	0.71	0.45	0–1
Micropolitan	0.19	0.39	0–1
Rural	0.10	0.31	0–1
Marketplace competition of location (county)			
Very high	0.43	0.49	0–1
High	0.32	0.47	0–1
Moderate	0.15	0.36	0–1
Low	0.11	0.31	0–1
Bed size	100.48	42.82	18–360
Occupancy rate (%)	85.68	10.28	29–100
High occupancy (>92%)	0.29	0.45	0–1
Payor mix (0%–100%)			
% Medicaid	53.70	14.15	0–100
% Medicare	10.60	6.81	0–52
% other	21.48	10.62	0–62
Casemix acuity index	9.73	1.20	5.39–14.10
Casemix—% residents w/ dementia	47.95	16.41	0–100
Casemix—% residents w/ depression	59.88	19.32	0–97.87
Casemix—% residents w/ psychiatric disorder[a]	33.65	17.66	0–92.50
Casemix—% residents w/ developmental disability	2.34	3.27	0–28.57
Has dementia special care unit	0.20	0.40	0–1
Staffing variables			
Employee retention rate (%)	74.05	11.13	35–100
Staffing levels (minutes per resident day)			
All nursing staff (RN, LPN, CNA)	213.89	46.12	54.80–486.38
Mental health staff	0.46	0.71	0–7.73
Activities staff	12.14	6.02	0–50.20
Food service and dietician staff	44.65	21.19	0–244.96
Housekeeping staff	31.42	17.20	0–243.03
Quality indicators			
Total number of deficiencies	4.87	4.50	0–26
High deficiencies (>4)	0.42	0.49	0–1
Deficiency for serious/ substandard care	0.18	0.39	0–1
% residents on anti-psychotic medications	25.08	13.50	0–91.49
% residents on anti-anxiety medications	24.70	10.96	0–71.43

Note: CCRC = continuing care retirement community; CNA = Certified Nursing Assistant; LPN = licensed practical nurse; RN = registered nurse.
[a]Excludes dementia and depression.

up of Medicaid (53.7%), Medicare (10.6%) and other sources (21.5%). In the average facility, about half of the residents (48%) had dementia, 60% had depression, 34% had a psychiatric disorder, and 2% had a developmental disability. Employee retention rates and staffing levels varied considerably across facilities. In terms of objective quality indicators, the average NH had 4.87 deficiency citations (*SD* = 4.50), and 18% of facilities had received a deficiency citation for serious or substandard care.

Multivariate Results

The calculated intraclass correlation coefficient was .113, indicating that 11.3% of the variability in perceived resident QOL could be considered between-facility variation and 88.7% attributed to individual-level variation. Table 3 presents the results of the hierarchical linear models in which perceived resident QOL was regressed on the three types of family member involvement, after controlling for resident, family member, and facility characteristics. Results are shown for the main effects model (Model 1) and the model with interaction effects (Model 2). Based on model deviance values, Model 2 provided a slightly improved fit to the data, χ^2 (5) = 102.89, $p < .001$. Findings from Model 2 are summarized below in terms of each group of predictors, beginning with family member involvement.

Family Member Involvement

All three types of family involvement were significantly related to perceived resident QOL. Family members who visited residents weekly or more often rated resident QOL significantly lower than those who visited on a less frequent basis. Next, the provision of personal care to a relative by the family member was negatively related to perceived resident QOL; each additional unit of personal care was associated with a decrease of over 1.6 points in the rating of resident QOL (a simple main effect). In general, higher levels of communication with facility staff were linked to perceptions of greater QOL; perceived resident QOL increased over 2 points with each additional unit of family member communication with staff in the facility (a simple main effect).

The interaction between family involvement in personal care and communication with staff terms was statistically significant. Although providing greater personal care to the resident was generally associated with lower ratings of resident QOL, this relationship was attenuated among family members who communicated more regularly with staff (Figure 1). Other significant interactions were observed. Family member age was found to moderate the relationships between two types of family involvement and perceived resident QOL. First, the negative relationship between providing personal care to the resident and perceived resident QOL was slightly attenuated among older family members. Second, the positive association between

Table 3. Hierarchical Linear Regression Models Predicting Perceived Resident Quality of Life from Resident and Family Member Characteristics, Family Member Involvement, and Facility-level Characteristics (*N* individuals = 14,979; *N* facilities = 839)

	Model 1		Model 2 with Level 1 interactions	
Fixed effects	Coefficient	(*SE*)	Coefficient	(*SE*)
Intercept	77.93***	(2.10)	78.00***	(2.09)
Resident characteristics				
Male	−0.26	(0.25)	−0.28	(0.25)
Age	−0.02	(0.01)	−0.02	(0.01)
Cognitive functioning	−0.28***	(0.08)	0.04	(0.10)
Physical functioning	0.69***	(0.03)	0.68***	(0.03)
Primary payment source (ref = Medicare)				
Medicaid	0.15	(0.34)	0.13	(0.34)
Private pay or private insurance	−0.02	(0.39)	−0.04	(0.39)
Expect short-term stay (3 months or less)	−1.51***	(0.45)	−1.56***	(0.44)
Prior living location (ref = own home)				
Hospital	0.60*	(0.28)	0.60*	(0.27)
Other nursing home	0.82*	(0.32)	0.80*	(0.32)
Other (e.g., group home, relative's home)	1.04***	(0.27)	1.00***	(0.27)
Family member characteristics				
Male	1.33***	(0.23)	1.29***	(0.23)
Age	0.08***	(0.01)	0.09***	(0.01)
Spouse	−1.74***	(0.41)	−1.19*	(0.57)
Non-White	−3.02***	(0.48)	−2.98***	(0.48)
High education (college degree or higher)	−0.22	(0.21)	−0.17	(0.21)
Facility characteristics: general features[a]				
Not for profit or government-owned	1.49***	(0.39)	1.49***	(0.39)
Part of multi-facility chain	−1.56***	(0.32)	−1.59***	(0.32)
Part of CCRC	−0.92	(0.49)	−0.90	(0.50)
Urbanicity of location (ref = Urban)				
Micropolitan	0.22	(0.43)	0.21	(0.43)
Rural	0.52	(0.53)	0.55	(0.53)
Marketplace competition (ref = Very high)				
High	0.96**	(0.36)	0.99**	(0.36)
Moderate	1.38**	(0.49)	1.39**	(0.49)
Low	0.89	(0.61)	0.93	(0.61)
Bed size	−0.02***	(< 0.01)	−0.02***	(< 0.01)
High occupancy (>92%)	1.21***	(0.37)	1.20***	(0.37)
Payer-mix				
% Medicaid	−0.02	(0.02)	−0.02	(0.02)
% other	0.03	(0.02)	0.03	(0.02)
Casemix acuity index	−0.06	(0.13)	−0.07	(0.13)
Casemix—% residents w/dementia	0.03**	(0.01)	0.03**	(0.01)
Casemix—% residents w/depression	0.01	(0.01)	0.01	(0.01)
Casemix—% residents w/psychiatric disorder[b]	<−0.01	(0.01)	<−0.01	(0.01)
Casemix—% residents w/developmental disability	−0.01	(0.06)	−0.01	(0.06)
Has dementia special care unit	−0.50	(0.37)	−0.49	(0.37)
Facility characteristics: staffing variables[a]				
Employee retention rate	0.08***	(0.01)	0.08***	(0.01)
Staffing levels (minutes per resident day)				
All nursing staff (RN, LPN, CNA)	0.01***	(< 0.01)	0.01***	(< 0.01)
Mental health staff	−0.72**	(0.24)	−0.72**	(0.25)
Activities staff	0.05	(0.03)	0.04	(0.03)
Food service and dietician staff	0.02*	(0.01)	0.02*	(0.01)
Housekeeping staff	−0.01	(0.01)	−0.01	(0.01)

Table 3. *Continued*

Fixed effects	Model 1		Model 2 with Level 1 interactions	
	Coefficient	(*SE*)	Coefficient	(*SE*)
Facility characteristics: quality indicators[a]				
High deficiencies (>4)	−0.50	(0.31)	−0.49	(0.31)
Deficiency for serious/substandard care	0.26	(0.39)	0.27	(0.39)
% residents on anti-psychotic medications	−0.04**	(0.02)	−0.04*	(0.02)
% residents on anti-anxiety medications	0.02	(0.02)	0.02	(0.02)
Family member (FM) involvement				
Visits at least weekly	−1.70***	(0.27)	−1.70***	(0.27)
Personal care provided to R	−1.59***	(0.06)	−1.61***	(0.06)
Communication with facility staff	2.08***	(0.05)	2.08***	(0.05)
Individual-level (Level 1) interaction effects				
FM personal care × FM communication with staff			0.12***	(0.03)
FM personal care × FM age			0.03***	(0.01)
FM communication with staff × FM age			−0.01*	(< 0.01)
FM high education × R cognitive functioning			−0.73***	(0.15)
FM age × FM is spouse			−0.07*	(0.03)
Chi-Square (Model 2 vs. Model 1)			102.89***	
df			5	

Notes: All continuous variables were centered. Final variance component estimates for Model 2: Level 1 = 145.59, Level 2 = 8.17. CCRC = continuing care retirement community; CNA = Certified Nursing Assistant; FM = family member; LPN = licensed practical nurse; R = resident; RN = registered nurse.
[a]Level 2 predictors of random intercept at Level 1.
[b]Excludes dementia and depression.
*$p < .05$. **$p < .01$. ***$p < .001$.

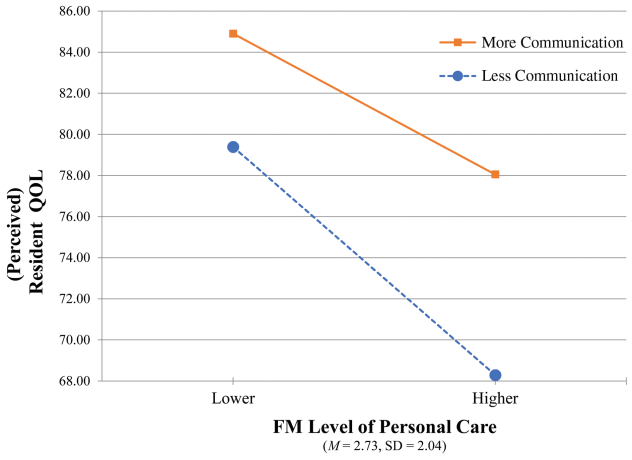

Figure 1. Effect of level of family member communication with staff on the relationship between family member level of personal care and (perceived) resident quality of life. *Note.* FM = Family member. Both predictors graphed at −1SD (Lower or Less) and +1SD (Higher or More).

communication and resident QOL was dampened somewhat as family members increased in age.

Resident and Family Member Characteristics

Residents with higher physical functioning and those with an expected stay longer than 3 months had higher perceived QOL. QOL ratings were lower for those who moved to the facility from their own homes compared to those who moved or transferred from any other location. Perceived QOL ratings were lower for residents with higher cognitive functioning, but this was true only among family members with higher education (college degree or higher).

Most family member characteristics were significantly related to the outcome. Resident QOL was perceived as higher among family members who were male and those who were older (a simple main effect). Spouses rated the QOL of the resident significantly lower than non-spouses (a simple main effect). Resident QOL was also perceived as lower by family members who were non-White and those with higher levels of education (a simple main effect). A significant interaction was also detected between family member age and relationship role. The positive association between family member age and perceived resident QOL was markedly attenuated among spouses.

Facility Characteristics

Numerous facility characteristics were associated with perceived resident QOL. Facility features associated with better perceived resident QOL included: not-for-profit or government ownership, a free-standing facility (not part of a chain), moderate or high marketplace competition, smaller (bed) size, a high occupancy rate, and a higher percentage of residents with dementia. In terms of facility staffing, employee retention rate and higher levels of nursing staff and food service/dietitian staff were positively related

to perceived resident QOL. However, increased mental health staffing levels were related to family perceptions of lower resident QOL. Of the available quality indicators, only the percentage of residents receiving anti-psychotic medications was related to (lower) perceived resident QOL. Neither a high number of deficiencies nor the presence of a serious deficiency was predictive of perceived resident QOL (although the coefficient for high deficiencies was trending in an expected direction, $\gamma = -0.49$, $p = .12$).

Overall Model

Based on the final model, a Proportion Reduction in Error (PRE) was calculated for each source of variability. Model 2 explained a large portion (63.9%) of the variation in resident QOL at the facility level; however, the final Level-2 variance component estimate was statistically significant ($\chi^2 = 1713.84$, $df = 810$, $p < .001$), indicating that additional facility-level variability remains unexplained. The model explained a modest amount (17.8%) of the variability in perceived resident QOL at the individual level.

Discussion

Our study contributes to the QOL literature by including the perspective of the most involved family caregiver and examining how family involvement is associated with the family's perceptions of resident QOL. While the involvement of families is generally thought to positively influence resident outcomes such as QOL (Gaugler, 2005), we found different types of family involvement were related to perceived QOL in different ways: families perceived resident QOL as lower when they visited the NH often (at least weekly) and provided more personal care; yet, greater communication between facility staff and the family member was associated with higher perceived resident QOL.

Families may feel compelled to visit the NH often to be a good advocate for their relative, or out of their own feelings of grief or guilt (Gladstone, Dupuis, & Wexler, 2006). Family members may also visit frequently in order to maintain social and emotional ties to the resident (e.g., Gaugler, 2005). Family caregiving roles transition between the community and long-term care. In NHs, formal caregivers assume primary responsibility for personal care (Gaugler & Kane, 2007). Yet, families in our study continued to provide some personal care during visits. In a prior study by Zimmerman and colleagues (2013), increased family involvement in some parts of resident care (helping with resident mobility and involvement in recreation-based activities) was associated with improved resident QOL. In the present study, families who visited frequently and provided more personal care tended to have lower perceptions of resident QOL, even after controlling for resident, family, and facility characteristics. These findings suggest that family members may be motivated to visit often and help more with personal care in response to perceived resident needs, as greater resident need may "mobilize" resources and support from families (Ensel & Lin, 1991). It may be that family members feel they must fill the gap to ensure good care.

Greater communication with staff was associated with families' perceptions of higher resident QOL. NH staff may find it helpful to talk to family members about meaningful ways to be involved in resident care. Families can serve as a resource to staff by providing information about the residents' preferences, social network, and history which could improve person-centered care (Boise & White, 2004). Collaboration among formal and informal care partners is necessary to build and sustain strong and trusting relationships. To develop and maintain constructive staff-family relationships, Haesler and colleagues (2007) describe the importance of effective communication, using a collaborative process, keeping the resident's uniqueness in mind, addressing unique family needs, understanding interpersonal power issues, and providing organizational support.

To better understand the complexity of family involvement in relation to perceived resident QOL, we explored whether the relationship between perceived resident QOL and each type of family involvement varied as a function of other types of family involvement and/or resident or family characteristics. First, we found evidence of a potential buffering effect of communication with staff. Although providing greater personal care was associated with lower ratings of resident QOL, this negative relationship was attenuated among family members who communicated more regularly with staff. This suggests that greater staff-family communication may help families to clarify their roles and maintain involvement in meaningful care. Second, we found that family member age interacted with family involvement to influence perceived resident QOL. Advanced family member age attenuated the negative relationship between providing more personal care and perceived resident QOL, as well as the positive association between greater communication with facility staff and resident QOL. Additionally, the positive relationship between family member age and perceived resident QOL was markedly attenuated among spouses. Thus, family member characteristics appear to interact with family involvement to shape perceived resident QOL.

Spouses, highly educated family members, and non-White family members consistently rated perceived resident QOL as lower. Our findings further suggest that certain family members (e.g., spouses and older family members) may need additional support from the NH to feel welcome and included in their relative's care. The caregiving literature recognizes that spouses often have higher depressive symptoms, greater financial and physical burden, and lower levels of psychological well-being than adult children or children-in-law serving as caregivers (Pinquart & Sörensen, 2011).

Our findings underscore that the relationship between family involvement and resident QOL can be complicated, since family member characteristics also contribute to perceived resident QOL. Increased family involvement

can have positive and negative outcomes for the family caregiver. After NH placement, families may feel more guilt and conflict, even though feelings of burden decrease (Zimmerman et al., 2013).

Regarding resident and facility characteristics, findings from this study are largely consistent with other studies. Like Shippee and colleagues (2015), we found positive associations between better physical functioning and expectations for a long-term stay with resident QOL, although in our study cognitive functioning was not related to perceived resident QOL, perhaps due to the broad range in our sample. Perceived resident QOL was higher among facilities that were owned by not-for-profits or the government, were not part of a multi-facility chain, and were located in areas of higher marketplace competition. Xu and colleagues (2013) also found that aspects of NH structure are associated with better resident QOL (e.g., not-for-profits, higher percentage of private rooms, rural location). Similar to other studies that support associations between features, staffing, and quality of facilities and resident QOL (e.g., Shippee et al., 2015; Degenholtz, Kane, Kane, Bershadsky, & Kling, 2006), better perceived resident QOL in the current study was associated with smaller facility size, higher staffing levels for nursing and food service staff, a higher occupancy rate, a higher employee retention rate, and a lower percentage of residents on anti-psychotic medications.

Relative Influence of Individual- and Facility-Level Characteristics

Consistent with other studies (e.g., Degenholtz et al., 2006; Shippee et al., 2015), most of the variability in perceived resident QOL was at the individual level. Only 11% of perceived resident QOL was attributable to differences between facilities; yet, this is a major focus of QOL research (e.g., Kane, 2004; Xu et al., 2013). In our study, as in much prior research, facility-level characteristics did a good job of explaining much of the between-facility variability in perceived resident QOL. At the individual level, perceived resident QOL was substantially related to the three types of family involvement, along with selected resident and family member characteristics. Still, much of the individual-level variability in perceived resident QOL remained unexplained.

Limitations and Directions for Future Research

The current study identified associations and not causal relationships between family involvement and family perception of resident QOL. Since resident, family member, and facility characteristics were significantly related to perceived resident QOL, longitudinal research should examine the complex relationship between types of family involvement and resident outcomes over time. Families may adjust their involvement due to increasing resident need or changes in the family (e.g., caregiving burden) or facility context (e.g., policies, the quality of staff-resident or staff-family relationships) that may affect resident QOL.

Regarding the measures, the outcome is a subjective measure assessed by the most involved family member, which could be biased and may not represent the views of the entire family who may participate in caregiving at various levels. Ideally, measuring resident QOL from additional sources, such as resident self-reports or NH staff reports, would provide valuable information and potential congruence with family member perception of resident QOL. As dimensions of family involvement (Gaugler, 2005) extend beyond the three types examined in this study, with the use of more robust measures of family involvement are recommended.

Although this study used a strong data source, a substantial number of family member surveys and several dozen facilities were not included in the analysis. In comparing our analysis sample to excluded cases, we found no difference in perceived resident QOL. However, family members in our analysis sample showed higher levels of involvement compared to those who were excluded, suggesting that they may have been more knowledgeable about their resident loved ones. This is consistent with the fact that many excluded surveys were missing data on resident characteristics such as cognitive and physical functioning. The analysis sample was comprised of larger facilities with more features (e.g., continuing care retirement community), a lower percentage of residents on anti-psychotic medications, a higher percentage of private pay residents, and better employee retention rates. No differences were observed between the analysis sample and excluded facilities in terms of the total number or severity of deficiency citations, overall case mix, staffing levels, or rurality. Nevertheless, is possible that the excluded cases and facilities may have influenced findings.

The current study builds a better understanding of the concepts and the myriad effects of certain predictors and their potential interactions at one point in time on the caregiving journey. Future research is needed to link patterns of family involvement with NH resident outcomes over time and to examine the predictors of family involvement across care settings. Future studies could also benefit from exploring more complex multi-level models, in which facility-level characteristics (e.g., employee retention rate) may interact with different types of family involvement to influence resident QOL.

Practice and Policy Implications

For families and NH providers, our findings suggest that more staff-family communication is significantly related to better family perception of resident QOL. Interventions to address family involvement in NHs have produced positive outcomes for families and staff (Pillemer et al., 2003; Zimmerman et al., 2013). However, more research is needed to determine how family involvement influences

resident outcomes. Findings of the current study suggest that we need to take a closer look at different aspects of family involvement, as not all types of family involvement may be positively related to resident QOL. Although some family members may relish involvement in personal care tasks, others may do so in response to perceptions of unmet need. Thus, it is important for facilities to provide opportunities for involvement that are meaningful to families (e.g., Reid & Chappell, 2015).

Quality improvement initiatives aimed at providing high-quality care through adequate staffing, retaining good employees, and avoiding the over-medication of residents may contribute to higher resident QOL. Adequate staffing may support better care and greater responsiveness to residents and families, which could help families relinquish the provision personal care to staff. Furthermore, consistent staffing may improve relationships among staff, residents, and families by enhancing trust and stability.

NHs can foster an inclusive culture where family involvement is a positive experience as families attempt to maintain or improve resident QOL (Tornatore & Grant, 2004). Certain family members, such as those who are spouses, older, non-White, and highly educated may need more support. Facilities can be intentional about supporting the unique needs of family caregivers in addition to their resident loved ones through a variety of ways, from offering support groups to providing meaningful opportunities for involvement.

Supplementary Material

Supplementary data is available at *The Gerontologist* online.

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Conflict of Interest

The authors report no conflict of interest.

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