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Coping Strategies and Caregiving Outcomes Among Rural Dementia Caregivers

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We studied the coping styles by which family caregivers living in rural areas of Alabama deal with the demands of caring for an older relative with dementia. Data were obtained from a sample of 141 caregivers through the random-digit dialing telephone survey. Two coping styles were identified: deliberate coping and avoidance coping. Deliberate coping was related to higher life satisfaction scores and, avoidance coping was related to lower life satisfaction scores and higher caregiver burden scores. Avoidance coping appeared to moderate the effects of caregiver health on caregiver burden. Social workers should pay greater attention to caregivers with dysfunctional coping styles.

KEYWORDS *Coping strategies, dementia caregivers, rural caregivers, caregiving outcomes*

The Administration on Aging (2009) reports that about 19% of older persons age 65+ lived in nonmetropolitan areas of the country in 2008. At the rural county level, older populations can be a rather significant proportion of all citizens (Tarman, 2003). For example, those 65 and older make up about

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one-third of the population in specific rural counties in North Dakota, Texas, and Hawaii. In the introduction to their book, *Gerontological Social Work in Small Towns and Rural Communities*, Butler and Kaye (2003) reported that there are higher proportions of older persons in rural areas (14.6%) than in urban areas (11.9%) of the United States.

It has been assumed that in rural areas, caregiving is provided willingly, lovingly, and effectively by the family. Questioning such optimistic assumptions, Cuellar and Butts (1999) called for more studies of rural caregiving and suggested that the romanticized vision of a tranquil and harmonious rural lifestyle is often refuted by the realities of economic deprivation, inadequate housing and transportation, limited access to health professionals and community-based programs, and unaddressed physical and mental health problems. Family members caring for relatives with dementia who live in rural communities are an invisible and understudied population. These caregivers often live in remote residential locations and are frequently suspicious of, and fail to use, formal health and social services (Butler & Kaye, 2003). The stigma of dementia may serve as a major barrier to the use of formal services among rural family caregivers (Morgan, Semchuk, Stewart, & D'Arcy, 2002). A shortage of both dementia services and diversified health and mental health professionals may also represent service barriers in most rural areas (Krout & Bull, 2006). For all these reasons, it is important to examine the coping strategies and caregiving outcomes of dementia family caregivers in rural environments.

COPING STRATEGIES OF CAREGIVERS

This study focuses on the methods by which family caregivers living in rural areas of Alabama cope with the demands of caring for an older relative with dementia. Coping strategies refer to the specific efforts, both behavioral and psychological, that individuals use to master, tolerate, reduce, or minimize the stressful events they face (MacArthur Research Network on SES and Health, 1998). Coping activities play a role in physical and psychological well-being when people are confronted with negative or stressful events (e.g., Cook & Heppner, 1997).

General Coping Styles

Lazarus and Folkman (1984) developed a model of stress and coping in which stress leads to appraisal of a threat or a challenge that, in turn, leads to a coping reaction. In an early study of coping among a sample of 100 community residing men and women between the ages of 45 and 64, Folkman and Lazarus (1980) found that people use both behavioral (i.e., problem-solving, use of services) and psychological types (i.e., anger, disengagement)

of coping. If individuals believe that some constructive action might help, or that information will be helpful, they tend to favor problem-focused coping. Those who accept the situation, and believe that little can be done, often favor emotion-focused coping. They further suggested that the predominance of one type rather than another is determined by one's personal style as well as the nature of the stressful event.

Carver, Scheier, and Weintraub (1989) suggested that the dichotomy of problem-focused and emotion-focused might be too simple, and that coping styles are more complex. For example, some emotional responses to stress involve denial, but others may involve a positive reinterpretation of events or seeking out social support. Problem-focused efforts might include planning, taking action, and seeking out assistance; so, too, such efforts might include a decision to wait before acting. Responding to the diversity in the outcomes of different forms of coping, Cook and Heppner (1997) suggested that, despite some findings of relationships between coping styles and outcomes, it is not possible to unequivocally label good or bad coping styles. Depending on the stressful situation and the individual, a coping style might be functional for one person but dysfunctional for another. Yet, Carver and Scheier (1994), in discussing their Coping Orientations to Problems Experienced (COPE) Scale, did identify coping mechanisms that they believed to be dysfunctional: denial, mental disengagement, behavioral disengagement, and the use of alcohol. Similarly, Ano and Vasconcelles (2005) distinguished positive religious coping from negative religious coping.

Coping by Family Caregivers

Folkman and Lazarus' (1980) work on stress and coping has been adapted in studies on family caregivers of dementia patients (e.g., Haley et al., 2004). Results of these studies suggest that coping styles may affect caregiving outcomes, but there is a lack of agreement about the most beneficial coping styles. Pruchno and Resch (1989) studied spousal dementia caregiving and concluded that, due to the chronic, long-term nature of the problem, the coping strategy of choice was emotion-focused strategies. As a result, many Alzheimer's caregivers seek to deal with the consequences of their ongoing caregiving stresses in an emotional way. Yet, Kramer (1993), who studied 72 spouses of husbands with Alzheimer's disease (AD), found that emotional-focused coping was significantly related to depression. Age, social resources, and positive relationship-focused coping (involving interpersonal regulation processes aimed at establishing and maintaining social relationships) were associated with caregiving satisfaction. Using longitudinal research design, McClendon, Smyth, and Neundorfer (2004, 2006) conducted survival analysis to examine the relationship between coping styles of AD caregivers and their care recipients' mortality, and found that the *wishfulness* (an intrapsychic coping mechanism) of caregivers was a risk factor for higher rates of

care recipient mortality. This was explained by the likelihood that such caregivers altered their feelings about the situation, engaged in withdrawal, or institutionalized care recipients.

One possible explanation for variations in findings regarding styles of coping may be the cultural background of dementia caregivers (e.g., Burgio, Stevens, Guy, Roth, & Haley, 2003; Janevic & Connell, 2001). Segall and Wykle (1988–89) found that African American caregivers, compared to White caregivers, were more likely to use prayer, faith, and religion as a coping strategy for the strains of caring for a relative with dementia. Knight, Silverstein, McCallum, and Fox (2000) found racial differences in coping mechanisms: African American caregivers used emotion-focused coping more than did White caregivers. Haley et al. (1996) found African American caregivers had less proactive and more avoidance coping styles than White caregivers.

Butler and Kaye (2003) pointed out that there has been limited research with regard to the coping styles of rural dementia caregivers and the relationships between their coping styles and their caregiving outcomes. Accordingly, there have been few studies that examine differences in coping styles between urban and rural caregivers. An early study by Wood and Parham (1990) on 85 women caring for an AD family member found that White caregivers and urban caregivers engaged in more problem-solving coping and also attended support groups more frequently. Caregivers from rural areas were less likely to seek information about dementia than White caregivers or urban caregivers and had less transportation available to enable them to access formal services.

PURPOSE

To learn more about the coping styles of rural dementia caregivers, we examined the coping mechanisms utilized by family caregivers of those with dementia living in rural Alabama. We sought to determine if there were relationships between different styles of coping and caregiver demographic characteristics, stressors, and outcomes. In this article, we first identified the patterns of coping found in our sample of rural family caregivers. Then we examined relations between coping styles and caregiver demographics, caregiving stressors, and caregiving outcomes (i.e., caregiver burden and caregiver life satisfaction).

We used a data set from the Rural Dementia Caregiving Study, a project funded by the Agency for Healthcare Research and Quality. This study employed a theoretical caregiving stress model based upon the work of Pearlin, Mullan, Semple, and Skaff (1990) that posits relations between caregiving stressors, stress mediators, and caregiving outcomes. The model suggests that caregiving stressors (such as care recipient behavioral problems,

caregiver poor health) are risk factors for psychosocial outcomes (such as depression, burden, and life satisfaction). Coping is conceptualized by Pearlin et al. as a mediating situation that “lessens the intensity of stressors and to block their contagion at the junctures” (p. 590) between caregiving stressors and outcomes. They suggest that coping could have a mediating effect (accounting for the differences in the effects of stressors on caregiving outcomes) or a moderating effect (altering the strength of the relation between stressors and caregiving outcomes). Coping has been examined as both a mediator and a moderator in previous studies (e.g., Morano, 2003), but the evidence is not yet conclusive. For these reasons, we examined both mediating and moderating effects of coping. Due to the modest number of rural dementia caregiving participants in our study, we limited our analysis to two caregiving outcomes: caregiving burden and life satisfaction.

METHODS

The setting for this study was Alabama, a state with a significant rural population. All study participants lived in counties designated as rural, as defined by the Bureau of the Census (2002). Participants chosen for the study came from 39 of the 45 rural counties in the state. We used the random digit telephone dialing method to obtain our sample (see detailed description in an early publication of Kosberg, Kaufman, Burgio, Leeper, & Sun, 2007). Professional staff members from the University of Alabama’s Institute of Social Science Research were responsible for generating the phone numbers from individuals living in rural counties in the State, as well as supervised the telephone surveys. There were a total of 45,904 phone numbers, from which 28,939 individuals were reached. Of these, 18,975 individuals agreed to be screened to ensure meeting the inclusion criteria (described in the next paragraph). The screening response rate was 65.6%. After screening, 223 were found to be eligible to participate in the study. Of this number, 82 individuals refused to participate after screening, and 141 completed the survey questions. Thus, the response rate of eligible rural family caregivers was 63.2%. We believe this sample is fairly representative of the state’s population of rural-dwelling family caregivers of persons with dementia, although we acknowledge the possible exclusion of eligible caregivers who do not have a home phone.

Participants

A total of 141 study participants were surveyed: 67 African American and 71 White family caregivers of rural dwelling older persons with dementia. To be eligible for inclusion in the study, the family caregivers and their dementia care recipients must have either lived together in a rural, noninstitutional setting, or have lived within commuting distance of each other. The eligible

care recipient must have been 60 years of age or older, and screened to have some level of dementia. All participants were self-described primary family caregivers who provided at least 10 hr a week of face-to-face assistance to meet the physical and/or emotional care needs of their care recipients. All participants had to be cognitively intact, have access to a telephone, and be conversant in English. Participants were asked to answer the 10 questions in the Short Portable Mental Status Questionnaire, a well-known instrument developed by Pfeiffer (1975) to test cognitive competence. Individuals who had more than three incorrect responses to the 10 items were not eligible for this study, and five individuals were excluded for this reason.

As shown in Table 1, caregivers were mainly women, married, and Protestant. They averaged 52 years of age, and they were almost evenly divided between those who had at least a high school education (or GED) and those who had attended college. Forty-two percent of the caregivers had yearly household incomes at or below \$20,000. Half (50%) of the respondents reported that paying bills was somewhat difficult or very difficult. The mean age of the care recipients was 79.5 years. Over one-fifth

TABLE 1 Demographic Characteristics of Caregivers ($N = 141$)

Demographic characteristics	<i>n</i>
Gender (% female)	85.1
Mean age	52.0
Mean age of first care recipients	79.5
Marital status	
% married	60.3
% widowed/divorced/separated	22.7
% never married	17
Education	
% less than high school	18.4
% high school/GED	36.9
% some college	29.1
% college graduate	15.6
Household income	
% <\$20,000	41.5
% \$20,000–\$40,000	31.1
% >\$40,000	27.4
Paying bills	
% not difficult at all	31.9
% not very difficult	17
% somewhat difficult	30.5
% very difficult	19.9
Employment status (% employed)	39
Hr/week among those employed	34.2
Religion (% Protestant)	93.6
Mean hr of care to first person	49.9
Care to second person	22
Mean hr of care to second person	30.9
Average number of people in household	3.9

of the caregivers provided care to a second care recipient. These caregivers provided an average of 50 hr a week of care to the first care recipient, and an average of over 31 hr a week to the second one. A total of 39% of the caregivers were employed and worked an average of 34 hr a week.

Measures

Level of dementia. The care recipient's level of dementia was measured by the use of a revised version of the Dementia Severity Rating Scale (DSRS), developed by Clark and Ewbank (1996), an informant-based 11-item instrument. This instrument employs a multiple-choice response format that obtains the caregivers' assessment of the care recipients' severity of dementia in the following areas: orientation, memory, judgment, recognition, language, social interaction, home activities or responsibilities, personal care, incontinence, mobility, and eating. The DSRS was administered on caregivers who rated the severity of dementia of their care recipients. The DSRS score was used as a screen to initially identify family members who are providing care to older persons who exhibit symptoms of dementia. C. Clark (personal communication, July 9, 2001) stated that scores over 7 on the DSRS are indicative of some level of dementia. Accordingly, DSRS scores of 8 or more were required for inclusion in the study. The Cronbach alpha of the scale on this sample was 0.92.

Problem behaviors. To measure problem behaviors of the dementia care recipients, we used the Revised Memory and Behavior Problem Checklist developed by Teri et al. (1992). This 24-item instrument, administered to the caregiver, provided ratings of the occurrence of problem behaviors by the care recipient in areas related to depression, memory loss, and disruptive behavior. The total score of the number of behavior problems has a possible range from 0 to 24, and we obtained a Cronbach alpha of 0.77 on this sample.

Functional abilities. The Physical Self-Maintenance and Instrumental Activities of Daily Living Scales developed by Lawton and Brody (1969) were used to provide an assessment of the functional abilities of care recipients. The scales consist of 14 items regarding activities (i.e., toileting, ambulation, shopping) that are rated by the caregiver with regard to the care recipient's level of impairment. The summed score has a possible range from 0 to 14, with higher scores indicating more impairment, and we obtained a Cronbach alpha of 0.81 for this sample.

Caregiver health. A single item from the Resources for Enhancing Alzheimer's Caregiver Health project (Schulz et al., 2003) was used to assess caregivers' perceived health from *poor* (1) to *excellent* (5).

Caregiver burden. We used the Consequences of Care Index (CCI; Kosberg & Cairl, 1986) to measure caregiving burden. The CCI has been found to be internally reliable (Kosberg & Cairl, 1986) and valid (Kosberg,

Cairl, & Keller, 1990). This 20-item instrument allows participants to rate their subjective burden on a four point scale in five domain areas: (a) personal and social restrictions, (b) physical and emotional problems, (c) economic costs, (d) value investment in caregiving, and (e) perception of the care recipient as a provocateur. The summed CCI score has a possible range from 20 to 60, and is used to indicate caregiver burden, with higher scores indicating greater burden. The Cronbach alpha of the scale on this sample was 0.89.

Life satisfaction. To measure caregiver life satisfaction, we used the Quality of Life Inventory (QOLI) developed by Frisch (1992). This 32-item instrument has been validated and used in previous studies (Frisch, Cornell, Villanueva, & Retzlaff, 1992; Scogin et al., 2007). This scale obtains data regarding respondents' ratings on 16 domain areas: health, self-regard, philosophy of life, standard of living, work, recreation, learning, creativity, helping, love relationships, friendships, relationships with children, relationships with relatives, home neighborhood, and community. Participants rate each item in terms of its importance to their overall happiness and satisfaction from *not at all important* (0) to *extremely important* (2) and their satisfaction with this area from *very dissatisfied* (-3) to *very satisfied* (3). We followed the protocol of Frisch et al. (1992) to calculate the overall life satisfaction by averaging all weighted satisfaction ratings that have nonzero importance ratings. High scores indicate higher levels of life satisfaction. The Cronbach alpha of this scale on this sample was 0.85.

Coping strategies. To measure how participants coped with stressors, we used the 60-item COPE Scale (Carver & Scheier, 1994; Carver et al., 1989). The 15 subscales were theoretically developed to measure the following coping styles: acceptance (trying to deal with the reality of the situation), denial (refusing to believe what is happening), religion (putting one's trust in God), growth (learning something good from the experience), emotional social support (getting understanding and support from another), instrumental social support (getting advice and concrete assistance from another), planning (coming up with a strategy for dealing with the situation), humor (joking and making fun about the situation), mental disengagement (day-dreaming, sleeping, and watching TV), behavioral disengagement (giving up trying to deal with problem), restraint (waiting before acting), active coping (doing something about the situation), substance abuse (using alcohol to feel better), suppressing competing demands (concentrating on only doing something about the situation), and focus on and venting of emotions (increased awareness of emotional distress and a tendency to ventilate those feelings). Each coping subscale had four items for which there were four possible response categories ranging from *I do not use this* (1) to *I usually do this a lot* (4). Each subscale has a possible range of scores from 4 to 16. Carver et al. (1989) reported good psychometric properties for this widely used instrument.

Analysis Strategies

Data were stored and analyzed using PASW 18 (formerly SPSS). An exploratory principal component factor analysis with varimax rotation was used to reduce the dimensionality of coping subscales by combining them into factors. The number of factors was determined by an eigenvalue greater than two. A coping item was retained in a factor if it had a factor loading greater than .5. Factor scores were obtained by summing those coping subscales (weighted by their factor loading coefficients) that significantly retained on this factor.

Bivariate Pearson correlations were used to investigate relations between coping factor scores and other continuous variables, such as demographics, measures of caregiver stress, and caregiving outcomes. *t*-tests for independent samples were used to assess potential coping differences between female and male caregivers and between Caucasian and African American caregivers.

In view of the study's modest sample size, we limited the focus of our model testing analysis to only one intervening variable: coping style. Hierarchical regression was used to test the simplified model. The first stage of the model enters measures of stressors. The second stage adds the coping factor scores. By comparing stages, the mediating effects of coping are determined. The third stage adds different interaction effects between coping and stressors. By examining the significance of these interaction effects, the moderation effects of coping are determined. Separate models were tested for two outcomes: caregiver burden and life satisfaction.

RESULTS

Frequency Distributions of Coping Subscales

The frequency distributions and means of each coping subscale were obtained (see Table 2). Use of religion was by far the most frequently used coping mechanism, with an average score of 15.2, indicating that almost all the rural caregivers used religious coping. In descending order following the use of religion, the top coping mechanisms were planning (13.6), growth (13.6), acceptance (12.4), and active coping (12.2). The least-used coping strategies included mental disengagement (9.2), behavioral disengagement (6.3), denial (6.4), and alcohol/drug disengagement (4.4). It is interesting that these least used styles had been considered to be dysfunctional coping styles by Carver and Scheier (1994).

Factor Analysis of Coping Subscales

To reduce the number of coping subscales, we conducted a principle component factor analysis with varimax rotation that generated two factors (see

TABLE 2 Descriptive Characteristics of Coping Strategies ($N = 141$)

Coping strategies	Means	Possible range	Observed range
Religious coping	15.2	4–16	4–16
Planning	13.6	4–16	6–16
Growth	13.6	4–16	8–16
Acceptance	12.4	4–16	7–16
Active coping	12.2	4–16	7–16
Emotional social support	11.3	4–16	4–16
Instrumental social support	11.5	4–16	4–16
Restraint coping	11.3	4–16	5–16
Suppression of competing activities	11.5	4–16	5–16
Focus on and venting of emotions	9.5	4–16	4–16
Use of humor	9.0	4–16	4–16
Mental disengagement	9.2	4–16	4–15
Behavioral disengagement	6.3	4–16	4–15
Denial	6.4	4–16	4–14
Substance use	4.4	4–16	4–11

Table 3). In combination, the two factors explained 37% of the total variance of the 15 coping styles and individually had an Eigenvalue above 2. Factor I included six significantly loaded items (factor loadings greater than .5): growth, seeking emotional help, seeking instrumental support, suppressing competing demands, active coping, and planning. Inasmuch as these coping styles reflected active efforts to deal with challenges, we labeled this factor

TABLE 3 Factor Loadings of the COPE Subscales ($N = 141$)

Scale	Factor loading	
	Deliberate coping	Avoidance coping
Emotional social support	.74	.14
Instrumental social support	.73	.01
Planning	.71	-.14
Growth	.64	-.28
Active coping	.64	.03
Suppress competing demands	.54	.36
Mental disengagement	-.02	.75
Behavioral disengagement	-.30	.71
Denial	-.20	.68
Focus on and venting of emotions	.31	.54
Restraint	.36	.20
Acceptance	.36	.11
Substance Abuse	-.01	.29
Religion	.17	-.05
Humor	.24	.25

Note. Emotional social support, instrument social support, planning, growth, active coping, and suppress competing demands are significantly loaded on Deliberate Coping. Mental disengagement, behavioral disengagement, denial, and focus on and venting of emotions are significantly loaded on Avoidance Coping.

deliberate coping. We used the total score of the six items weighted by their factor loading coefficients and created a deliberate coping index. The Cronbach alpha of this index was 0.78. Factor II included four significantly loaded items: focus on and venting of emotions, denial, behavior disengagement, and mental disengagement. Because these coping styles seemed to indicate withdrawal from dealing with challenges, we labeled this factor *avoidance coping*. Similarly, we created an avoidance coping index using the total score of the four items weighted by their factor loading coefficients. The Cronbach alpha of the Avoidance Coping index was 0.63.

Bivariate Analysis

Pearson correlations were used to examine bivariate relations between coping factors, demographic characteristics, caregiver stressors, and caregiving outcomes. As seen in Table 4, a direct relation was found between deliberate coping and education ($r = .20^*$). Inverse relations were found between avoidance coping and education ($r = -.31^{**}$) and perceptions of income adequacy ($r = -.37^{**}$). On the bivariate level, deliberate coping was found to be unrelated to any measure of caregiver burden, and avoidance coping was associated with caregivers who had lower self-rated health status ($r = -.21^*$). For caregiving outcomes, deliberate coping was related to higher life satisfaction ($r = .25^{**}$) and avoidance coping was related to higher caregiving burden ($r = .27^{**}$) and inversely related to life satisfaction ($r = -.19^*$). In our study, neither racial nor gender differences were found to be significantly related to coping styles (data not shown).

Hierarchical Regression Analysis

Table 5 shows the hierarchical regression model with life satisfaction as the outcome variable. The first stage entered the two stressors that showed significant correlations with life satisfaction: care recipient behavior problems and caregiver self-rated health. The other two stressors, care recipient dementia severity and care recipient functional ability, failed to show significant correlations with life satisfaction and were not included in the model. When caregivers perceived care recipients to have more behavior problems and perceived themselves to have poorer health, they had lower life satisfaction scores. The model explained 9% of the variance of life satisfaction. The second stage added the two types of coping to the first model. The two stressors entered in the first stage retained their statistical significance in the second stage. Therefore, their effects on life satisfaction were not significantly mediated by coping. In addition, deliberate coping was significantly related to higher life satisfaction scores, but avoidance coping was not significant. The second model explained 14% of the variance of life

TABLE 4 Significant Correlations of Coping Strategies ($N = 141$)

	Demographics			Stressor		Outcomes	
	Income adequacy	Education		Self-perceived health	Caregiving burden	Life satisfaction	
Deliberate coping	.06 ($n = 134$)	.20* ($n = 135$)		.09 ($n = 135$)	.14 ($n = 133$)	.25** ($n = 135$)	
Avoidance coping	-.37** ($n = 137$)	-.31** ($n = 138$)		-.21* ($n = 138$)	.27** ($n = 136$)	-.19* ($n = 138$)	

* $p < .05$, two-tailed. ** $p < .01$, two-tailed.

TABLE 5 Hierarchical Regression Models With Life Satisfaction as Outcome Variable

Variables	Model 1 B	Model 2 B	Model 3 B	Model 4 B	Model 5 B	Model 6 B
CG health	.27**	.24**	.24**	.24**	.24**	.24**
CR behavioral problems	-.17*	-.16*	-.16*	-.16*	-.16*	-.16*
CG deliberate coping		.23**	.23**	.21**	.23**	.23**
CG avoidance coping		-.10	-.10	-.10	-.10	-.10
CG health × CG deliberate coping			-.04			
CR behavioral problems × CG deliberate coping				-.10		
CG health × CG avoidance coping					.01	
CR behavioral problems × CG avoidance coping						-.01
Adjusted R^2	.09	.14	.14	.14	.13	.13

Note. R^2 change from Model 1 to Model 2 is significant ($p < .01$). The R^2 difference between Model 2, Model 3, Model 4, Model 5, and Model 6 is not significant. CG = caregiver; CR = care recipient.

* $p < .05$. ** $p < .01$.

satisfaction. To test whether the relation between caregiving stressors and life satisfaction would vary depending on different coping styles, we also tested four different interaction effects (each in a separate model) between coping styles and caregiving stressors. We found that none of them reached statistical significance.

Table 6 reflects the hierarchical regression model with caregiver burden (measured by the CCD) as the outcome variable. The first model included the two stressors, care recipient behavior problems and self-rated health.

TABLE 6 Hierarchical Regression Models With Caregiver Burden as Outcome Variable

Variables	Model 1 B	Model 2 B	Model 3 B	Model 4 B
CG health	-.20*	-.16*	-.17*	-.15
CR behavioral problems	.32**	.32**	.33*	.30**
CG avoidance coping		.22**	.24**	.21*
CG health × CG avoidance coping			.19*	
CR behavioral problems × CG avoidance coping				.07
Adjusted R^2	.13	.17	.20	.17

Note. R^2 change from Model 1 to Model 2 is significant ($p < .01$). R^2 change from Model 2 and Model 3 is significant ($p < .05$). R^2 change from Model 2 and Model 4 is not significant.

* $p < .05$. ** $p < .01$.

Caregivers who perceived care recipients to have more behavior problems and perceived themselves to be in poorer health were found to have higher scores of caregiver burden. The model explained 13% of the variance of burden. The second stage added avoidance coping to the model. The second model explained 17% of the variance of burden, adding 4% to the explained variance of the first model. Participants who scored higher on the avoidance coping style reported greater levels of caregiver burden. To test whether the relation between caregiving stressors and caregiver burden would vary depending on avoidance coping, we tested an interaction effect between avoidance coping and caregiver health in the third model, and an interaction effect between avoidance coping and care recipient behavioral problems in the fourth model. The interaction between caregiver health and caregiver avoidance coping was significant ($p < .01$), which indicated the association between poorer health and higher caregiver burden was weakened for those who were more likely to engage in avoidance coping compared to those who were less likely to engage in avoidance coping. That is, the effects of poorer health on caregiver burden tended to diminish as participants engaged more in avoidance coping (see Figure 1).

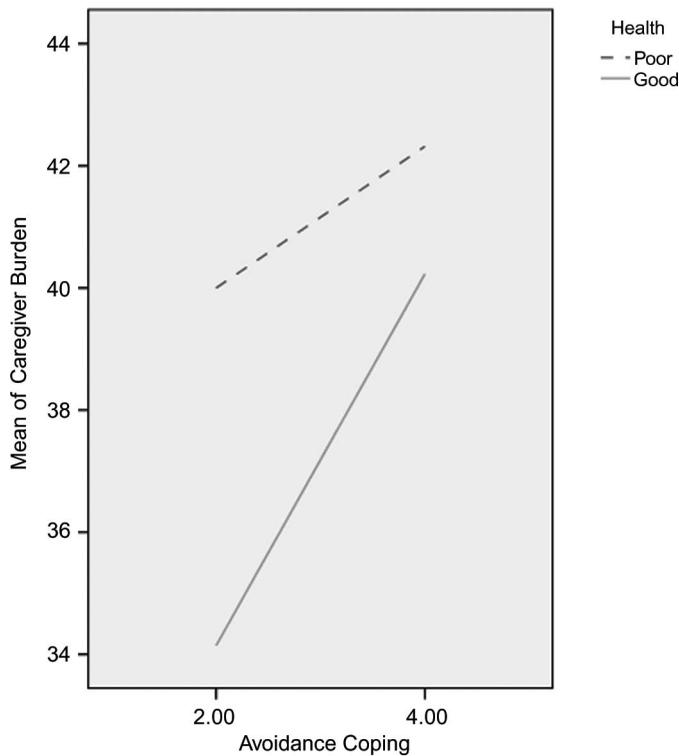


FIGURE 1 Interaction effect of avoidance coping and caregiver health on caregiver burden.

DISCUSSION

Conceptual Issues

This study found that, at the bivariate level, caregivers with higher scores on deliberate coping were more likely to report higher scores on life satisfaction. Caregivers with higher scores on avoidance coping were more likely to report greater caregiving burden and lower scores on life satisfaction. These findings are consistent with previous findings by Haley et al. (1996). However, the cross-sectional nature of the study could not permit the time sequencing of relationships. For example, it is unknown whether higher deliberate coping resulted in higher life satisfaction or whether those with higher life satisfaction engaged in more deliberate coping activities. Perhaps those experiencing higher levels of caregiver burden had lower levels of life satisfaction, and such individuals—for whatever reasons—utilized avoidance coping styles. Another possibility could be that the problems of those using avoidance coping led to increased caregiving burden that may, in turn, have resulted in lower life satisfaction.

The mediating effects of coping styles between caregiving stressors and caregiving outcomes were not supported by our results, which is similar to the findings of Morano (2003), who found no mediating effects of emotional-focused coping or problem-focused coping using a sample of Alzheimer's caregivers in southeast Florida. The insignificance of mediation effects indicate that caregiving stressors may not influence caregiving outcomes through coping styles. In other words, coping styles did not account for the differences in caregiving outcomes caused by caregiving stressors. Another explanation of the insignificant mediating effects could be due to the measure of coping we used in this study. As is true of most studies on caregiver coping and the consequences of caregiving, our measurement of coping did not focus specifically on caregiving situations, but has a more general and ambiguous reference and focuses upon undifferentiated stresses, problems, and challenges. Thus, it is difficult to suggest a direct relation between coping styles identified in this study and specific caregiving stressors. This is further supported by our findings that caregiver coping styles were not related to any particular caregiving stress associated with demands of caring for a care recipient (e.g., care recipient behavioral problems), except for a significant relation between avoidance coping and caregiver health status. Given such a view, coping styles in this study appeared to be like personal characteristics that precede the caregiving situations. For these reasons, we suggest that future studies examine the mediating effects of coping using caregiving specific coping measures.

We did identify a moderating effect of avoidance coping that was found to attenuate the relation between health status and caregiving burden. Those who were more likely to engage in avoidance coping reported that their health status had a minor effect on their caregiving burden. Those who

were less likely to engage in avoidance coping reported that their health status had a substantial effect on their burden. It seems that as one moves from the continuum from the least involvement in avoidance coping to the most involvement in avoidance coping, the effect of their physical health on caregiving burden tended to diminish.

Contrary to previous findings (e.g., Knight et al., 2000), our study did not find racial differences in coping styles. Janevic and Connell (2001) explained variations in research findings on ethnic/racial comparisons of caregiver experiences as a result of methodological variations between studies, and they recommend that future cross-cultural studies more clearly explicate definitions of *primary caregiver*, noting cultural variations. But our results suggest an alternative explanation for the absence of cultural differences. In this study, education level and income adequacy were related to coping styles. Might it be, for our rural population, that socioeconomic levels (measured by education and perceived income adequacy) are more important than racial or cultural backgrounds? Perhaps, as some have suggested, there are social class commonalities between those from different racial groups (Connell & Gibson, 1997).

Applied Issues

Our findings may have implications for social workers who work with dementia caregivers in rural settings. This study found that avoidance coping interacted with health to influence caregiver burden. Thus, it may be important for professionals to tailor their interventions based upon an assessment of caregivers' coping styles, paying special attention to caregivers who engage heavily in avoidance coping. First, it is critical to ensure an accurate and comprehensive assessment of caregivers' characteristics. According to Hooyman and Kiyak (2008), health and social service agencies should first conduct multidimensional caregiver assessments (that include attention to coping strategies), and then offer needed services such as support groups, skills training, and educational materials. A careful assessment of caregivers' stressors, resources and coping strategies would help service professionals identify other life stresses that may exacerbate the stress of caregiving (Kramer, 1993). Caregivers with limited access to resources may also have limited knowledge and skills at coping which, in turn, lead to perceived burden and low life satisfaction. Addressing the basic needs of caregivers may lead to better outcomes in their caregiving experience.

Second, social workers in rural settings need to give particular attention to caregivers who indulge in avoidance coping. Those with poor social resources may be more depressed and less satisfied with caregiving and may use more avoidance coping strategies than caregivers with adequate social resources. This seems particularly true for rural populations who generally have limited access to social resources, and might well be substantiated by

the study reported in this article. In this regard, interventions (e.g., caregiver self-care classes) that target improving caregiver physical health and wellness may prove more effective among those with little engagement in avoidance coping. For those who mainly use avoidance coping, social workers should consider interventions that might alter coping styles (e.g., cognitive behavioral treatment combined with coping skills training) and, thereby, reduce their caregiving burden.

Finally, social workers need to continue to advocate for programs that are less likely to exist in rural areas, such as programs teaching skills for coping with problems, and education and counseling to provide caregivers help in solving or reframing problems (Pratt, Schmall, Wright, & Cleland, 1985).

Limitations of Study

As mentioned, we did not use a coping measure developed specifically for use with caregivers of older persons with dementia. Therefore, the stressors and coping styles that were noted might have been in response to stressors other than those related to dementia caregiving, such as family-related situations (i.e., marital problems, substance abuse), personal challenges (i.e., work-related difficulties, financial problems), and/or other external stressors (i.e., interpersonal conflicts, world conditions). Ideally, research on the causes and consequences of caregiving stress should seek to utilize a methodology and instruments that directly address the caregiving experience but also identify (and control) alternative stressful influences. Also, it needs to be mentioned that the Cronbach alpha of the avoidance coping scale, derived from the exploratory factor analysis, was not ideally high. This could be due to the inclusion of the *focus on and venting of emotion items*, which had the lowest factor loading on the avoidance coping scale. The focus on and venting of emotion may be intuitively less indicative of avoidance than the indicators of denial, mental disengagement, and behavior disengagement. Yet, literature has been quite consistent in suggesting that emotion-focused coping is related to caregiver burden and depression (Almberg, Grafstrom, & Winblad, 1997; Powers, Gallagher-Thompson, & Kraemer, 2002). Conceptually, focusing on emotional catharsis may impede adjustment and distract people from active coping (Carver et al., 1989). For these reasons, we believe that the focus on and venting of emotion indicates a degree of passivity, and, thus, is suitable to be included in the avoidance coping scale. But future studies need to use exploratory factor analyses to see whether the same factor structure would emerge, or adopt confirmatory factor analyses to test the avoidance coping scale on other caregiver samples.

Our study used a cross-sectional design. We were only able to measure coping styles at one point in time. Thus, we were unable to determine

whether or not the coping styles of dementia caregivers vary over time after taking on the caregiving role. Given the progressive nature of dementia, and the changes in care recipient needs, it is important to study possible changes in coping strategies of caregivers over time. Indeed, such longitudinal research on the experiences of dementia caregivers has not only theoretical importance, but is also needed to effectively target interventions by those in the helping professions who seek to assist those in family caregiving roles. Certainly, there remains the question of how the experiences of our participants compare to rural dementia caregivers in other parts of the country.

CONCLUSIONS

This article reports the coping styles of a sample of dementia caregivers in rural Alabama. Using a caregiver stress and coping model, we found that coping styles may play an important role in dementia caregiving. In this study, caregivers who had higher levels of deliberate coping reported higher scores on life satisfaction. Our findings also revealed no differences in the coping styles between African American and White caregivers; although they do suggest that socioeconomic factors, rather than race/ethnicity, may have a greater influence on the coping experiences of rural dementia caregivers in Alabama.

We encourage researchers to use methodologies that focus on the experiences of dementia caregivers that will help us to learn more about how they cope with the stresses of caregiving. We encourage practitioners to assess the coping styles of caregiving clients and to design interventions to assist them to better cope with the many challenges of caring for family members with dementia. By helping these caregivers, society is also likely to improve quality of the lives of their care recipients.

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