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Effect of Race on Cultural Justifications for Caregiving

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Objectives. Our objective in this study was to explore the effects of caregiver characteristics on cultural reasons given for providing care to dependent elderly family members.

Methods. The sample included 48 African American and 121 White caregivers. Using multivariate analyses, we used caregiver characteristics (e.g., race, gender, education) to predict scores on the Cultural Justifications for Caregiving Scale (CJCS).

Results. Confirmatory factor analysis showed that the CJCS was appropriate for both African American and White caregivers. African Americans had stronger cultural reasons for providing care than Whites, education levels were inversely related to CJCS scores, and the influences of gender and age on cultural reasons were moderated by race. Compared to females, African American males had lower CJCS scores, whereas White males had higher CJCS scores. Younger as compared to older White caregivers had higher CJCS scores.

Discussion. This study supports the long-standing cultural tradition of African American families providing care to dependent elders. Cultural reasons for caregiving need to be interpreted within the context of race and gender socialization. Social roles, such as husband or wife, son or daughter, can also help determine how individuals within a particular cultural group experience cultural expectations and obligations. Information from this study can inform culturally appropriate caregiving interventions.

SEVERAL comprehensive reviews of the caregiving literature (Aranda & Knight, 1997; Dilworth-Anderson, Williams, & Gibson, 2002; Janevic & Connell, 2001; Vitaliano, Zhang, & Scanlan, 2003) document the growing and stressful demands of caregiving to older family members, especially dementia caregiving. These reviews show that a limited amount of research exists in understanding caregiving in diverse populations, especially those that address cultural and ethnic issues. For example, little is known about cultural reasons for giving care as well as how culture can serve to provide a network of caregivers, and how and why people give care to dependent elders in the family. Although numerous steps can be taken to address these concerns, this article approaches it by providing information on cultural reasons, which can be assessed through a cultural justification measure, for giving care to older dependent relatives among African American and White caregivers. Informed by the literature on race, culture, behavior, and aging (see the work of Jackson, Antonucci, & Brown, 2004) as well as behavioral medicine (Siegler, Bastian, Steffens, Bosworth, & Costa, 2002; Whitfield, Weidner, Clark, & Anderson, 2002), this study addresses a major gap in the literature that speaks to culture, and not just race. It also expands the work of Dilworth-Anderson, Goodwin, and Williams (2004) on cultural reasons for giving care by including White caregivers that are spouses or other relatives.

Two key concepts are critical to this discussion: race and culture. Although there is, according to Smedley and Smedley (2005), no recognized or definitive definition of race, they do note, however, that when race is defined it is generally defined to include phenotypical and social characteristics. Further, race is viewed as a socially derived concept that takes history and politics into account, but does not conform to any anthropological, biological, or genetic criteria. It reflects a recognized social definition, that is, people self-identify with being African American or White. Thus, race is used in this discussion to provide a context for the life experiences of people based on their identified racial group classification and, when coupled with the discussion on culture, to provide a larger landscape from which to assess and interpret the lives of people.

Culture is defined here as a set of shared symbols, beliefs, and customs that shapes individual and group behavior (Goodenough, 1999). It provides guidelines for speaking, doing, interpreting, and evaluating one's actions and reactions in life. One's culture serves as a platform for cultural reasons, which are defined in this discussion as the expressions and meanings, as derived from culture, that direct particular behaviors, such as why people provide care to older dependent relatives and their families. However, we do not purport that cultural reasons are uniform within any particular cultural group; instead there is likely variability within cultural groups regarding how they express the cultural reasons for giving care. With this in mind, the concept of cultural frame is important to this study. Cultural frame, according to Goodenough (1999),

Table 1. Cultural Justifications for Caregiving Scale

I give care because:
a. It is my duty to provide care to elderly dependent family members.
b. It is important to set an example for the children in the family.
c. I was taught by my parents to take care of elderly dependent family members.
d. Of my religious and spiritual beliefs.
e. By giving care to elderly dependent family members, I am giving back what has been given to me.
f. It strengthens the bonds between me and them.
g. I was raised to believe care should be provided in the family.
h. It is what my people have always done.
i. I feel as though I am being useful and making a family contribution.
j. My family expects me to provide care.

addresses how individual characteristics and experiences, such as gender and age, can influence cultural beliefs and values about caregiving. Cultural frame allows us to understand how an individual's culture framework is developed through the incorporation of the sum of one's experiences, interactions, and thoughts with the norms and expectations one perceives as being held by other group members, typically of family members. Thus, due to differences in individual cultural frames, people can simultaneously be cultural group members and hold cultural beliefs that are not shared by some members of the group (Dilworth-Anderson & Gibson, 2002; Goodenough, 1981).

With these definitions in mind, the heuristic logic of the study is to uncover critical, but previously unstudied, cultural and personal dimensions of why family members give care to older relatives, without making assumptions that it is expected and normal. Additionally, this study reports on only a particular aspect of culture without viewing culture at its broadest levels. This study, therefore, addresses the cultural reasons for giving care, and, as noted above, we suggest that these reasons direct particular caregiving behaviors found among people who have different racial identities.

Reasons for giving care that reflect the cultural values and beliefs of caregivers are assessed in this study, as well as how such factors as race, gender, age, education, and relationship to the care recipient may affect their cultural reasons for giving care. The study addresses three major questions: 1) Are there differences in how specific groups (e.g., African Americans vs Whites) differ in the cultural reasons caregivers give for providing care? 2) What caregiver characteristics (i.e., gender, age, education, income, work status, and relationship to the care recipient) predict cultural reasons for caregiving? and 3) Does race moderate the influence of caregiver characteristics on cultural reasons for providing care? These questions, as noted earlier, attempt to address issues of culture but cannot do so without recognizing that African Americans and Whites are also within distinct racial categories. As such, culture and race are interconnected concepts in our society.

Methodology

Sampling Procedures

We recruited participants as part of a study to examine the underlying biological and behavioral mechanisms whereby stressful social and physical environments lead to health disparities between different socioeconomic and racial groups. The present sample consisted of 175 middle-aged and older adults who reported significant caregiving responsibility for a spouse or parent with Alzheimer's disease. We recruited caregivers using flyers, ads in the local media, and outreach efforts conducted under the auspices of a community outreach and education program. All subjects gave informed consent prior to their participation in the study. We collected data in two venues—during a home visit by a nurse and during a visit to the General Clinical Research Center (GCRC) at Duke University Medical Center. We gave a questionnaire battery containing the information used in the present study to participants during the home visit, which they then returned upon their visit to the GCRC, at which point study personnel went over the questionnaires to check with the participant regarding any queries or unanswered items. The present study consisted of 169 participants (48 African Americans, 121 Whites) who had complete data for all independent and dependent variables of interest (6 participants had missing data on one or more of these constructs).

Measures

Independent variables.—Caregiver characteristics examined included race, age, gender, education, income, work status, and relationship to the care recipient. Race was coded 1 for African American and 2 for White. Age was measured in years, rounded to the nearest year. Gender was coded 1 for male and 2 for female. Education was measured in years of education completed. Income was measured in 20 categories, beginning with less than $10,000 and increasing by increments of $4,000 ending at $100,000 or more. Work status was coded as 1 for participants who worked full time and 0 for those who were not employed full time. Finally, type of caregiver was coded as 1 for spousal caregivers and 2 for nonspouse caregivers. Ninety-five percent of the nonspouse caregivers were adult children; the remaining 5% included other relatives (siblings, grandchildren, cousins, and fictive kin).

Dependent variable.—The Cultural Justifications for Caregiving Scale (CJCS; Dilworth-Anderson et al., 2004) is a 10-item measure designed to assess caregivers' cultural reasons and expectations in providing care (See Table 1 for scale items). Responses are coded as follows: 4 = strongly agree, 3 = somewhat agree, 2 = somewhat disagree, and 1 = strongly disagree. Items are summed, and scores may range from 10 to 40, with higher scores indicating stronger cultural reasons for giving care. The Cronbach alpha was .86 in the present sample of 169 caregivers. Additionally, we compared the factor structure of the CJCS across race using a two-group confirmatory factor analysis as available in the M-Plus software package (Muthén & Muthén, 1998–2004). Specifically, we compared the fit of a one-factor model in which the loadings were constrained to be equivalent across racial groups to the fit of the same model in which no such constraints were made. The chi-square difference test comparing the models indicated that the corresponding loadings were not significantly different across racial groups ($\chi^2 = 9.382$, 9df, $p = .402$).

Table 2. Sample Characteristics and Cultural Justification for Caregiving by Race

Characteristic	African American Caregivers ($n = 48$)	White Caregivers ($n = 121$)	p
Age, M (SD)	55.4 (13.1)	62.9 (13.2)	$< .01$
Gender, n (% male)	10 (20.8)	34 (28.1)	$< .33$
Education, n (% $>$ 12 years)	41 (85.4)	96 (79.3)	$< .85$
Income, median range	$40,000–$44,999	$55,000–$59,999	$< .03$
Work status, n (% full time)	24 (50.0)	29 (24.0)	$< .01$
Type of caregiver, n (% spouse)	10 (20.8)	70 (57.8)	$< .01$
CJCS scores, M (SD)	34.9 (5.5)	32.9 (5.9)	$< .05$

Notes: CJCS = Cultural Justification for Caregiving Scale. For the table, $N = 169$. Statistical significance was determined by t tests for nondichotomous variables and by chi-square tests for dichotomous variables.

Statistical Analysis

We used bivariate analyses (t tests or chi-square tests) to examine the effects of race on the following sample characteristics: age, gender, education, income, work status, and type of caregiver (spouse vs nonspouse). We conducted multivariate analyses to address the effects of race and sample characteristics on cultural justifications for caregiving. Specifically, we used ordinary least squares (OLS) regression equations to examine main effects and interaction models. Main effects models included race, age, gender, education, income, work status, and relationship to the care recipient as predictors of cultural justifications for caregiving. Interaction models added race by sample characteristics product terms (e.g., Race × Age) to our main effects model. Interaction analyses addressed whether the effects of caregiver characteristics on CJCS scores differed between African American and White caregivers. We evaluated these interactions of interest simultaneously using the pooled test, as recommended by Harrell (2001). This test controls for Type 1 error when conducting multiple tests of interactions. If the test is nonsignificant, interactions cannot be interpreted even if one or two of them are significant; however, if the pooled test is significant, individual significant interaction terms can be interpreted with some confidence that they were not just "chance" effects.

We used SAS Version 8 statistical software (SAS Institute, 2000) to conduct all analyses. Prior to entry into regression analyses, we scaled nondichotomous variables (age, income, education) to their interquartile range. This yielded a regression coefficient that compares a typical participant in the upper half of the distribution of the predictor to a typical participant in the lower half.

Results

Table 2 presents the characteristics of the sample and the results of the bivariate analyses comparing African American to White caregivers. African American caregivers in this study were younger, had lower incomes, were more likely to work full time, and were less likely to be spousal caregivers than were White caregivers. However, African American caregivers did not differ from White caregivers in terms of gender and education. Bivariate analyses also revealed that African American caregivers had significantly higher CJCS scores than their White counterparts (African Americans $M = 34.9$ [5.5]; Whites $M = 32.9$ [5.9]), suggesting that African American caregivers adhered more strongly to cultural reasons for providing care than did White caregivers.

Table 3. Main Effects Model: Predictors of CJCS Scores

Variable	b	*SE*	p
Age	1.5	1.0	$< .13$
Gender (male)	1.9	1.1	$< .09$
Race (African American)	2.3	1.1	$< .03$
Education	−1.7	0.9	$< .05$
Income	1.0	0.9	$< .27$
Work status (not full time)	−0.3	1.2	$< .80$
Type of caregiver (spouse)	−1.1	1.2	$< .37$

Notes: CJCS = Cultural Justification for Caregiving Scale. Age, income, and education were scaled to their interquartile range.

We provide results of the main effects regression model predicting CJCS scores in caregivers in Table 3. As with bivariate analysis, results of the multivariate model that controlled for other caregiver characteristics showed that race was significantly related to the CJCS, with African American caregivers scoring significantly higher on the scale, as compared to White caregivers ($b = 2.3$, $p < .03$). In addition to race, education was also significantly related to CJCS scores, such that caregivers who had higher levels of educational attainment scored lower on the CJCS ($b = -1.7$, $p < .05$). Although the results for gender did not reach conventional levels of statistical significance, they suggested a trend for males to score higher on the CJCS ($b = 1.9$, $p < .09$). Age, income, work status, and type of caregiver were not significantly related to CJCS scores.

The pooled test for the six interaction terms (race interacting with gender, age, education, income, work status, and relationship to the care recipient) was significant ($p < .047$). Further examination revealed that both gender ($p = .013$) and age ($p = .029$) interacted with race. The form of the interaction for gender was such that among African Americans, males had lower CJCS scores, as compared to females, whereas White males had higher CJCS scores, as compared to females (see Figure 1). Regarding the Race × Age interaction, within the African American group there was little difference between CJCS scores for younger versus older caregivers; however, within the group of younger White caregivers, their CJCS scores were higher as compared to older caregivers (see Figure 1). The four interaction terms of race by education, income, work status, and type of caregiver were nonsignificant ($p > .150$).

Discussion and Conclusions

The purposes of the present study were to examine whether or not there were racial differences in the cultural reasons caregivers give for providing care, to examine which caregiver characteristics predict the cultural reasons for caregiving, and to ascertain whether race moderated the effects of caregiver characteristics on cultural justifications for caregiving. The newly developed CJCS (Dilworth-Anderson et al., 2004) was developed to assess a relatively homogenous construct of reasons for caregiving. As noted earlier, the family plays an important role in the perpetuation of cultural values and beliefs

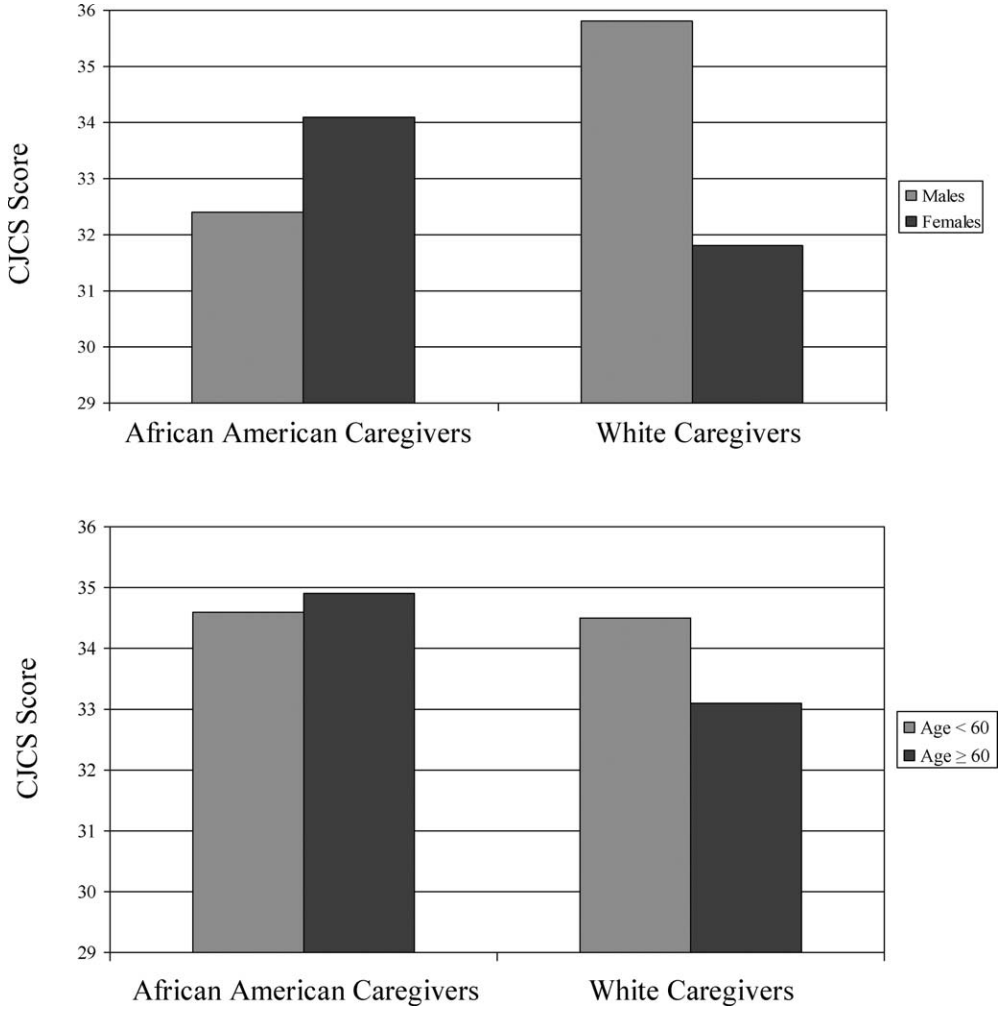

Figure 1. Race × Gender and Race × Age interactions as predictors of CJCS scores. Age groups are based on medium split; means are adjusted for education, income, work status, type of caregiver, gender (top graph) and age (bottom graph).

through the generations; therefore, the CJCS reflects the influence of the family on the development of cultural reasons. In this study, the CJCS was used to measure caregivers' adherence to cultural reasons for providing care, of which we report several major findings.

First, the factor structure of the CJCS across race using a two-group confirmatory factor analysis showed that the corresponding loadings were not significantly different across racial groups. In other words, the scale assesses cultural justifications equally well in African American and White caregivers in this study. Second, both bivariate and multivariate analyses revealed that African Americans scored significantly higher on the CJCS as compared to Whites. The implications of African Americans scoring significantly higher on the scale, as compared to Whites, suggest they differ from Whites regarding why they give care to older relatives. Evidence suggests that these differences may be rooted in sociohistorical explanations on the formation of interdependence of family and community members and expected reciprocity between family members seen in African American families unlike in White families (Franklin, 1997). Historically, African American informal family networks have served as social service systems, welfare systems, and community-based intervention systems (Burton & Dilworth-Anderson, 1991; Franklin; Katz, 1993). As such, cultural socialization in the African American community helps create beliefs and attitudes about caring for dependent others in the family. For example, Lawton, Rajagopal, Brody, and Kleban (1992) found that African American caregivers, as opposed to White caregivers, more strongly identify with traditional values that encourage providing care to older dependent people in the family. Additionally, the literature suggests that, unlike White families, African American families are more likely to provide care in collectivist versus individualistic caregiving systems (Keith, 1995; Pyke & Bengtson, 1996). Again, African Americans scoring higher on the CJCS in this study may reflect collectivist ways of thinking about caregiving as indicated by items on the scale that address interdependence and expected reciprocity. Another interpretation of this finding is that financial pressures and the lack of resources were barriers to providing formal care from an institution, hence family expectations deemed that care should be provided by the family.

A third finding in this study was the influence of caregiver characteristics on CJCS scores. Results of the regression analyses show that caregivers' educational level was the only caregiver characteristic variable that significantly predicted CJCS scores. Specifically, there was an inverse relationship between education and CJCS scores; caregivers with higher levels of education scored lower on the CJCS. It is possible that caregivers with higher levels of education will have more mainstream ideologies that lessen their cultural connection to their identified group. This finding also speaks to the lack of homogeneity in racial and cultural groups in their beliefs and attitudes about family roles, expectations, and obligations. It also addresses Goodenough's (1981) concept of cultural frame whereby individual characteristics and experiences help shape how people experience their culture, sometimes collectively and sometimes individually. It could also be surmised that education modified cultural justifications for caregiving in that education may have changed the way that people think about what their roles are in the caregiving process. In addition, education may provide an economic advantage in that the caregivers were in a position to use alternative ways of providing care.

To address whether there were differences in the effects of caregiver characteristics on CJCS scores attributed to race, we examined interaction terms with race and each of the caregiver characteristics. Our fourth finding showed that there were significant interactions found between race and both gender and age. Regarding gender, it was revealed that among African American caregivers, males had significantly lower CJCS scores than females, whereas White male caregivers had higher CJCS scores than females. We speculate that selection effects may partly explain this Race $\times$ Gender interaction. In particular, we believe that White male caregivers in this study represent a select group of caregivers. The majority of White male caregivers in this study were husbands as opposed to adult sons among African American male caregivers. According to Cantor's (1979) hierarchical-compensatory model, husbands, when available, will assume the caregiving role to wives. Caring for dependent wives may be perceived as a role that is an extension of the husband role and culturally justified. However, caring for a dependent mother is not a role for which men have been socialized. Instead, their roles have been primarily to provide financial support as opposed to direct social and emotional support when adult daughters are available to address these issues. As noted in the gerontological literature, caregiving is a "gendered" experience whereby American cultural values, as well as those in specific cultural groups, socialize male and female children into defined roles that prevail today and are evident in who cares for elders in this society (Finley, 1989; Neal, Ingersoll-Dayton, & Starrels, 1997). Women in the caregiving role, as compared to men, perform more tasks, spend more hours in providing care, and have a higher level of responsibility in the caregiving role (Neal et al.). Further, sons tend to provide care at a "distance" and typically serve as a primary caregiver when there are no adult daughters available. We purport that it is more likely that adult sons in these situations are providing care by default rather than for cultural reasons.

Race also interacted with age in predicting CJCS scores. Younger White caregivers reported higher CJCS scores than older caregivers. These findings may suggest that younger White caregivers, especially among husbands, may have egalitarian marital relationships similar to those found among African Americans that include providing as well as receiving care. However, no significant differences were found with respect to age for African Americans. This may be due to the fact that African American families have traditionally been perceived as more egalitarian and flexible in family roles than are White families (Dillaway & Broman, 2001; McAdoo, 1993). Thus, African Americans—young and old, male and female—have been socialized to provide care.

In conclusion, the findings from this study highlight the effect of race on caregivers' cultural reasons for providing care to dependent elderly family members. These findings, we believe, moves the discussion beyond using race as a proxy for understanding cultural influences in caregiving research (Gallagher-Thompson et al., 2000; Haley et al., 1995). As expected, African American caregivers in this study expressed stronger cultural reasons for providing care than White caregivers, as measured by the CJCS. However, we believe that the cultural values that once served to foster strong caregiving networks may now be a source of stress for some caregivers. For example, Dilworth-Anderson and colleagues (2004) found that very strong cultural justifications for giving care to dependent family members predicted less positive evaluations of health for African American caregivers. Very weak cultural justifications for caregiving were predictive of poor evaluations of health as well. Instead, African American caregivers with moderate levels of cultural justifications for providing care evaluated their health the most positively. Additionally, some caution should be made regarding African Americans scoring higher on the CJCS given the emerging literature that points out that older African Americans have smaller social networks and fewer social resources as compared to Whites (Ajrouch, Antonucci, & Janevic, 2001; Barnes, Mendes de Leon, Bienias, & Evans, 2004). This research suggests that these smaller networks, although denser in family connections as compared to Whites, may not have the ability to provide support over time, especially in networks where socioeconomic resources are limited. Therefore, we believe the findings from this study provide additional information to the emerging literature that examines social networks and resources in later life by showing that culture can be viewed as a social resource for understanding who gives care and who receives it in African American and White families.

Given the importance of culture for African Americans in providing care to dependent family members and the effect cultural beliefs have on their health, future studies are needed to examine the processes whereby caregivers are socialized to provide care to elders. Furthermore, significant race interactions show that not all African American or White caregivers adhere to cultural values for caregiving universally. Thus, within-group analyses are needed to further explain the cultural socialization processes among these specific racial groups, especially about gender and age.

Several limitations are noted in the study. Statistical analysis of the CJCS found that it could detect cultural differences in reasons for providing care with equal reliability among White and African American caregivers. Yet, as noted earlier, because culture provides a framework for behavior, there is a need to engage in more refined and in-depth ethnographic investigations

in the future that may illuminate differences in caregiving between racial subgroups, and perhaps between genders, that will enhance our knowledge about the role of culture in understanding caregiver behavior and health outcomes.

Another limitation is that, similar to other studies, caregivers with higher levels of education and incomes are more likely to participate than the general population. For example, the income level of the African American sample indicates a higher level of income than those in the general population ($40,000–$44,999 vs $38,096 median income; U.S. Census Bureau, 2004). Finally, the lack of longitudinal data did not allow for assessing changes in the status of caregivers and care recipients on cultural justifications for caregiving.

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References

Ajrouch, K. J., Antonucci, T. C., & Janevic, M. R. (2001). Social networks among Blacks and Whites: The interaction between race and age. *Journal of Gerontology: Social Sciences, 56B*, S112–S118.

Aranda, M. P., & Knight, B. G. (1997). The influences of ethnicity and culture on the caregiver stress and coping process: A sociocultural review and analysis. *The Gerontologist, 37*, 342–354.

Barnes, L. L., Mendes de Leon, C. F., Bienias, J. L., & Evans, D. A. (2004). A longitudinal study of Black–White differences in social resources. *Journal of Gerontology: Social Sciences, 59B*, S146–S153.

Burton, L. M., & Dilworth-Anderson, P. (1991). The intergenerational roles of aged Black Americans. *Marriage and Family Review, 16*, 311–322.

Cantor, M. H. (1979). Neighbors and friends: An overlooked resource in the informal support system. *Research on Aging, 1*, 434–463.

Dillaway, H., & Broman, C. (2001). Race, class, and gender in marital satisfaction and divisions of household labor among dual-earner couples. *Journal of Family Issues, 22*, 309–327.

Dilworth-Anderson, P., & Gibson, B. E. (2002). The cultural influence of values, norms, meanings, and perceptions in understanding dementia in ethnic minorities. *Alzheimer Disease and Associated Disorders, 16*, S56–S63.

Dilworth-Anderson, P., Goodwin, P. Y., & Williams, S. W. (2004). Can culture help explain the physical health effects of caregiving over time among African American caregivers? *Journal of Gerontology: Social Sciences, 59B*, S138–S145.

Dilworth-Anderson, P., Williams, I. C., & Gibson, B. E. (2002). Issues of race, ethnicity, and culture in caregiving research: A twenty-year review (1980–2000). *The Gerontologist, 42*, 327–272.

Finley, N. J. (1989). Theories of family labor as applied to gender differences in caregiving for elderly parents. *Journal of Marriage and the Family, 51*, 79–86.

Franklin, D. (1997). *Ensuring inequality: The structural transformation of the African-American family*. New York, NY: Oxford University Press.

Gallagher-Thompson, D., Arean, P., Coon, D., Menendez, A., Takagi, K., Haley, W. E., et al. (2000). Development and implementation of intervention strategies for culturally diverse caregiving populations. In R. Schulz (Ed.), *Handbook of dementia caregiving: Evidence-based interventions for family caregivers* (pp. 151–185). New York: Springer.

Goodenough. W. H. (1981). *Culture, language, and society*. Menlo Park, CA: Benjamin/Cummings Publication Co.

Goodenough, W. H. (1999). Outline of a framework for a theory of cultural evolution. *Cross-Cultural Research, 33*, 84–107.

Haley, W. E., West, C. A., Wadley, V. G., Ford, G. R., White, F. A., Barrett, J. J., et al. (1995). Psychological, social, and health impact of caregiving: A comparison of black and white dementia family caregivers and noncaregivers. *Psychology and Aging, 10*, 540–552.

Harrell, F. E. (2001). *Regression modeling strategies: With applications to linear models, logistic regression, and survival analysis*. New York: Springer.

Jackson, J. S., Antonucci, T. C., & Brown, E. (2004). A cultural lens on biopsychosocial models of aging. *Advances in Cell Aging and Gerontology, 15*, 221–241.

Janevic, M. R., & Connell, C. M. (2001). Racial, ethnic, and cultural differences in the dementia caregiving experience: Recent findings. *The Gerontologist, 41*, 334–347.

Katz, M. B. (1993). *The "Underclass" debate: Views from history*. Princeton, NJ: Princeton University Press.

Keith, C. (1995). Family caregiving systems: Models, resources, and values. *Journal of Marriage and the Family, 57*, 179–190.

Lawton, M. P., Rajagopal, D., Brody, E., & Kleban, M. H. (1992). The dynamics of caregiving for demented elders among Black and White families. *Journal of Gerontology: Social Sciences, 47*, S156–S164.

McAdoo, J. L. (1993). Decision making and marital satisfaction in African American families. In H. P. McAdoo (Ed.), *Family ethnicity: Strength in diversity* (pp. 109–119). Newbury Park, CA: Sage.

Muthén, B., & Muthén, L. (1998–2004). *MPlus Manual* (3rd Ed.). LA: Author.

Neal, M. B., Ingersoll-Dayton, B., & Starrels, M. E. (1997). Gender and relationship differences in caregiving patterns and consequences among employed caregivers. *The Gerontologist, 37*, 804–816.

Pyke, K. D., & Bengston, V. L. (1996). Caring more or less: Individualistic and collectivist systems of family eldercare. *Journal of Marriage and the Family, 58*, 379–392.

SAS Institute. (2000). *SAS/STAT software changes and enhancements, Release 8.1*. Cary, NC: Author.

Siegler, I. C., Bastian, L. A., Steffens, D. C., Bosworth, H. B., & Costa, P. T. (2002). Behavioral medicine and aging. *Journal of Consulting and Clinical Psychology, 70*, 843–851.

Smedley, A., & Smedley, B. D. (2005). Race as biology is fiction, racism as a social problem is real: Anthropological and historical perspectives on the social construction of race. *American Psychologist, 60*, 16–26.

U.S. Census Bureau. *Income 2003 (August 27, 2004)*. Retrieved September 20, 2004, from http://www.census.gov/hhes/income/income03/statemhi.html

Vitaliano, P. P., Zhang, J., & Scanlan, J. M. (2003). Is caregiving hazardous to one's physical health? A meta-analysis. *Psychological Bulletin, 129*, 946–972.

Whitfield, K. E., Weidner, G., Clark, R., & Anderson, N. B. (2002). Sociodemographic diversity and behavioral medicine. *Journal of Consulting and Clinical Psychology, 70*, 463–481.

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