

Journal of Family Issues

<http://jfi.sagepub.com/>

Depression Among Rural Native American and European American Grandparents Rearing Their Grandchildren

Bethany L. Letiecq, Sandra J. Bailey and Marcia A. Kurtz

Journal of Family Issues 2008 29: 334 originally published online 19 November 2007

DOI: 10.1177/0192513X07308393

The online version of this article can be found at:

<http://jfi.sagepub.com/content/29/3/334>

Published by:



<http://www.sagepublications.com>

Additional services and information for *Journal of Family Issues* can be found at:

Email Alerts: <http://jfi.sagepub.com/cgi/alerts>

Subscriptions: <http://jfi.sagepub.com/subscriptions>

Reprints: <http://www.sagepub.com/journalsReprints.nav>

Permissions: <http://www.sagepub.com/journalsPermissions.nav>

Citations: <http://jfi.sagepub.com/content/29/3/334.refs.html>

>> [Version of Record](#) - Feb 1, 2008

[OnlineFirst Version of Record](#) - Nov 19, 2007

[What is This?](#)

Depression Among Rural Native American and European American Grandparents Rearing Their Grandchildren

Bethany L. Letiecq

Sandra J. Bailey

Marcia A. Kurtz

Montana State University, Bozeman

Increasing numbers of grandparents are rearing their grandchildren because of their adult children's inability to parent. Researchers have begun to document the mental health outcomes of grandparent caregivers in general, yet none have examined the mental health of Native American and European American grandparent caregivers residing in rural communities. To shed light on this topic, the current study examined relationships between degree of rurality; economic, community, and social resources; grandparenting experiences; and depression among 55 rural Native American and European American custodial grandparents. Based on hierarchical regression analyses, the best predictors of depression were grandparental stress, total time providing primary care to grandchildren, household income, and race. Grandparents experiencing more stress, less time in the role of primary grandparent caregiver, and lower household income reported more depressive symptoms. Moreover, Native American grandparent caregivers reported more depressive symptoms than did their European American counterparts. Implications for research and practice are discussed.

Keywords: *rural; grandparent caregivers; grandparents raising grandchildren; depression*

Grandparent-headed households, where grandparents take on the surrogate parental role for their grandchildren without a parent present,

Authors' Note: This project was funded in part by a Kappa Omicron Nu Research Grant. Address correspondence to Dr. Bethany L. Letiecq, Department of Health and Human Development, 316 Herrick Hall, Montana State University, Bozeman, MT, 59717; e-mail: bletiecq@montana.edu.

have emerged as one of the fastest growing family constellations in the United States (Bryson, 2001). In many of these grandfamilies, grandparents are rearing grandchildren not by choice or tradition but as the result of family crises that necessitate grandparent intervention (Bowers & Myers, 1999; Hayslip, Shore, Henderson, & Lambert, 1998; Jendrek, 1994). These family crises may have resulted from parental substance abuse, chronic physical or mental illness, teen pregnancy, abandonment, death, incarceration, military deployment, or some other situation requiring kinship care (Bullock, 2004; Cox, 2003; Emick & Hayslip, 1999; Weber & Waldrop, 2000). Because many grandparents take over the parental role during family crises, they are often unprepared for their new role and thus face considerable challenges. Shifting from the grandparent role to the parent role, accessing services and financial assistance programs to meet the needs of their grandchildren, and coping with their adult children's problems as well as the struggles of their grandchildren are just a few of the challenges that many custodial grandparents encounter.

Given the emergent circumstances of many grandfamilies, researchers have begun to focus on the mental health and functioning of grandparent caregivers. In general, researchers have confirmed that grandparent caregivers experience more symptoms of depression than do their noncaregiving counterparts, likely as a result of taking on the parental role a second time around (Bowers & Myers, 1999; Burton, 1992; Caputo, 2001; Grinstead, Leder, Jensen, & Bond, 2003; Hayslip, Emick, Henderson, & Elias, 2002; Kelly, Whitley, Sipe, & Yorker, 2000; Minkler, Fuller-Thomson, Miller et al. 2000). For example, in a study comparing grandparent, spouse, and adult-child caregivers to noncaregivers, Strawbridge, Wallhagen, Shema, and Kaplan (1997) found that all three groups experienced significantly greater levels of depressive symptoms than did noncaregivers and that grandparent caregivers had poorer physical health and stricter activity limitations than did noncaregivers. In addition Minkler et al. (2000), using a longitudinal national data set, found that when compared to noncaregivers, caregiving grandparents were nearly twice as likely to report depressive symptomatology at levels high enough to cause clinical concern. Moreover, Minkler et al. found that after controlling for precaregiving depression and demographic characteristics, grandparent caregivers reported higher depression scores than did noncaregivers. This finding suggests that grandparent caregiving itself is directly associated with higher levels of depression.

Although researchers have begun to understand the psychological sequelae of custodial grandparenting, most studies have focused on grandfamilies

residing in urban communities and in the South (Burton, 1992; Fuller-Thomson & Minkler, 2000). There remains a paucity of research examining the mental health correlates of custodial grandparents in rural locales and the West (King, Silverstein, Elder, Bengston, & Conger, 2003; Spence, Black, Adams, & Crowther, 2001). Moreover, few studies have examined the mental health correlates of rural Native American grandparents, who—when compared to their European American counterparts—are more likely to be resource poor and provide primary care for a grandchild without a parent present (Fuller-Thomson & Minkler, 2005; Probst, Moore, Glover, & Samuels, 2004). Thus, in this study, we examine the contextual correlates of depression in the lives of Native American and European American custodial grandparents residing in the rural West.

Theoretical Framework and Review of Literature

This study draws on ecological systems theory (Bronfenbrenner, 1986). Within this theoretical framework, focus is directed to the macro- and micro-contextual levels in which experience occurs. At the macro-contextual level, we explore the relationships between rurality; economic, community, and social resources; and depression among Native and European American grandparents. At the micro-system level, we examine the experiences of grandparents rearing their grandchildren (e.g., the length of time in the caregiving role and the level of stress experienced by custodial grandparents) in relation to depression. Although we recognize that there are a number of other factors likely related to depression among Native American and European American caregiving grandparents, this study explores some of the macro- and micro-level variables that appear to be particularly salient to grandfamilies residing in rural Montana.

Rurality, Race, and Depression

Although research examining the mental health of grandparent caregivers is increasing, few researchers have assessed the well-being of rural grandparent caregivers in general, and no studies have examined how the level or degree of rurality relates to depression. One recent study of rural caregiving grandparents suggests that rural residents struggle with many of the same issues as urban grandparents (Bullock, 2004); however, this study did not assess psychological well-being. Research on the health of elderly individuals suggests that those residing in rural areas are at risk of poor mental health, social isolation, and low social network involvement owing to limited finances,

poor physical health, and transportation problems (Revicki & Mitchell, 1990). The scope and severity of depression may be exacerbated for rural—especially, rural low-income—grandparents, whose lives are typically characterized by a number of stressful conditions. Challenges such as chronic under- or unemployment, poor access to health services, and food insecurity may contribute to rural and low-income grandparents' feelings of hopelessness (Grutzmacher, Braun, & Simmons-Wescott, 2005).

Rural living can likewise be challenging and thereby contribute to caregiver mental health problems because rural communities generally lack public transportation and have fewer, readily available services for families, when compared to those of urban dwellers (e.g., mental health services, specialized therapeutic care, specialized medical practices, low-cost child care centers, support groups, and community food banks; Probst et al., 2004). In recent years, many rural areas have also experienced job loss and significant reductions in population because their economies have suffered in the changing global marketplace (Bullock, 2004). As these communities depopulate, there may be fewer resources and informal networks for families to draw on in times of need (Bullock, 2004; Glasgow, Holden, McLaughlin, & Rowles, 1993). Adding to these challenges, many rural communities in the West are combating a methamphetamine drug outbreak that is wreaking havoc on families, depleting limited social service resources, and leading to an escalation of criminal activity that these communities have not faced before (Herz & Murray, 2003; National Association of Counties, 2005).

The relationship between rurality and mental health is compounded by the disparate experiences encountered by racial and ethnic minorities (Brown, Brody, & Stoneman, 2000; Probst et al., 2004). In Montana (where this study takes place), the largest such group is Native American, composing 6.5% of the total population (U.S. Census, 2007). As a group, Native Americans fare worse economically and in terms of health when compared to their European American counterparts (Probst et al., 2004). The centuries-old legacy of colonialism, cultural genocide, forced relocation to reservations, and removal of children to boarding schools have taken their toll on native communities such that Native Americans, in comparison to European Americans, generally experience higher rates of poverty, poor health, and drug and alcohol problems (Fuller-Thomson & Minkler, 2005). Facing such challenges and a legacy of discriminatory policies and practices, low-income rural Native American grandparent caregivers are at risk for poor health outcomes—including poor mental health outcomes (Probst et al., 2004). In this study, we expected that highly rural grandparent caregivers—especially,

Native American grandparents—would report more depressive symptoms when compared to their less rural counterparts.

Economic, Community, and Social Resources

Regardless of rurality, many grandparents are faced with providing for their grandchildren on a fixed income. Research indicates that the average income for grandparent-headed households with children present is under \$20,000 (AARP, 2003). More than 38% of grandparents who are primary caregivers to their grandchildren live below the poverty line (Kirby & Kaneda, 2002). In comparison to other households, caregiving grandmothers who are raising grandchildren are more likely to be poor, more likely to receive public assistance, and less likely to have health insurance (Cox, 2003). However, states in which the poverty population is largely rural or disproportionately racial/ethnic minority generally offer lower state-based financial assistance (Probst et al., 2004). Rural living often means that grandfamilies—especially, racial/ethnic minority grandfamilies—have access to fewer economic, community, and social resources (Beale, 2004). Such rural and racial/ethnic disparities in assistance hold serious consequences for rural Native American custodial grandparents. Using data from the 2000 census, Fuller-Thomson and Minkler (2005) compared Native American caregiving grandparents to similarly aged Native American noncaregiving grandparents. The researchers found that grandparent caregivers were more likely than noncaregivers to be out of the labor market, living in overcrowded housing, living on a reservation, living in poverty, and receiving public assistance and food stamps.

Findings from several studies indicate that lack of financial and community-based resources (e.g., child care assistance) are typically reported by grandparents as major stressors (Bullock, 2004; Dowdell, 1995; Kelley, 1993; Kelly et al., Minkler & Roe, 1993). Financial burdens may include strain from additional expenses, legal representation, underemployment, and difficulty obtaining government assistance (Waldrop & Weber, 2001). In rural areas, financial stress may be compounded by a lack of jobs, food insecurity, and a lack of child care—all likely to threaten grandparent caregivers' mental well-being.

Beyond financial and community resources, researchers recognize that social support can be an important factor in the psychological well-being of grandparent caregivers. In a recent study, Landry-Meyer, Gerard, and Guzell (2005) found that social support had a beneficial influence on the stress outcomes of grandparent caregivers. However, availability of support may vary depending on one's circumstances. For example, Emick and Hayslip (1999)

found that custodial grandparents reported less available support than did the comparison groups of grandparents with problematic grandchildren and those who were noncustodial grandparents. Moreover, support can have a negative side. As Landry-Meyer et al. note, one's social network determines not only what resources might be available but also what demands are placed on the individual. Some grandparent caregivers may give more than they receive.

Research on grandparents rearing grandchildren indicates that many grandparents feel socially isolated from their peers (Bullock, 2004; Emick & Hayslip, 1999; Kelley, 1993; Shore & Hayslip, 1994), which in a rural setting can be compounded by few opportunities to participate in social networks, poor physical health, and transportation problems (Kelly et al., 2000; Revicki & Mitchell, 1990). Social isolation resulting from grandparent caregiving is of significant concern given that social support can act as a mediator and so buffer the emotional stressors experienced by grandparent caregivers (Cnic & Greenberg, 1990; Kelly et al., 2000). Although researchers are beginning to understand the social capital of grandparent caregivers in the majority culture, few studies have examined the social supports of Native American grandparent caregivers and how those support systems influence their mental health. We expected this study to show that regardless of racial background, grandparent caregivers with fewer economic, community, and social resources would experience more depressive symptoms than those of their higher-resource peers.

Grandparenting Experiences

Few studies on the topic of grandparents' rearing grandchildren have focused on the micro-contextual variable of length of time in the grandparent caregiving role. Research by Landry-Meyer (2000) indicates that the average length of time that grandparents provide care to their grandchildren is 6 years, often without legal custody. In the general population, the majority of grandchildren being parented by their grandparents is under the age of 6, and the average number of children parented by a grandparent caregiver is two (Landry-Meyer, 2000). Fuller-Thomson and Minkler (2005) report that of the 53,000 Native American caregiving grandparents in the United States, almost two thirds were raising one grandchild, one quarter were raising two grandchildren, and the remainder (11%) were raising three or more grandchildren. About half of Native American grandparents had been caring for their grandchildren for 5 years or longer. Although few researchers have studied the relationship between length of time in the caregiving role and

depression, research by Minkler et al. (2000) indicates that one of the most at-risk subsets of grandparent caregivers includes those who are new to the caregiving role. In their study, grandparents who had assumed caregiving responsibility within the last 5 years showed higher depression levels than did those who had been in the role for an extended period.

In addition to identifying the initial stressors of negotiating parenthood the second time around, researchers recognize that there are a variety of other parental stressors that grandparents rearing grandchildren have in their daily lives, many of which are due to the complex life events that led to the children's being placed in the grandparents' homes. Younger grandparents may be faced with more stressful work and family issues, whereas older grandparents may experience stressors associated with health problems, limited income, and retirement (Bullock, 2004; Sands & Goldberg-Glen, 2000). In addition, grandparent caregivers are likely to experience stressors specifically related to the surrogate parenting role, such as role ambiguity, strained spousal and familial relationships, difficulties controlling grandchildren's behavior, coping with generational differences, and dealing with grandchildren with special needs (Bullock, 2004; Sands & Goldberg-Glen, 2000). High levels of stress likely have negative consequences for caregiver mental health, yet it is unknown if such stressors differ as a function of race or rurality. As such, we expected that caregiving grandparents who have been in the role less time and who are experiencing high parental stress will report more depressive symptoms when compared to their more experienced, less stressed peers.

Method

Sample and Procedure

This study was part of a larger effort investigating the needs of grandparents rearing grandchildren in Montana. In 2000, an estimated 6,053 Montanan grandparents were raising their grandchildren, which was a 54% increase over the previous decade (U.S. Census, 2000). To begin assessing the needs of grandparent caregivers in Montana, one of the authors of the current study conducted a statewide volunteer survey in 2002. Using a purposive sample and a snowball sampling technique, quantitative data were collected throughout the state from grandparents who were raising their grandchildren. Information regarding the survey was made available through brochures, bimonthly newsletters, an e-mail listserver, child care programs,

senior citizen groups, facilitators of grandparent support groups across the state, statewide county extension agents, and through cooperation with AARP. Grandparents were mailed or given a copy of the survey and consent form to fill out, with a postage-paid envelope for return. If the survey was not returned, a second survey was mailed out with a reminder letter.

Eighty-three grandparents responded to the call for participation in the study, and 63 grandparents completed and returned all survey materials, yielding a 76% response rate. Inclusion criteria included the following: grandparent caregivers were solely responsible for the physical and financial care of at least one grandchild under the age of 21 who resided in the grandparents' home; the child's (or children's) parents were not living in the home at the time of the study; and child custody was established through formal or informal arrangements.

The current study uses the data collected from the 2002 needs assessment. Before conducting data analyses for this study, several respondent surveys were dropped. Eight respondents were part of a couple dyad; thus, one partner from each couple was randomly selected to be included. Additional respondent surveys were dropped because of incomplete surveys ($n = 2$) or because they did not meet the three inclusion criteria (i.e., two grandparents were not sole primary caregivers of their grandchildren but provided child care on a regular basis). In the final analysis, 55 grandparent surveys were included in the analyses.

Measures

Demographic characteristics. Information was obtained on a demographic characteristics form designed for the current study, which included items about respondent age, race/ethnicity, marital status, income and education levels, number of grandchildren under care, and the total length of time in the grandparent caregiving role, among others.

Depression. Depression was measured using the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977). This scale measures depressed mood, feelings of guilt and worthlessness, feelings of helplessness and hopelessness, psychomotor retardation, loss of appetite, and sleep disturbance. Respondents were asked to indicate how often they felt certain ways during the past week, using the following 4-point scale: 0 = rarely or none of the time; 1 = some or a little of the time; 2 = occasionally or a moderate amount of the time; and 3 = most or all of the time. This measure was scored by summing the 20 items, which yielded scores ranging from 0 to 60. A cutoff score

of 16 indicates a clinical concern for depression. Examples of items include “I was bothered by things that don’t usually bother me” and “I felt that I was just as good as other people.” The CES-D is a widely used, easily administered self-report measure of current depressive symptoms. The scale has good internal consistency, acceptable test–retest reliability, and excellent concurrent validity. The psychometric properties have been found to be consistent across sex, age, and ethnic subgroups (Radloff & Locke, 1986). Our reliability assessment suggests that the measure was appropriate for use with grandparent caregivers ($\alpha = .88$).

Rurality. Montana is the fourth-largest state in the United States yet has a total population of 935,670 residents, yielding an average of 6.2 persons per square mile (U.S. Census, 2007). Given its settlers’ history and size, Montana is considered a rural, frontier state; however, rurality can vary on a continuum from high to low. The degree of rurality for each respondent was computed using the population size from the 2000 census of the city or town in which the participant resided. Based on the rurality frequency distribution, there was a natural split in the data, where approximately 65% of the participants resided in small towns, with fewer than 10,000 residents, located far from metropolitan areas. The remaining 35% of participants resided in larger towns and cities, with more than 26,000 residents. Given this split, we created a dummy variable where communities with fewer than 10,000 residents were coded as 1 = *highly rural* and communities with more than 26,000 residents were coded as 0 = *less rural*.

Community resource needs. For the purposes of the needs assessment, a scale of community resource needs was created to determine the type of information and resources that grandparent caregivers might need to better raise their grandchildren. The scale consisted of 10 items and included the following resource needs: how to register grandchildren for school, how to find child care, how to locate child care assistance to pay for care, how to locate health care providers, how to locate a dentist for a grandchild, how to find respite services, how to access low-cost housing, how to get low-cost legal services, how to apply for food stamps, and how to find the nearest food bank. Grandparents who responded, “Yes, I need this information” were coded 1, and all others, 0. A total resource score was summed, ranging from 0 to 10. The Cronbach’s alpha coefficient of .84 for this scale was acceptable.

Perceived social support. Perceived social support was measured using the Support subscale of the Parenting Ladder (Pratt, 1995; Pratt, McGuigan, &

Katzev, 2000). This measure was adapted to fit the target population of grandparents who were parenting their grandchildren. Using a Likert-type scale, or "ladder," ranging from 0 (*low*) to 6 (*high*), the respondents were asked to put themselves on the ladder in terms of the following five items: other parents to talk to; someone to help you in an emergency; someone to offer helpful advice or moral support; someone to relax with; and professionals to talk to when you have a question about your grandchild. The five items were summed to yield a total perceived support score ranging from 0 to 30. This measure was selected for the needs assessment because it was short and would likely reduce participant burden. Cronbach's alpha tests suggested acceptable scale reliability ($\alpha = .83$).

Grandparental stress. Parental stress was measured using the Parental Stress Scale (Berry, 1995), which was modified for grandparents who were parenting their grandchildren. The Parental Stress Scale is highly reliable and is related to general measures of stress. The scale measures variations of parental stress, including an emotional dimension (e.g., guilt, anxiety) and a role satisfaction dimension (e.g., marital satisfaction and job satisfaction). Because of a typing error, 17 questions (rather than the original 18 items) were asked, and each answer was coded on a Likert-type scale ranging from 4 (*strongly agree*) to 1 (*strongly disagree*). Example items include "Having grandchildren has been a financial burden" and "The behavior of my grandchildren is often embarrassing or stressful to me." Responses were summed to compute a total stress score, where higher scores indicated higher stress levels. Internal reliability assessments for this scale suggest that the measure was appropriate for use with study participants ($\alpha = .88$).

Results

Overall, the mean age of grandparents in this study was 60 years. Grandparents had relatively low educational attainment, with 35% reporting that they had some high school or had completed their high school education. Approximately 40% of the grandparents were employed outside of the home. Grandparents had an average of two grandchildren under their care, with an average age of 9 years. Native American grandparents were over-represented in the sample (37%), given that the Native American population in Montana composes 6.5% of the state's total population (U.S. Census, 2007). Tribal nations represented by participants included Assiniboine,

Table 1
Demographic Characteristics of the Sample by Race ($N = 55$)

	Native American ($n = 19$)		European American ($n = 36$)	
	n (%)	M (SD)	n (%)	M (SD)
Grandparent characteristics				
Gender				
Male	2 (10.5)		6 (16.7)	
Female	17 (89.5)		30 (83.3)	
Age in years		59.8 (10.3)		58.7 (7.4)
Marital status				
Married	9 (47.4)		24 (68.6)	
Single/never married	10 (52.6)		11 (31.4)	
Highest level of education				
Less than high school	5 (27.8)		3 (8.6)	
High school diploma	3 (16.7)		10 (28.6)	
Some college	7 (38.9)		14 (40.0)	
College graduate or more	3 (16.7)		8 (22.9)	
Employed outside the home	8 (42.1)		13 (36.1)	
Number of hours worked per week	19.2 (16.5)		28.9 (12.9)	
Primary reason for parenting grandchildren ^a				
Parental drugs/alcohol	7 (36.8)		20 (55.6)	
Economic/job situation	2 (10.5)		11 (30.6)	
Mental illness	2 (10.5)		9 (25.0)	
Divorce	4 (21.1)		8 (22.2)	
Parental incarceration	2 (10.5)		8 (22.2)	
Parental death	1 (5.3)		5 (13.9)	
Other	4 (21.1)		6 (16.7)	
Grandchild characteristics				
No. of grandchildren under care		2.0 (1.1)		1.7 (9.4)
Age of grandchildren in years		10.6 (5.1)		8.7 (5.1)
Gender of grandchildren				
Male	15 (45.5)		32 (51.6)	
Female	18 (54.5)		30 (48.4)	

a. Percentages do not add up to 100%, because some grandparents selected more than one reason for caring for their grandchildren.

Blackfeet, Chippewa-Cree, Crow, and Northern Cheyenne. Using chi-square analyses for discrete data and using independent t tests for continuous data, we compared the demographic variables by race (see Table 1); however, there were no statistically significant racial differences found.

Rurality, Resources, Grandparenting Experiences, and Depression by Race

Next, we examined study variables as a function of race (see Table 2). As compared to their European American counterparts (58%), Native American grandparent caregivers (84%) were significantly more likely to live in highly rural locales, $\chi^2(1, N = 55) = 3.78, p = .05$. Native American caregivers also reported significantly less household income ($M = 2.3, SD = 1.2$) than that of European American caregivers ($M = 3.5, SD = 1.4$), $t(53) = 3.26, p = .002$. The average annual household income of Native American caregiving grandparents ranged between \$10,000 and \$20,000. For European American grandparents, average household income ranged from \$30,000 to \$40,000. Native American caregivers also reported rearing their grandchildren for significantly more time ($M = 9.2, SD = 5.3$) than that of their European American caregivers ($M = 5.4, SD = 5.0$), $t(51) = 2.59, p = .012$. And last, Native American grandparent caregivers reported experiencing significantly more depressive symptoms ($M = 17.9, SD = 11.4$) than those of European American grandparent caregivers ($M = 10.1, SD = 7.9$), $t(53) = 2.99, p = .004$. Eleven of the 19 Native American respondents (58%) scored above the CES-D cutoff point, suggesting a clinical concern for depression, compared to 8 of the 36 European American respondents (22%).

We also explored study variables as a function of degree of rurality; however, there were few differences between groups. Highly rural caregivers cared for their grandchildren significantly longer ($M = 8.3$ years, $SD = 5.6$) than less rural grandparents did ($M = 3.8, SD = 3.6$), $t(51) = 3.56, p = .001$. Highly rural caregivers also perceived a greater number of social supports available ($M = 22.4, SD = 6.1$) than their less rural counterparts ($M = 18.9, SD = 7.2$); however, this was only a trend in the data, $t(53) = 1.88, p = .066$. Depression scores did not vary by degree of rurality. Unfortunately, because of our small sample size, we were unable to analyze race by rurality interaction effects.

Bivariate Relationships Between Variables

Next, we ran correlation coefficients separately for Native American and European American grandparent caregivers to examine the strength and direction of the relationships between selected macro- and micro-contextual predictors and depression (see Table 3). Because no demographic characteristics were significantly related to depression among either Native or European American respondents, we omitted those variables from the table. For Native American respondents, depression scores were significantly related to social support ($r = -.47, p = .043$) and parental stress ($r = .71,$

Table 2
Predictor and Outcome Variables of Interest by Race

	Native American (<i>n</i> = 19)		European American (<i>n</i> = 36)	
	<i>n</i> (%)	<i>M</i> (<i>SD</i>)	<i>n</i> (%)	<i>M</i> (<i>SD</i>)
Macro-contextual variables				
Degree of rurality				
Highly rural	16 (84.2)		21 (58.3)*	
Less rural	3 (15.8)		15 (41.7)	
Economic, Community, & Social Resources				
Household's annual income		2.3 (1.2)		3.5 (1.4)***
\$10,000 ≥	5 (26.3)		2 (5.6)	
\$10,001–\$20,000	7 (36.8)		9 (25.0)	
\$20,001–\$30,000	6 (31.6)		6 (16.7)	
\$30,001–\$40,000	0 (0.0)		10 (27.8)	
\$40,001–\$50,000	0 (0.0)		6 (16.7)	
\$50,001 ≤	1 (5.3)		3 (8.4)	
Total community resource needs		2.0 (2.7)		2.1 (2.4)
Perceived social support score		23.2 (6.7)		20.2 (6.4)
Micro-contextual variables				
Grandparent caregiving experiences				
Total time in grandparent caregiver role (in years)		9.2 (5.3)		5.4 (5.0)*
Parental stress score		29.4 (9.3)		29.3 (7.8)
Outcome variable				
Depression score		17.9 (11.4)		10.1 (7.9)**

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

$p = .001$). Caregiving grandparents who perceived more available supports reported fewer depressive symptoms. Conversely, Native American grandparents who experienced more parental stressors reported more depressive symptoms. Additionally, the longer that Native American grandparent caregivers had been providing care for their grandchildren, the more social supports they perceived as being available ($r = .51, p = .028$).

For European American caregiving grandparents, depression was significantly related to total length of time in the provider role ($r = -.38, p = .028$) and parental stress ($r = .37, p = .029$). The longer that European American grandparents provided care for their grandchildren, the fewer depressive symptoms they reported. Like their Native American counterparts, European American grandparents who experienced more parental stressors reported

Table 3
Correlation Coefficients of Predictor and Outcome Variables by Race

	1	2	3	4	5	6	7
1. Depression .71**	—	.40 [†]	-.17	.28	-.47*	-.30	
2. Rurality	-.14	—	-.40 [†]	.17	.04	.28	.42 [†]
3. Household income	-.30 [†]	.18	—	.07	.15	-.21	-.02
4. Resource needs	.31 [†]	-.24	.01	—	.05	.10	.29
5. Social support	.09	.28	.14	-.35*	—	.51*	-.34
6. Total time in grandparent role	-.38*	.36*	.20	-.30 [†]	.10	—	-.16
7. Grandparental stress	.37*	-.46**	-.01	.23	-.32 [†]	-.26	—

Note: Native American grandparent caregiver scores are shown above the diagonal; European American grandparent caregiver scores are below. Rurality dummy coded: 1 = *highly rural*, 0 = *less rural*.

[†] $p < .10$ * $p < .05$. ** $p < .01$.

more depressive symptoms. Rurality was also significantly related to time in the caregiver role ($r = .36$, $p = .035$) and parental stress ($r = -.46$, $p = .005$). As compared to less rural grandparents, highly rural grandparents were more likely to care for their grandchildren longer and less likely to be experiencing parental stressors. Finally, European American caregivers who perceived more available social supports reported needing fewer community resources ($r = -.35$, $p = .036$).

Hierarchical Regression Analysis

Hierarchical regression analyses were run to examine the contributions of race, selected macro-contextual variables (rurality and resources), and selected micro-contextual variables (time in caregiver role and grandparenting stress) in accounting for the variance in depressive symptomatology (see Table 4). Early runs also included other demographic variables, but none made a significant contribution to the model and were omitted. Because of our small sample size, we could not run our multivariate analyses as a function of race; thus, we included race as a predictor variable in the first block of the model. The second block contained the macro-contextual variables (degree of rurality, economic, community, and social resources) and Block 3 added the micro-contextual grandparenting experiences. Within each model, the magnitude of the standardized beta coefficients was used to assess the relative importance of the predictors (Pedhazur, 1982).

The three hierarchical regression models were significant at each of the three levels. Model 1 revealed that race ($p < .01$) was a salient predictor, accounting for 15% of the variance. Native American grandparents experienced significantly more depressive symptoms than did their European American counterparts. When degree of rurality and the resource variables were added in Model 2, an additional 15% of the variance in depression was accounted for, thus increasing this model's explanatory power. In addition to race, resource needs emerged as the best predictor, where grandparent caregivers with greater resource needs reported significantly more depressive symptoms than those of grandparent caregivers with few resource needs ($p < .05$). In Model 3, an additional 25% of the variance in depression was accounted for by adding total time in the grandparenting role and grandparental stress. In the final model, grandparental stress was the strongest predictor of depressive symptomatology ($p < .001$), followed by race ($p < .05$), time in the caregiver role ($p < .05$), household income ($p < .05$), rurality ($p < .10$) and community resource needs ($p < .10$). Contrary to expectations, social support was not a significant predictor.

Discussion

Exploring the mental health of rural grandparents rearing their grandchildren, this study found that Native American grandparents showed higher levels of depressive symptoms than those of their European American counterparts. Moreover, 58% of Native American caregiving grandparents scored above the CES-D cutoff point, suggesting a clinical concern for depression. Anecdotally, when we asked several Native American grandparent caregivers to speculate about our findings, they consistently told us that they did not expect to be taking on the full-time caregiving of their grandchildren, especially in the absence of their adult children and community supports. Native American grandparents have a rich history of providing care for their grandchildren and likely derive pleasure from their caregiving role (Bahr, 1994); however, today's grandparents may be taking on the caregiver role because of a crisis in the family and a desire to keep grandchildren out of the foster care system, rather than because of the sole desire to impart cultural knowledge, traditions, and tribal language. Native American grandparents who reported feeling depressed in this study also reported high levels of parenting stress and limited social support. Such findings appear to confirm anecdotal reports. The traditional roles that grandparents used to play in their families may have buffered them from feelings of sadness or hopelessness.

Indeed, in native cultures in general, elders were (and continue to be) respected, revered, and expected to play a major role in child socialization (Bahr, 1994). Yet with changing familial roles, cultural and social norms, and pressures from the majority culture to assimilate, these grandparent caregivers may be experiencing an increased sense of loss and grief.

Depression among Native American grandparent caregivers is complex and must be understood through historical and cultural lenses. Native American grandparent caregivers may be experiencing depressive symptoms as a result of a complex web of factors, including historical traumas suffered via colonialism and a legacy of boarding schools and cultural genocide that stripped tribal nations of their traditional ways of knowing (Bahr, 1994; Fuller-Thomson & Minkler, 2005). Moreover, some Native American grandparent caregivers may feel sadness because of their own adult childrens' struggles with such problems as unemployment or underemployment, alcohol or drug addiction, and/or an inability to parent their children. Future research examining a more complex array of factors in addition to those in the current study will aid in understanding depression experienced by rural Native American grandparent caregivers and in developing culturally appropriate mental health interventions.

Beyond exploring depression among Native American grandparent caregivers as compared to their European American counterparts, this study examined the salience of certain macro- and micro-contextual predictors of depression. First, we examined degree of rurality in relation to depressive symptomatology and, contrary to expectations, found that rural living did not explain depressive symptoms in our sample. There was a trend in the data suggesting that highly rural grandparent caregivers experienced more depressive feelings than those of their less rural counterparts, but when considering rurality and depression by race, it appears that highly rural Native American grandparents are more at risk for depression than are their similarly rural European American counterparts. Among European American caregiving grandparents, those living in highly rural locales had been rearing their grandchildren for longer periods and so reported less parental stress. Both longer time of caregiving and fewer parental stressors were related to fewer depressive symptoms. Future research, with larger samples, is needed to tease apart relationships between race, rurality, and depression among these caregivers.

Next, we examined macro-level resource variables as predictors of depression. Although community-based resource needs and social support were not among the most salient predictors of rural grandparent caregiver depression, economic resources clearly mattered. Grandparent caregivers

with higher household incomes reported fewer symptoms of depression. Regarding community resource needs, we found a trend in the data where more needs were related to higher levels of depressive symptoms. We did not find a significant relationship between social support and depression, which was unexpected. In fact, we found that highly rural grandparent caregivers perceived more social supports available, as compared to their less rural counterparts, and although this finding was only a trend, it raises questions about the level of isolation experienced by rural grandparents in our study. However, our measure of social support, which examined perceived availability of supports, was limited in scope and did not capture the amount of support actually provided to caregivers. Rural caregiving grandparents may perceive that they have someone to talk to in times of need, but there may be fewer people around (as well as resources) in highly rural locales to provide instrumental supports to grandfamilies. Moreover, having a friend or neighbor to talk to may not buffer against feelings of sadness and despair. These grandparents may benefit more from having someone to provide respite child care or assist with navigating the legal and social service systems. Future research is needed to clarify which resources can help ameliorate the mental health outcomes of rural Native American and European American grandparent caregivers.

Finally, when we considered micro-level characteristics of grandparent caregiving, we found that the best predictor of depression was grandparental stress. Grandparent caregivers who reported experiencing more stressors in raising their grandchildren showed higher depression levels than did their less stressed peers. It is possible that grandparent caregivers felt overwhelmed by the responsibilities of taking care of their grandchildren, especially with limited incomes. Many grandchildren being raised by grandparents have experienced significant traumas, from witnessing or experiencing violence in their families of origin to being abandoned by their parents (Harrison, Richman, & Vittimberga, 2000). These grandchildren come to their grandparents with significant emotional needs, which may place additional burdens on grandparents who are stepping in to provide care in the absence of biological parents. Many grandparents likely experience the fulfillment of being there to rear their grandchildren (and keep them out of the foster care system), but they may also experience the emotional disadvantages of caregiving without many institutional supports (Evenson & Simon, 2005).

Consistent with that of extant research (Minkler et al., 2000), the length of time in the grandparent caregiver role was found to be an important risk factor for depression. Grandparents who had spent less time caring for their grandchildren showed higher depression levels than did those who had been

caregiving for longer periods. This finding supports the idea that many grandparents are taking on the surrogate parental role in a time of familial crisis. It may take several months, if not years, for these families to grapple with their familial situation, stabilize, and achieve normal functioning levels. In addition, many grandparents may be unsure about how long their grandchildren will be with them, because many of such arrangements are informal, with no court intervention or formal custodial arrangements (Landry-Meyers, 2000). In these situations, biological parents can come and reclaim their children at any time. The initial period of custodial unknowns (which may last several years) may dissipate as time goes by and it becomes clear that the biological parents are not going to reestablish their parental role. It is also possible that over time grandparent caregivers and biological parents reach an understanding of their respective roles as caregivers and the family may remedy the emotional fallout resulting from their earlier crises and transitions.

Implications for Future Research and Practice

Although this study utilized a small convenience sample, which limits its generalizability, the findings hold implications for future research and practice. First, future researchers should continue to investigate grandparents who are raising grandchildren in rural communities, but they should do so using larger sample sizes, which will allow for more complex analyses. Because many rural communities are experiencing increased trafficking of methamphetamine (National Association of Counties, 2005), more attention should be given to meth-related problems and how they are affecting grandparents—who are often the only individuals available to take custody of their grandchildren, given the limited number of foster care families in rural locales. Researchers might also consider expanding the ecologies in future efforts by examining other macro-level variables, such as social and economic policies and family laws relevant to kinship care (which can vary by state and tribal nation). Adding other micro-contextual variables, such as child characteristics (e.g., special needs, developmental disability of the grandchild, physical limitations, and behavioral disorders that the grandchild may exhibit) and intergenerational family relations (e.g., between grandparent and parent, parent and child, and grandparent and grandchild) will also be important to fully understanding the complex correlates of depression.

Researchers should likewise be sensitive to the cultural nuances that exist between and among Native American and European American grandparents who are rearing their grandchildren. This study was not developed for Native American caregiving grandparents and may not have been as culturally relevant

to our native respondents. For example, as Bahr (1994) notes, studies of European American caregiving grandparents assume that these grandparents are “off-time” and that their caregiving is developmentally disadvantageous to their well-being; however, for many Native American cultures, grandparent caregiving is not considered off-time, or outside the family life-stage trajectory. Native American grandparent caregiving has traditional roots and has been a normative, expected role to be performed by grandparents. Future researchers should consider conducting culturally and tribally specific qualitative and quantitative research with Native American populations to better understand the relationship between grandparent caregiving and mental health. Finally, future research is warranted to better understand the circumstances and challenges facing all grandparents who are raising grandchildren in rural communities and, specifically, how grandparents from different racial/ethnic backgrounds can learn from one another to garner resources and improve grandparent and grandchild outcomes.

Beyond research considerations, the current findings suggest several implications for practitioners. Given the often tragic circumstances that necessitate grandparent involvement, the difficulties experienced by the children may exacerbate the adjustments related to middle-aged and older grandparents who are assuming parental roles (Hayslip et al., 1998). Clearly, grandparent caregivers could benefit from mental health services, especially in rural locales where mental health professionals are sparse. The high rates of Native American depressive symptomatology are cause for concern. These grandparent caregivers may be grappling with a complex web of emotions—not only those associated with parenting the second time around but also those related to historical traumas experienced over generations (Bahr, 1994). Dealing with grief and loss would seem important components of interventions for both rural Native American and European American caregiving grandparents. Grandchildren may also benefit from mental health intervention, given their potential exposure to parental drug or alcohol abuse and their own experiences of abuse and/or neglect by their biological parents.

References

- AARP. (2003). *Financial assistance for grandparent caregivers*. Retrieved November 11, 2003, from <http://aarp.org/confacts/money/tanf.html>
- Bahr, K. S. (1994). The strengths of Apache grandmothers: Observations on commitment, culture, and caretaking. *Journal of Comparative Family Studies*, 25, 233-248.
- Beale, C. L. (2004, February). Anatomy of nonmetro high-poverty areas: Common in plight, distinctive in nature. *Amber Waves*. Retrieved January 27, 2007, from <http://www.ers.usda.gov/Amberwaves/February04/Features/Anatomy.htm>

- Berry, J. O. (1995). The parental stress scale: Initial psychometric evidence. *Journal of Social and Personal Relationships, 12*, 463-472.
- Bowers, B. F., & Myers, B. J. (1999). Grandmothers providing care for grandchildren: Consequences of various levels of care giving. *Family Relations, 48*(3), 303-311.
- Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspective. *Developmental Psychology, 22*, 723-742.
- Brown, A. C., Brody, G. H., & Stoneman, Z. (2000). Rural Black women and depression: A contextual analysis. *Journal of Marriage and Family, 62*, 187-198.
- Bryson, K. (2001, November). *New Census Bureau data on grandparents raising grandchildren*. Paper presented at the 54th annual scientific meeting of the Gerontological Society of America, Chicago.
- Bullock, K. (2004). The changing role of grandparents in rural families: The results of an exploratory study in southeastern North Carolina. *Families in Society: The Journal of Contemporary Social Services, 85*(1), 45-54.
- Burton, L. M. (1992). Black grandparents rearing children of drug-addicted parents: Stressors, outcomes, and social service needs. *The Gerontologist, 32*(6), 744-751.
- Caputo, R. K. (2001). Depression and health among grandmothers co-residing with grandchildren in two cohorts of women. *Families in Society: The Journal of Contemporary Human Services, 82*, 473-483.
- Cox, C. B. (2003). Designing interventions for grandparent caregivers: The need for an ecological perspective for practice. *Families in Society: The Journal of Contemporary Human Services, 84*(1), 127-134.
- Crnec, K. A., & Greenberg, M. T. (1990). Minor parenting stress with young children. *Child Development, 61*, 1628-1637.
- Dowdell, E. B. (1995). Caregiver burden: Grandmothers raising their high risk grandchildren. *Journal of Psychosocial Nursing, 33*, 27-30.
- Emick, M. A., & Hayslip, B. (1999). Custodial grandparenting: Stresses, coping skills, and relationships with grandchildren. *International Journal of Aging and Human Development, 48*(1), 35-61.
- Evenson, R. J., & Simon, R. W. (2005). Clarifying the relationship between parenthood and depression. *Journal of Health and Social Behavior, 46*, 341-358.
- Fuller-Thomson, E., & Minkler, M., (2000). African American grandparents raising grandchildren: A national profile of demographic and health characteristics. *Health & Social Work, 25*(2), 109-118.
- Fuller-Thomson, E., & Minkler, M. (2005). American Indian/Alaskan native grandparents raising grandchildren: Findings from the Census 2000 Supplementary Survey. *Social Work, 50*(2), 131-139.
- Glasgow, N., Holden, K. C., McLaughlin, D. K., & Rowles, G. (1993). The rural elderly and poverty. In Rural Sociological Society Task Force on Persistent Poverty (Ed.), *Persistent poverty in rural America* (pp. 259-291). Boulder, CO: Westview.
- Grinstead, L. N., Leder, S., Jensen, S., & Bond, L. (2003). Review of research on the health of caregiving grandparents. *Journal of Advanced Nursing, 44*(3), 318-326.
- Grutzmacher, S., Braun, B., & Simmons-Wescott, L. (2005). Food security, food resource management, and health among rural, low-income families: Implications for nutrition education with limited-resource populations. *Journal of Nutrition Education and Behavior, 37*, 46-47.
- Harrison, K. A., Richman, G. S., & Vittimberga, G. L. (2000). Parental stress in grandparents versus parents raising children with behavior problems. *Journal of Family Issues, 21*(2), 262-270.

- Hayslip, B., Emick, M. A., Henderson, C. E., & Elias, K. (2002). Temporal variations in the experience of custodial grandparenting: A short-term longitudinal study. *Journal of Applied Gerontology, 21*(2), 139-156.
- Hayslip, B., Shore, R. J., Henderson, C. E., & Lambert, P. L. (1998). Custodial grandparenting and the impact of grandchildren with problems on role satisfaction and role meaning. *Journal of Gerontology: Social Sciences, 53*(3), S164-S173.
- Herz, D. C., & Murray, R. (2003). Exploring arrestee drug use in rural Nebraska. *Journal of Drug Issues, 33*(1), 99-118.
- Jendrek, M. P. (1994). Grandparents who parent their grandchildren: Circumstances and decisions. *The Gerontologist, 34*, 206-216.
- Kelley, S. J. (1993). Caregiver stress in grandparents raising grandchildren. *Journal of Nursing Scholarship, 25*, 331-337.
- Kelley, S. J., Whitley, D., Sipe, T. A., & Yorker, B. C. (2000). Psychological distress in grandmother kinship care providers: The role of resources, social support, and physical health. *Child Abuse & Neglect, 24*, 311-321.
- King, V., Silverstein, M., Elder, G. H., Jr., Bengston, V. L., & Conger, R. D. (2003). Relations with grandparents: Rural Midwest versus urban southern California. *Journal of Family Issues, 24*(8), 1044-1069.
- Kirby, J. B., & Kaneda, T. (2002). Health insurance and family structure: The case of adolescents in skipped-generation families. *Medical Care Research and Review, 59*(2), 146-165.
- Landry-Meyer, L. (2000). Grandparents as parents: What they need to be successful. *Family Focus, 45*, F9-F10.
- Landry-Meyer, L., Gerard, J. M., & Guzell, J. R. (2005). Caregiver stress among grandparents raising grandchildren: The functional role of social support. *Marriage & Family Review, 37*(1/2), 171-190.
- Minkler, M., Fuller-Thomson, E., Miller, D., & Driver, D. (2000). Grandparent caregiving and depression. In B. Hayslip Jr. & R. Goldberg-Glen (Eds.), *Grandparents raising grandchildren: Theoretical, empirical, and clinical perspectives* (pp. 207-219). New York: Springer Press.
- Minkler, M., & Roe, K. M. (1993). *Grandmothers as caregivers: Raising children of the crack cocaine epidemic*. Newbury Park, CA: Sage.
- National Association of Counties. (2005). *The National Association of Counties holds a news conference on the problem of methamphetamines at the National Press Club*. Washington, DC: Congressional Quarterly.
- Pedhazur, E. J. (1982). *Multiple regression in behavioral research*. Fort Worth, TX: Harcourt Brace.
- Pratt, C. (1995). *The parenting ladder*. Unpublished instrument, Oregon State University, Corvallis.
- Pratt, C. C., McGuigan, W. M., & Katzev, A. R. (2000). Measuring program outcomes: Using retrospective pretest methodology. *American Journal of Evaluation, 21*(3), 341-349.
- Probst, J. C., Moore, C. G., Glover, S. H., & Samuels, M. E. (2004). Person and place: The compounding effects of race/ethnicity and rurality on health. *American Journal of Public Health, 94*(10), 1695-1703.
- Radloff, L. S. (1977). The CSE-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385-401.
- Radloff, L. S., & Locke, B. Z. (1986). The community mental health assessment survey and the CES-D Scale. In M. Weissman, J. Myers, & C. Ross (Eds.), *Community surveys* (pp. 177-189). New Brunswick, NJ: Rutgers University Press.

- Revicki, D. A., & Mitchell, J. P. (1990). Strain, social support, and mental health in rural elderly individuals. *Applied Psychological Measurement, 1*, 385-401.
- Sands, R. G., & Goldberg-Glen, R. S. (2000). Factors associated with stress among grandparents raising their grandchildren. *Family Relations, 49*, 97-105.
- Shore, R. J., & Hayslip, B. (1994). Custodial grandparenting: Implications for children's development. In A. E. Gottfried & A. A. Gottfried (Eds.), *Redefining families: Implications for children's development* (pp. 171-218). New York: Plenum.
- Spence, S. A., Black, S. R., Adams, J. P., & Crowther, M. R. (2001). Grandparents and grandparenting in a rural Southern state: A study of demographic characteristics, roles and relationships. *Journal of Family Issues, 22*(4), 523-534.
- Strawbridge, W. J., Wallhagen, M. I., Shema, S. J., & Kaplan, G. A. (1997). New burdens or more of the same? Comparing grandparent, spouse, and adult-child caregivers. *The Gerontologist, 37*, 505-510.
- U.S. Census Bureau. (2000). *Children under 18 living in their grandparents' household, by state*. Retrieved September 13, 2003, from <http://factfinder.census.gov/servlet/BasicFactsServlet>
- U.S. Census Bureau. (2007). *Montana quick facts*. Retrieved January 29, 2007, from <http://quickfacts.census.gov/qfd/states/30000.html>
- Waldrop, D. P., & Weber, J. A. (2001). From grandparent caregiver: The stress and satisfaction of raising grandchildren. *Families in Society: The Journal of Contemporary Human Services, 82*(5), 461-472.
- Weber, J. A., & Waldrop, D. P. (2000). Grandparents raising grandchildren: Families in transition. *Journal of Gerontological Social Work, 33*(2), 27-45.