Family Caregiving to Elderly African Americans: Caregiver Types and Structures

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Objectives. This study identified different types of caregivers who provide care to older African Americans, the types of caregiving structures created to provide care, and the factors that help predict caregiving structures.

Methods. A community sample of 330 caregivers caring for 202 elderly African Americans was used. Multinomial logistic regression predicted what type of caregiving structure was created by families to provide care to older relatives.

Results. Three types of caregivers were identified: 187 primary caregivers, who were connected to 79 secondary caregivers and 49 tertiary caregivers. Fifteen tertiary-only caregivers who were not connected to other caregivers were identified. Five caregiving structures were found: (i) primary, (ii) primary and secondary, (iii) primary and tertiary, (iv) primary only, and (v) tertiary-only. Characteristics of care recipients were predictive of caregiving structures.

Discussion. Different types of caregivers with distinct roles and responsibilities provided care within defined caregiving structures to older African American family members. Caregiving structures may be individualistic (only one caregiver) or collectivist (two or more caregivers). Caregiving structure is predicted by the care recipients' conditions and situations, but not those of the primary caregiver.

In the reviews on caregiving to elderly people, limited findings are available on caregiving in ethnic minority groups (Kramer, 1997; Schultz, O'Brien, Bookwala, & Fleissner, 1995; Schultz, Visintainer, & Williamson, 1990). In addition, few findings are available on caregiving issues beyond those of the primary caregiver (Barer & Johnson, 1990; Horowitz, 1992; Keith, 1995; Matthews & Rosner, 1988). Therefore, little is known about how families make use of multiple caregivers who create distinct structures of care for elderly relatives. We believe, as Keith (1995) suggested, that caregiving to older people can be understood more clearly by changing the approach; that is, by expanding the focus of caregiving studies from just the primary caregiver to examining how families organize the structure of care when caring for dependent members. Therefore, rather than continuing to study the caregiving dyad (care recipient and primary caregiver), we examine the multiple types of caregivers and the various ways in which care is given to older people. As Pyke and Bengtson (1996) suggest, this approach can show whether families create individualistic or collectivist systems of care to address older relatives' needs.

Findings show that the incidence of severe functional limitations among older African Americans (40%) is higher than among Whites (27%; U.S. Bureau of the Census, 1995), that the rate of institutionalization for African Americans is less than half the rate for Whites (Belgrave, Wykle, & Choi, 1993), and that African American families make limited use of formal services to assist with caregiving (Caserta, Lund, Wright, & Redburn, 1987; Logan & Spitz, 1994). In light of these findings, there is a need to study how African American families provide care to older relatives beyond a single caregiver. Accordingly, in this study we address three major questions: (a) Do older African Americans receive care from different types of caregivers who have different levels of responsibility and who provide different amounts of care? (b) Are the different types of caregivers in African American families organized to form distinct structures through which care is provided? (c) Which factors best predict what structures of care are used by caregivers to provide care to older African Americans?

Types of Caregivers

In this study we distinguished the different types of caregivers by their level of responsibility and caregiving tasks. Primary caregivers were identified by care recipients or their proxies and were verified by the caregivers. They had the highest level of responsibility regarding care and performed the largest number of caregiving tasks. Primary caregivers provided care alone or in conjunction with other helpers. Secondary caregivers were identified by the primary caregiver as persons who performed tasks at a level similar to that of the primary caregiver, but without the same level of responsibility. Therefore, secondary caregivers were not in charge of making decisions about the care recipient's support and care and only provided care in conjunction with primary caregivers. Tertiary caregivers were usually identified by the primary caregiver and provided care with the primary caregiver. These caregivers had little or no responsibility for making decisions regarding the care recipient; they performed specialized tasks such as grocery shopping, yard work, or paying bills. Some tertiary caregivers, however, provided care in the absence of other caregivers, typically to high-functioning older people. Similar to primary caregivers, these tertiary caregivers were identified by the care recipients or their proxies.

Caregiving Structures

We proposed that caregivers would create various structures of care, which would differ according to the type and combination
of caregivers, that provide varying degrees of care and support to older relatives. Although it would have been ideal to include all possible combinations of caregiving structures that included various numbers and configurations of caregivers in this article, we were only interested in examining whether a primary caregiver had at least one secondary and/or tertiary caregiver who provided them with the most assistance among all other caregivers in their support network. We believed this approach would provide an available sample of caregiving structures for analysis. Therefore, primary caregivers could work either alone (primary-only) or in combination with others (primary and secondary; primary and tertiary; or primary, secondary, and tertiary). Secondary caregivers worked only in combination with others (primary and secondary; or primary, secondary, and tertiary). Tertiary caregivers could work either with others (primary and tertiary; or primary, secondary, and tertiary) or alone (referred to as tertiary-only).

Hypotheses about caregiver structures.—Based on previous literature, we have five hypotheses about caregiving structures. First, care recipients with the highest levels of dependency, as evidenced by their need for assistance with activities of daily living (ADLs), would receive care in larger structures (e.g., primary, secondary, and tertiary vs primary-only, primary and tertiary, primary and secondary, or tertiary-only; Litwak, 1985; Stoller & Pugliesi, 1991). Second, care recipients with limited financial resources, as evidenced by their inability to meet their financial obligations, would receive care in smaller structures (Benin & Keith, 1995; Chatters, Taylor, & Neighbors, 1989; Murrell & Norris, 1991). Third, the greater the care recipients' use of formal support services—situations that most often indicate greater frailty and dependency—the more likely that care would be provided in larger as opposed to smaller structures (e.g., primary, secondary, and tertiary vs primary-only). Fourth, care recipients with the greatest number of children living within one hour's drive would have larger caregiving structures (Himes, Jordan, & Parkas, 1996). Finally, caregivers co-residing with the care recipient (Soldo, Wolf, & Agree, 1990; Ward, Logan, & Spitz, 1992), working full-time (Starrels, Ingersoll-Dayton, Dowler, & Neal, 1997), experiencing distress in their role as a caregiver, or suffering physical health problems would give care in larger structures (e.g., primary, secondary, and tertiary) than the caregivers without these characteristics.

Methods

Sampling Procedures

This study included older African Americans who were members of the Duke Established Populations for Epidemiological Studies of the Elderly (EPESE; Cornoni-Huntley, Blazer, Service, & Farmer, 1990). Two criteria were used to select older participants based on data from Wave 3 (1992–1993). These criteria included an inability to perform two or more basic activities of daily living (Branch, Katz, Kniepman, & Papsidero, 1984) and/or a score of 3 or more (indicating mild to severe cognitive impairment) on the Short Portable Mental Status Questionnaire (SPMSQ; Pfeiffer, 1975). Four hundred ninety-seven African American elders met these criteria, but only 234 were available when this study began. Most of the attrition resulted from deaths.

All 234 elderly participants or their proxy respondents were first contacted between 1995 and 1997 by a letter describing our study and how we obtained their names, addresses, and phone numbers. A follow-up screening telephone interview with the elderly participants or proxy respondents was conducted to determine whether there was a main caregiver who provided them with the most support and care. If identified, that person was contacted by phone to verify his or her caregiving roles and responsibilities, and an in-person interview was scheduled. If there were any discrepancies in identifying and verifying the main caregiver, the care recipient was contacted again. In the few cases in which this occurred, we were able to identify the appropriate main caregiver. Ten percent of the 234 main caregivers refused to participate, 2% could not be contacted, and 2% of the care recipients had died or were institutionalized. As a result, 202 main caregivers were interviewed (187 primary and 15 tertiary-only caregivers). We asked the primary caregivers whether there was one secondary and/or tertiary caregiver who provided the greatest amount of help in assisting them in their caregiving role. From this group, 79 secondary and 49 tertiary caregivers were interviewed. Thus, our total sample included 330 caregivers.

Measures

The measure of caregiving structure consisted of five categories reflecting combinations of types of caregivers identified in the study: (i) primary, secondary, and tertiary; (ii) primary and secondary; (iii) primary and tertiary; (iv) primary-only; and (v) tertiary-only. To assess the level of dependency among care recipients, we used the Duke OARS 6-item physical ADL subscale, which had a Cronbach's alpha of .77 (Fillenbaum, 1988). Degree of assistance with support on this scale ranged from 2 (unable to perform tasks) to 0 (able to perform tasks without help). We assessed financial status by care recipients' reports on whether the amount of money they possess meets their needs poorly, fairly well, or very well. The number of children living within a one-hour drive of the care recipient was measured as a continuous variable. To measure care recipients' use of formal support services (e.g., delivered meals, physical therapy, or homemaker service), we asked primary caregivers to indicate whether the care recipients used any of 16 different formal support services within the past month. These were summed to indicate the total number of services used. Coresidence was defined as living with the care recipient (coded 1) or not living with care recipient (coded 0). Employment was measured as employed (coded 1) or not employed (coded 0). We measured caregivers' functional health using a 10-item subscale from the Rand Health Survey. Scores were converted to percentiles ranging from 0 to 100, with higher percentiles indicating better health (McHorney, Ware, Lu, & Sherbourne, 1994). Cronbach's alpha was .91. We measured caregiver distress by dichotomizing the Global Severity Index (GSI) of the Brief Symptom Inventory (BSI; Derogatis & Spencer, 1982). The BSI subscales had Cronbach's alphas ranging from .71 to .90. Caregivers were classified as distressed if they had a T score of 63 or greater on two or more of the nine subscales.

Results

Care Recipients

There were 42 male and 160 female African American care recipients. The average age was 74. More than 75% were unmarried, with the majority being widowed. The average number of
ADL limitations, as reported by the main caregivers, was 2.4. Forty-three percent of the care recipients were cognitively impaired. More than half (58%) of the care recipients lived with their primary caregiver and only 2% lived more than 30 minutes away. None of the tertiary-only caregivers lived with the care recipients.

Caregivers
As shown in Table 1, we found four different types of caregivers. These were 187 primary caregivers, 79 secondary caregivers, 49 tertiary caregivers, and 15 tertiary-only caregivers. Tertiary caregivers had provided care for a longer time (10.6 years) than either primary, secondary, or tertiary-only caregivers (8.7 years, 7.1 years, and 3.2 years, respectively). Most of the caregivers had moderate functional health with mean scores of 8.7 years, 7.1 years, and 3.2 years, respectively. Wives were more likely than husbands to be providers of care to a spouse. Unlike primary caregivers, the secondary, tertiary, and tertiary-only caregivers included paid helpers (22%, 8%, and 40%, respectively). Caregivers were more likely to be unmarried (57% were divorced, widowed, or never married) than married. The majority (more than 55%) of the caregivers had at least a high school education. Seventy-four percent of the primary caregivers had an annual personal income of $15,000 or less. Although personal incomes were somewhat higher for all other caregivers, approximately one third had annual incomes of $15,000 or less. At least 35% of the primary caregivers were working more than 30 hours per week, as were 44% to 60% of the secondary, tertiary, and tertiary-only caregivers.

Predicting Caregiving Structures
Five caregiving structures were identified: primary and secondary (33%); primary, secondary, and tertiary (25%); primary-only (19%); primary and tertiary (16%); and tertiary-only (7%). For the multivariable analyses, the tertiary-only structures (N=15) were dropped because of their small number. Furthermore, we combined the primary-only and primary and tertiary structures because the frequency of each was small (31 and 39, respectively); the only difference between them was the presence of a tertiary caregiver who performed specialized tasks to support the primary caregiver in the primary and tertiary structure. Given the limited amount of assistance a tertiary caregiver may provide, we believed that the coefficients on the variables used to predict these structures would not differ significantly.

Guided by our hypotheses, we considered eight predictors reflecting the needs and conditions of care recipients and caregivers. The four predictors for care recipients included ADL status, level of formal support, doing well versus doing poorly in meeting their financial needs, and the number of children living within one hour’s drive of the care recipient. The four caregiver predictors included living versus not living with the care recipient, distressed versus not distressed, employed versus not employed, and the level of functional health. We tested for multicollinearity by examining correlations among the predictor variables. None were found to be significantly related.

To assess the effect of the predictor variables, we estimated models using multinomial logistic regression. This procedure simultaneously estimates the effects of the predictors on the probability of belonging to the reference category (primary, secondary, and tertiary) as compared with each of the other categories of the dependent variable (primary-only/primary and tertiary, and primary and secondary). However, according to Concato, Feinstein, and Holford (1993), the results of logistic regression models possessing fewer than 10 outcome events per independent variable may be questionable as to accuracy, and the tests of significance may be invalid. Therefore, because of our small sample size in the primary, secondary, and tertiary structure, we performed the analyses in two steps. First, we used bivariate analyses to determine the relationship between caregiving structure and each of the eight variables. Second, we performed multinomial logistic regression using only the significant predictors from the bivariate analyses.

In the bivariate analyses, we found that all four of the variables on the care recipients were significant, but none of the caregiver variables were significant. Therefore, our multivari-
DISCUSSION

We found, as others have reported (Burton & Dilworth-Anderson, 1991; Chatters et al., 1989; Dilworth-Anderson & Anderson, 1994; Taylor & Chatters, 1986), that caring for older dependent family members in African American families involves different types of caregivers. In this study, we identified and labeled these various caregivers as primary, secondary, and tertiary based on their roles and responsibilities. The main caregivers were organized into five caregiving structures (primary, secondary, and tertiary; primary and secondary; primary and tertiary; primary-only; and tertiary-only), which are similar to those described by Keith (1995) and by Pyke and Bengston (1996). Like those researchers, we found both individualistic (involving one caregiver) and collectivist (involving two or more caregivers) caregiving structures. However, almost three fourths (74%) of the structures were collectivist in that they were formed by two or more caregivers.

As expected, care recipients with greater dependency were more likely cared for in larger structures. Care recipients in poor financial condition were less likely to be cared for in larger structures. This is consistent with previous reports which show that when family members' financial resources are limited, they often have smaller levels of support available than those with more financial means (Benin & Keith, 1995; Murrell & Norris, 1991). In agreement with yet other findings (Dwyer & Miller, 1990; Himes et al., 1996; Lawton, Rajagopal, Brody, & Kleban, 1992; Pruchno, Peters, & Burant, 1995), proximity of children was important. The greater the number of children living within one hour’s drive, the more likely caregivers tended to use structures with larger levels of support.

We found no support for our hypothesis that the caregivers’ characteristics would help to predict caregiving structure. We believe that these characteristics were not significant predictors, in contrast to those reported in the caregiving literature on predominantly White samples, because they may not represent the issues that are best suited for predicting caregiving structures among African Americans. For example, historical evidence on African American families helps to clarify why co-residence did not predict caregiving structure in this study. Historians such as Franklin and Moss (1994), Gutman (1976), and Jones (1985) report that African Americans share households not only for economic reasons, but also for cultural reasons, such as shared values and beliefs about closeness and connectedness. We believe that these values and beliefs may create norms regarding household sharing in the African American culture and thus may reduce the stress and strain found in other groups residing together. Nevertheless, we agree with other researchers (Aquillo, 1990; Peek, Coward, & Peek, in press) that further research is needed to explain why co-residence is more prevalent among older African Americans than in other groups and to account for the effect of co-residence on caregivers’ outcomes. In fact, further studies with larger samples are needed for examining the full range of caregiving structures and testing our beliefs that the effects of the independent variables in predicting caregiving structure are not statistically different for primary-only and primary and tertiary structures. A larger sample would also provide the opportunity to examine the predictors of the tertiary-only caregiving structure.

The major strengths of this study are that we identified the different types of caregivers providing care to older dependent African Americans according to their roles and responsibilities and the amount of care they provided. We also identified caregiving structures (individualistic and collectivist) that caregivers use when providing care. Although we cannot make any conclusions about how different the types of caregivers and caregiving structures identified in this study are from those that may exist among other racial and ethnic groups, our findings can provide information that can be used in future comparative studies. Further, we make no claim that all African American families with dependent elders use multiple caregivers and that families organize themselves through defined caregiving structures when providing care. We do, however, purport that the

### Table 2. Multinomial Logistic Regression for Predicting Caregiver Structure (N=187)

<table>
<thead>
<tr>
<th>Model Variable</th>
<th>Primary-Only/Primary, Tertiary vs Primary, Secondary, and Tertiary Adjusted Odds Ratio 95% Confidence Interval</th>
<th>Primary, Secondary vs Primary, Secondary, and Tertiary Adjusted Odds Ratio 95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Care recipient ADL</td>
<td>0.76*** (0.65, 0.87)</td>
<td>0.88* (0.79, 0.98)</td>
</tr>
<tr>
<td>Care recipient formal support</td>
<td>0.71** (0.51, 0.96)</td>
<td>0.54** (0.37, 0.75)</td>
</tr>
<tr>
<td>Care recipient does poorly*</td>
<td>7.54* (2.17, 36.23)</td>
<td>5.08* (1.41, 17.93)</td>
</tr>
<tr>
<td>No. of children living within 1 hour's drive from care recipient</td>
<td>0.80* (0.66, 0.97)</td>
<td>0.94 (0.79, 1.12)</td>
</tr>
</tbody>
</table>

**Note:** -2 Log Likelihood, df/8, chi-square 55.21, p<.0001.
* p<.05; ** p<.01; *** p<.001.
*Does fairly well and very well is reference category.
findings reported in this study reflect and support the cultural legacy of extended family caregiving to dependent family members in African American families. In this instance, elderly dependent members are most often cared for by two or more people whose roles and responsibilities address their needs.

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