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Abstract: Diminished psychological health has been identified among caregiving grandmothers. The intent of this investigation was to examine psychological distress levels, as well as their predictors, in a sample of 480 caregiving African American grandmothers, mean age 56 years. Almost 40% (39.8%) of participants had clinically elevated psychological distress scores. Results of hierarchical multiple regression indicated that internalizing and externalizing child behavior problems, poor grandmother physical health, younger age of grandmother, and lack of family resources predicted 31% of the variance in psychological distress. Results provide direction for nursing interventions aimed at enhancing the psychological well-being of caregiving grandmothers.

Keywords: psychological distress; grandparents; grandchildren; caregiving; child behavior; intergenerational families

Research related to grandparents raising grandchildren has become increasingly more common in the caregiving literature over the past two decades. In the United States, nearly 5% of children are raised by a grandparent who, more often than not, is the grandmother (U.S. Census Bureau, 2009). The most common reasons that children are raised by grandparents include abandonment, abuse or neglect, incarceration, death, and substance abuse (Bachman & Chase-Landsdale, 2005; Kelley, Whitley, & Campos, 2011; Ross & Aday, 2006). Although receiving care from grandparents, as opposed to non-relative foster parents, benefits the children, the effects of caregiving responsibilities may be harmful to the welfare of these grandparents. Worsened mental and physical health, as well as increased stressors typically associated with full-time caregiving, raise concern not only for the caregivers’ well-being but also for their long-term ability to raise the grandchildren (Dellmann-Jenkins, Blankemeyer, & Olesh, 2002; Kelley, Whitley, Sipe, & Yorker, 2000; Musil & Ahmad, 2002). The intent of this
investigation was to examine psychological distress levels and their predictors in African American caregiving grandmothers.

Psychological Well-Being of Caregiving Grandparents

Most literature on the psychological health of caregiving grandparents has focused on the concepts of stress and depression. In the general population, stress is linked with a host of negative health outcomes. Particularly among older adults, stress contributes to decreased immune function and diminished health (Cearlock & Laude-Flaws, 1997; Fredman, Cauley, Hochberg, Ensrud, & Doros, 2010). Caregiving grandmothers consistently report more stress than their non-caregiving counterparts. Researchers who compared three levels of caregiving found that both full-time and part-time caregiving grandmothers reported higher levels of stress than non-caregiving grandmothers (Musil & Ahmad, 2002). Additionally, Musil et al. (2011) found increases in the grandmothers' stress levels subsequent to transitioning from a partial to a primary caregiving role. Researchers examining stress specifically related to the parenting role also found elevated levels in caregiving grandmothers (Leder, Grinstead, & Torres, 2007; Ross & Aday, 2006).

The negative consequences attributable to elevated stress levels among these caregiving grandmothers are well documented. In a study of caregiving grandmothers, stress was identified as the best predictor of depressive symptomatology and self-reported health issues (Musil & Ahmad, 2002). Other researchers reported that greater parenting stress was associated with diminished well-being in caregiving grandmothers (Leder et al., 2007).

Depression is the dimension of mental health studied most frequently in grandmothers raising grandchildren, with compelling evidence that they experience comparatively high levels of depressive symptomatology (Blustein, Chan, & Guanais, 2004; Goodman, 2003; Musil & Ahmad, 2002; Musil et al., 2011; Musil, Warner, Zauszniewski, Wykle, & Standing, 2009). In a national sample, caregiving grandmothers had significantly higher levels of depressive symptoms when compared to non-caregiving grandmothers, even after controlling for key demographic and background variables (Fuller-Thomson & Minkler, 2000a).

Factors Associated With Diminished Psychological Well-Being

Caregiving context

Younger caregiving grandmothers reported more emotional distress than older ones, perhaps because of personal and professional goals that have gone unrealized due to caregiving responsibilities (Conway, Jones, & Speakes-Lewis, 2011). Grandmothers caring for very young children were more prone to elevated distress than those caring for older children (Kelley et al., 2000). Lack of stability in the relationship with the grandchild’s birth parent is often a source of constant struggle for caregiving grandmothers. Some grandmothers wrestled with sporadic comings and goings of the birth parent in the grandchild’s life (Baird, 2003; Haglund, 2000). The uncertainty concerning how long the grandmothers will be providing full-time care for grandchildren was also a source of stress, with many fearing that the child will be returned to an unsuitable parent (Kelley, 1993).

Resources and social support

Research findings consistently indicated that caregiving grandmothers are likely to be economically challenged, especially when they are of minority status (Blustein et al., 2004; Goodman, Potts, & Pasztor, 2007; Minkler & Fuller-Thomson, 2005). Given their older age and the time requirements of caregiving, many custodial grandmothers have experienced a dramatic reduction in income due to retirement or decreased work hours (Kelley, Yorker, Whitley, & Sipe, 2001). Moreover, many caregiving grandmothers received less financial support from child welfare agencies than their non-kin foster parent counterparts (Goodman et al., 2007). Limited resources and lack of social support also contributed to increased distress among caregiving grandmothers (Kelley et al., 2000). In fact, the feeling of isolation was one of the most consistent stressors reported by caregiving grandmothers (Baird, 2003; Fuller-Thomson & Minkler, 2000b). Unsurprisingly, single caregiving grandmothers reported more emotional stress and less support than married grandmother caregivers (Conway et al., 2011; Dolbin-MacNab, 2006; Musil et al., 2011).
Grandchild behavior problems

Stress resulting from the caregiving role may vary by characteristics of the grandchild. Due to the traumatic experiences that often necessitate placement with grandmothers (e.g., child abuse, abandonment, death of parent), the grandchildren are at increased risk for psychological difficulties. In a study of 230 children raised by grandmothers, over 30% had clinically elevated behavior problems, indicating a need for psychological evaluation and possible therapeutic intervention (Kelley et al., 2011). Currently, there is minimal empirical evidence on the contributions of child behavior problems to the emotional well-being of caregiving grandmothers. Preliminary findings suggest that an increase in behavior problems is linked to elevated stress in caregiving grandparents (Conway et al., 2011; Leder et al., 2007).

Physical health of caregiving grandmothers

In a national study, caregiving grandparents reported worse health than the national norms, even when controlling for age, race/ethnicity, economic status, education, and marital status (Minkler & Fuller-Thomson, 1999). Results of several other studies of caregiving grandmothers also have shown diminished physical health (Kelley, Whitley, & Campos, 2013; Lee, Colditz, Berkman, & Kawachi, 2003; Whitley, Kelley, & Sipe, 2001). In one study, caring for grandchildren was associated with an increased likelihood for heart disease, even when adjusting for additional known risk factors (Lee et al., 2003). An examination of the physical health of 504 African American caregiving grandmothers showed that slightly more than 25% were diabetic, almost 60% were hypertensive, and nearly 90% were either overweight or obese as determined by their body mass index (BMI; Kelley et al., 2013).

The health challenges confronted by caregiving grandmothers are likely to have an impact on their emotional well-being. While findings indicate that caregiving grandmothers are at increased risk for diminished psychological health, knowledge about factors that contribute to their mental health is currently constrained for several reasons. First, in most studies, only a single dimension of psychological health was examined (e.g., depression, stress); we addressed this through use of a multi-dimensional measure of psychological health. Second, little is known of the potential contribution of child emotional health (e.g., behavior problems) to the caregivers’ own psychological well-being. What is currently known is limited by unstandardized measurement of child behavior problems or small sample size. We addressed these limitations through use of a comprehensive, standardized measure of child behavior problems and a relatively large sample of children. Last, while diminished physical health in caregiving grandmothers is well-documented, little is known about its contribution to the caregiver’s emotional well-being; we examined this as well.

Theoretical Framework

The resiliency model of family stress, adjustment, and adaptation was used to theorize how the challenges faced by the family system could affect the emotional well-being of caregiving grandmothers (McCubbin, Thompson, Futrell, & McCubbin, 1997). The resiliency model is a conceptual explanation of how some families are able to manage effectively when confronted with difficulties while others are not.

By definition, internal and external stressors are among the events potentially producing a harmful change within the family system. In the case of unanticipated responsibility for a grandchild, internal factors would include number of grandchildren in the grandmother’s care, length of time expected to have grandchild in care, number of significant losses in past year, child and grandmother ages, and caregiver level of education. External factors would include internalizing and externalizing child behavior problems, perceived unavailability of community resources and services, social isolation, and declining physical health of the caregiver. Known resiliency factors that promote adaptation include accessible resources, positive social support networks, and effective problem-solving capacity of family members.

Continuous and ongoing family stressors without appropriate and supportive resources increase vulnerability to psychological distress. According to the resiliency model, as families experience and interpret life challenges, members draw upon and utilize personal, familial, and/or community resources to move toward adjustment and adaptation. If family members do not recognize or use available resources, or if
certain resources are seen as irrelevant to current needs, levels of distress are likely to increase.

**Purpose and Hypothesis**

Our aims were to ascertain the level of psychological distress in African-American grandmothers raising grandchildren and to identify predictors of increased psychological distress. Based on the resiliency model of family stress, adjustment, and adaptation (McCubbin et al., 1997), we hypothesized that diminished grandmother physical health, decreased family resources and family social support, as well as increased child behavior problems, would predict elevated levels of psychological distress, after adjusting for the demographic and background variables of grandmother and grandchild ages, grandmother level of education, number of grandchildren being raised by caregiver, length of time expected to raise grandchild (until adulthood vs. less than adulthood), and one or more significant personal loss(es) in the past year. These background and demographic variables were selected because they potentially affect the psychological well-being of caregivers, and yet are not amenable to intervention, in contrast to the external variables of physical health, child behavior problems, family resources, and family social support, that are potentially amenable to change.

**Methods**

**Sample Characteristics**

The current study used baseline data from a larger investigation of the effectiveness of a community-based intervention to enhance the health of caregiving grandparents. To qualify for enrollment in this study, participants needed to be providing full-time parenting to one or more grandchildren who were 18 months to 16 years of age. One of the study measures required the child to be at least 18 months of age; therefore, those younger were excluded. Families with a co-residing birth parent were ineligible. Because there were very few grandfathers in the larger study sample, they were excluded from the present study. Participants needed to reside within 20 miles of the researchers’ university, which is located in a major city in the southeastern section of the United States. Grandmother participants of any socioeconomic status and racial-ethnic group were eligible for the study, but because almost all participants were African American (98.5%), other racial-ethnic groups were excluded from this analysis.

The composition of the families in this sample \(N = 480\) included 169 (35%) grandmothers who were raising only one grandchild and 311 (65%) grandmothers who were raising more than one grandchild; the latter group consisted of 947 grandchildren with an average of three grandchildren per grandmother. To ensure

![FIGURE 1. Family adaptation model.](image-url)
that the grandmother’s response related to only one grandchild, we randomly selected a single representative for each family from among these 947 grandchildren. This random sample was examined to ensure that there were no statistically significant differences in demographic variables between the selected group and the remaining participants. The final sample of grandchildren for this study included 480 children with an average age of 8.27 years (SD = 4.15, range = 1.5–16 years). Almost half (48.3%) of the children were female.

**Measures**

Figure 1 depicts the instruments used and the hypothesized relationships among the study variables.

**Brief Symptom Inventory (BSI).** The BSI, a self-assessment of psychological symptoms, is composed of 53 items (Derogatis & Savitz, 1999). Items are rated from 0 (not at all) to 4 (extremely). The BSI also has nine symptom dimensions: (1) Somatization (discomfort from impressions of physical dysfunction); (2) Obsessive-Compulsive (focus on thoughts and actions that seem incessant and undesirable); (3) Interpersonal-Sensitivity (experience of personal inadequacy); (4) Depression (signs of clinical depression); (5) Anxiety (including tenseness and panic attacks); (6) Hostility (including angry thoughts, feelings, or actions); (7) Phobic-Anxiety (a constant fear response that is illogical and out of proportion to the stressor); (8) Paranoid Ideation (representing mistrustful behavior as a disturbed manner of thinking); and (9) Psychoticism (involving an introverted, insulated, schizoid manner of living) (Derogatis & Savitz, 1999).

While the BSI has three global indices of distress, the most reliable appraisal of overall psychological distress is the Global Severity Index (GSI; Derogatis & Savitz, 1999). Thus, it was used as the dependent variable. To determine GSI scores, the totals for the nine symptom dimensions and of four additional items (e.g., loss of appetite, trouble falling asleep) that do not belong to a symptom dimension are combined and then divided by the total number of responses. For instance, if there are no missing items, the total is divided by 53.

The BSI is scored by transforming raw scores to T scores that can range from 30 to 80. To identify participants with high distress, we used the established cutoff of a T score of 63 or higher on the GSI, or a T score of 63 or higher on at least two subscales of the BSI. These scores are suggestive of elevated distress at a level warranting further evaluation and possible clinical intervention. The measure has well-established psychometric properties (Derogatis & Savitz, 1999). The GSI reliability coefficient was .95 for the current sample. For the BSI subscales, the reliability coefficients were as follows: Somatization, .81; Obsessive-Compulsive, .81; Interpersonal-Sensitivity, .72; Depression, .81; Anxiety, .79; Hostility, .72; Phobic-Anxiety, .70; Paranoid Ideation, .68; and Psychoticism, .65.

**Child Behavior Checklist (CBCL).** The CBCL measures emotional and behavioral problems in children (Achenbach & Rescorla, 2000, 2001). Child Behavior Checklist forms are available based on informant (e.g., parent, teacher, youth self-report) and child age; we used the preschool and school-age versions of the Parent Report Form. The school-age version (ages 6–18 years) consists of 113 items, while the preschool version (1.5–5 years) has 100 items. Respondents are instructed to specify the extent to which each behavior listed describes their child. Response options range from 0 (not true as far as you know) to 2 (very true or often true).

The CBCL provides internalizing and externalizing scales based on types of behavior problems. Internalizing behavior problems are mainly within the self, such as anxiety and depression. Externalizing behavior problems mainly involve conflicts with others. Examples of these items include “Withdrawn, doesn’t get involved with others” and “Feels worthless.” Externalizing behavior problems and aggression problems are well documented and reported elsewhere (Achenbach & Rescorla, 2000, 2001). The reliability coefficients for the preschool version were .85 and .93, respectively, for internalizing and externalizing behavior problems in this sample. For the school-age version, the reliability coefficients were .88 for internalizing behavior problems and .89 for externalizing behavior problems.

**Family Resource Scale (FRS).** We used the FRS to determine the adequacy of resources
available to the participant’s family (Dunst, Trivette, & Deal, 1999). The 31-item self-report inventory was created with the underlying belief that lack of access to necessary resources will contribute to increased caregiver stress and decreased commitment to the parenting role. Items address specific resources with choices ranging from 1 (Not at all adequate) to 5 (Almost always adequate). Item scores are summed to determine the total score, with higher scores signifying better access to resources. Potential scores range from 31 to 155. Item examples include “Food for two meals a day,” “Money to pay monthly bills,” and “Dependable transportation.” The reliability coefficient in the current sample was .85.

Family Support Scale (FSS). This measure was chosen to determine the usefulness of the different support systems available to parents (Dunst, Trivette, & Hamby, 1994). It is comprised of 18 items with responses ranging from 1 (not at all helpful) to 5 (extremely helpful). Examples of items include “My husband/wife,” “Social groups/clubs,” and “My friends.” Single item scores are summed to determine the total score, with scores ranging from 18 to 90. Higher scores imply greater availability of social support to the family. The internal consistency reliability coefficient of the FSS was .73 for this sample.

Short Form-36 General Health Survey (SF-36). Participant physical health was measured using the Physical Functioning Scale of the SF-36 (Ware, 1993). It was selected because the SF-36 does not provide an overall summary score of health; the Physical Functioning Scale is considered the most accurate of the SF-36 physical health scales (Ware, 1993). The Physical Functioning Scale includes 10 items that are prefaced with “Does your health now limit you in these activities?” Participants rate each item from 1 (yes, limited a lot) to 3 (no, not limited at all). Examples of the 10 physical activities include “Lifting or carrying groceries,” “Vigorous activities, such as running, lifting heavy objects, participation in strenuous sports,” and “Climbing several flights of stairs.” Scores range from 10 to 30; higher scores are indicative of more optimal functioning. The Physical Functioning Scale has well-established reliability and validity (Ware, 1993). Its reliability coefficient was .92 in this study.

Procedures

Participants were recruited from community agencies serving children and families. Informed consent letters were signed by each grandmother. For children between 11 and 16 years of age, written assent was obtained; those 6–10 years old provided verbal assent. Data were collected in the participants’ homes by trained graduate students prior to initiation of the intervention. Data collection included structured interviews, as well as the use of standardized instruments. Due to the relatively low educational level of the sample, all questionnaires were read to participants. As compensation for their time, each participant received $40. The research protocol received approval from the university’s institutional review board.

Data Analysis

Before analyses were conducted, variables were assessed for compliance with the assumptions of multivariate analysis using a variety of SPSS procedures; no violations in assumptions were revealed. All independent and dependent variables were summarized using descriptive statistics, and relationships between continuous level variables were assessed with bivariate correlations. We used Cohen’s criteria (1977) to classify correlations as weak (r = .1–.3), moderate (r = .3–.5), or strong (r ≥ .5).

A hierarchical linear multiple regression analysis was used to examine possible predictors of psychological distress. Standardized scores for grandmother psychological distress were used as the dependent variable. Potential predictors included grandchild and grandmother ages, grandmother education level, number of grandchildren being raised, length of time expected raise grandchild (until adulthood vs. less than adulthood), one or more serious loss(es) in the past year, Family Resources total score, Family Support total score, grandmother physical health score, and the CBCL internalizing and externalizing behavior problem scores. These potential predictors were entered into the stepwise hierarchical regression model.

In Step 1, certain internal variables were entered that could influence the dependent variable but are not amenable to clinical intervention (Block 1: Age and education level of grandmother, number and age of grandchildren being raised, number of significant personal losses in past year, and length of time expected to raise grandchild). Physical health was entered in Step 2, as prior research showed that caregiving grandmothers are at increased risk for compromised physical health. In Step 3 family
resources and family social support were entered together due to their complementary role in reducing demands on the family according to the resiliency model of family stress. The fourth and final step involved entering the CBCL internalizing and externalizing behavior problem scores. These were entered together because both are associated with increased stress in caregivers and often are strongly correlated.

Results

All participants (N = 480) were African American. Forty percent of participants had not completed high school. All participants were the grandmothers of the index children. Their employment status was as follows: presently unemployed, 49%; working outside of the home, 37%; and retired, 14%. Participant mean age was 55.8 years (SD = 8.5; range = 35–81 years); almost one-third (31.7%) were aged 60 and older. With respect to marital status, the largest proportion (40.1%) was divorced or separated; the rest were widowed (22.7%), married (19.2%), or never married (18%). The participants cared for an average of 2.4 grandchildren (SD = 1.5), with a range of 1–8.

Participants were raising grandchildren for a variety of reasons that were often related, and included child maltreatment (69%), substance abuse (59.8%), abandonment (36%), parental incarceration (21%), removal by child protective services (15.6%), parental death (13.8%), and parental HIV disease (3.1%). Of those children who experienced maltreatment, the most common form was neglect (67.3%), followed by emotional abuse (27.7%), physical abuse (11.7%), and sexual abuse (1.9%).

Description of Study Variables

Our first objective was to ascertain the proportion of caregiving grandmothers with psychological distress scores in the clinical range. Results showed that 39.8% of participants had scores within the clinical range as the result of elevated scores on two or more BSI subscales, while 26.5% had scores within the clinical range based on their GSI scores. The proportion of grandmothers with clinically elevated scores on subscales were: Paranoid Ideation, 30.4%; Somatization, 29.4%; Obsessive-Compulsive, 24.6%; Psychoticism, 23.8%; Phobic-Anxiety, 22.1%; Interpersonal-Sensitivity, 21.0%; Anxiety, 15.8%; Depression, 15.4%; and Hostility, 13.1%.

Descriptive statistics for the independent (demographic and background characteristics, family resources and family social support, child behavior problems, caregiver physical

Table 1. Description of Independent and Dependent Variables

<table>
<thead>
<tr>
<th>Possible Range of Scores</th>
<th>Mean</th>
<th>SD</th>
<th>Median</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>GM psychological distress</td>
<td>30–80</td>
<td>54.38</td>
<td>10.86</td>
<td>55.0</td>
</tr>
<tr>
<td>GM physical health</td>
<td>10–20</td>
<td>23.15</td>
<td>5.75</td>
<td>24.0</td>
</tr>
<tr>
<td>Family social support</td>
<td>18–90</td>
<td>23.73</td>
<td>10.44</td>
<td>23.0</td>
</tr>
<tr>
<td>Family resources</td>
<td>31–155</td>
<td>96.72</td>
<td>18.19</td>
<td>97.0</td>
</tr>
<tr>
<td>Internalizing behavior problems</td>
<td>0–100</td>
<td>50.74</td>
<td>12.00</td>
<td>50.0</td>
</tr>
<tr>
<td>Externalizing behavior problems</td>
<td>0–100</td>
<td>54.63</td>
<td>11.81</td>
<td>54.0</td>
</tr>
<tr>
<td>Grandmother age</td>
<td>55.80</td>
<td>8.46</td>
<td>55.0</td>
<td>0.188</td>
</tr>
<tr>
<td>No. of children raised by grandmother</td>
<td>2.43</td>
<td>1.53</td>
<td>2.0</td>
<td>1.180</td>
</tr>
<tr>
<td>Grandchild age</td>
<td>8.27</td>
<td>4.14</td>
<td>8.0</td>
<td>0.086</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>%</th>
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<tbody>
<tr>
<td>Expect to raise grandchild</td>
<td>73.8</td>
</tr>
<tr>
<td>Until adulthood</td>
<td>73.8</td>
</tr>
<tr>
<td>Until less than adulthood</td>
<td>26.3</td>
</tr>
<tr>
<td>Significant personal loss(es) past year</td>
<td>52.9</td>
</tr>
<tr>
<td>One or more</td>
<td>52.9</td>
</tr>
<tr>
<td>None</td>
<td>47.1</td>
</tr>
<tr>
<td>GM level of education</td>
<td>59.8</td>
</tr>
<tr>
<td>HS graduate</td>
<td>59.8</td>
</tr>
<tr>
<td>&lt;HS graduate</td>
<td>40.2</td>
</tr>
</tbody>
</table>

Note: GM, grandmother; HS, high school.  
*Low score optimal.  
*High score optimal.  

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health) and dependent (psychological distress) variables are found in Table 1. Skewness values and the possible range of scores are also displayed in Table 1.

### Correlations of Study Variables

Table 2 presents the bivariate correlations among the major study variables. As hypothesized based on the premises of the resiliency model of family stress, participant psychological distress was significantly related to internalizing and externalizing child behavior problems, family resources, family social support, and grandmother physical health. All correlations were in the direction predicted and ranged in strength from moderate to weak. The relationships between psychological distress and internalizing and externalizing child behavior problems, family resources, and physical health were moderate, while the relationship between psychological distress and family social support was weak.

### Predictors of Psychological Distress

Results of the multiple regression analysis are displayed in Table 3. After each step, $R$ differed significantly from zero. With select background variables in the equation after Step 1, $R^2 = .05$, $F(6, 473) = 4.26$, $p < .001$. After Step 2, with physical health added, $R^2 = .14$, $F(7, 472) = 11.10$, $p < .001$. After Step 3, when family social support and family resources were included, $R^2 = .20$, $F(9, 470) = 12.65$, $p < .001$. After Step 4, when CBCL internalizing and externalizing behavior problem scores were included in the equation, $R^2 = .31$, $F(11, 468) = 19.44$, $p < .001$.

The final model predicted 31% of the variance in psychological distress. The variables that were the most predictive (in order from most to least predictive) were internalizing child behavior problems (elevated emotional distress in caregiving grandmothers was related to increased internalizing behavior problems in grandchildren); the physical health of the grandmothers (grandmothers with poorer health reported higher levels of psychological distress); grandmother age (younger grandmothers reported higher distress); family resources (lower resources among higher distress grandmothers); and externalizing child behavior problems (elevated emotional distress in grandmothers was related to increased externalizing child behavior problems). The other variables were not statistically significant predictors.

### Discussion

The finding that nearly 40% of participants in the current study scored in the clinical range on psychological distress raises considerable concern in regard to the well-being of African-American caregiving grandmothers. While these results are consistent with prior reports of an increased propensity for diminished psychological health (e.g., depression, stress) in grandmothers raising grandchildren (Conway et al., 2011; Musil et al., 2009, 2011), we expand existing knowledge by reporting the proportion of participants with clinically elevated levels of diminished psychological health. Furthermore, the high level of distress is consistent with the stress associated with family caregiving under other circumstances (Dougherty & Thompson, 2009; Gaugler et al., 2009; Saunders, 2009).
In addition to the caregiving role, the reasons the grandmothers were raising grandchildren (e.g., parent’s incarceration, substance abuse) undoubtedly added to their stress. These caregivers often struggle for years with their adult child’s problems. Given the disproportionate amount of informal caregiving among African American families in comparison to Caucasian families (Pinquart & Sörensen, 2005), it is likely that many African American caregiving grandmothers are also caring for other family members such as aging parents and ill spouses. According to McCubbin et al.’s resiliency model of family stress, these additional stressors (e.g., adult child’s problems, additional family caregiving responsibilities) would increase family vulnerability to psychological distress.

Several factors were found to contribute to elevated psychological distress in caregiving grandmothers. Most notable were grandchild behavior problems, diminished grandmother physical health, and lack of family resources. Given the dearth of research on the contribution of childhood emotional disturbances to the emotional distress of caregiving grandmothers, our findings provide valuable direction for interventions to reduce caregiver psychological stress. Trauma-focused cognitive behavior therapy
Caregiving grandmothers also may benefit from therapeutic interventions to help them develop more effective coping and parenting strategies. Parenting traumatized children requires specialized skills to address their myriad behavioral and emotional problems (Pacifici, Delaney, White, Nelson, & Cummings, 2006). The advantages of participating in support groups for caregiving grandmothers have been widely reported in the literature and include peer support, decreased sense of isolation, information sharing, and emotional respite (Smith, 2003; Whitely, Kelley, & Campos, 2011). These recommendations for intervening with the caregivers and their grandchildren are consistent with the major premise of the resiliency model of family stress: access to community resources and positive social support promote adjustment and adaptation to family stressors.

As predicted, we found that worse physical health was associated with diminished psychological health. With a high likelihood of poverty and limited access to health care, caregiving grandmothers are vulnerable to adverse health consequences (Kelley et al., 2013). Health disparities are a serious concern, given the over-representation of ethnic minority groups in grandmother-headed families. The daily demands of parenting grandchildren may be so overwhelming that there is little time left over to attend to one’s own health needs. As over 30% of participants were age 60 years and older, aging needs to be taken into account when addressing the high rates of obesity, diabetes, and hypertension previously reported in African American caregiving grandparents (Kelley et al., 2013).

While caregiving grandmothers show an extraordinary commitment to their grandchildren, they often encounter significant challenges when trying to meet the associated financial demands (Goodman et al., 2007; Minkler & Fuller-Thomson, 2005). In the present study, lack of family resources was associated with increased caregiver distress. This finding supports a key supposition of the family resiliency model, in that when a family is unable to reduce the demands on the family system through sufficient resources, there is an increased likelihood of unfavorable outcomes, such as increased psychological distress (McCubbin et al., 1997). The association between fewer resources and greater stress is consistent with prior research linking unmet service needs to higher levels of caregiver burden in caregiving grandmothers (Goodman et al., 2007). Because caregiving grandmothers, especially those of color, are more often economically disadvantaged, access to adequate resources is critical in providing a supportive family environment.

The present findings extend prior work in a number of important respects. First, we used a multi-dimensional measure of caregiver psychological health in contrast to the vast majority of prior studies of caregiving grandmothers in which only a single dimension of mental health (e.g., depression, stress) was assessed. Reliance on measures that limit assessment to a single dimension could result in an underestimation of psychological health problems. For instance, in the present study, one of the lowest proportions of elevated scores was found in the depression scale, yet depression is the dimension of mental health studied most frequently in this population.

We also extended current knowledge by using both a standardized, multi-dimensional measure of child behavior problems and a relatively large sample size. Prior research linking the emotional well-being of caregiving grandmothers’ emotional health to child behavior problems is limited by reliance on either non-standardized measurement of child behavior problems (Leder et al., 2007) or small sample sizes (Conway et al., 2011; Leder et al., 2007). We also established a link between caregiver physical health and psychological health. While prior research has shown a relationship between caregiving grandmothers’ physical health and emotional well-being, the majority of studies were limited by factors including reliance on a single-item measure for perceived physical health status (e.g., Fuller-Thomson & Minkler, 2000a; Hughes, Waite, LaPierre, & Luo, 2007; Musil & Ahmad, 2002) or small sample sizes (Dowdell, 2004; Kelley et al., 2000). We used a multi-item scale of physical health status and a relatively large sample.

The finding that younger grandmothers experienced more distress than older grandmothers is consistent with other studies (Conway et al., 2011; Kelley et al., 2000). One possibility is that younger grandmothers attribute a different meaning to family caregiving, perhaps finding it less rewarding and experiencing greater resentment for loss of independence at a stage in their lives when they should be free of child-rearing
responsibilities. Contrary to other reports (Musil & Ahmad, 2002; Musil et al., 2009), in this study family social support was not linked to psychological distress in caregiving grandmothers. This could be related to measurement issues or the fact that our sample was limited to one racial group.

**Study Limitations**

The sample was restricted to African American caregiving grandmothers who were, in general, of low socioeconomic status. Participation also was limited to residents of a major Southeastern urban area. Reliance on a single informant should be taken into consideration, as the grandmother’s own distress level could have affected her appraisal of the grandchild’s emotional problems. Furthermore, the lack of random selection of participants and absence of a comparison group limit generalizability. It is possible that caregiving grandmothers who enroll in an intervention study may differ from those who do not perceive a need for support services. As noted earlier, we randomly selected one grandchild per grandmother to avoid duplication of participant responses; it is possible that the results would vary if all grandchildren in a family unit were included. Future research would be enhanced by use of more diverse samples in regard to socioeconomic status, race, ethnicity, and location (e.g., rural settings), as well as by use of observational measures and multiple informants to assess key study variables.

**Implications for Research, Policy, and Practice**

Considering both the potential for high stress levels and their negative effects on health, nurses, and other health professionals should routinely assess stress levels among caregiving grandmothers. The association found between caregiver stress and child behavior problems underscores the need for screening grandchil- dren for emotional problems, as well. Our findings also suggest referring caregiving grandmothers to resources in the community, as well as to social workers who are knowledgeable in kinship care issues. In particular, community resources that provide home visits by registered nurses, as well as case management services by social workers, are effective in improving the well-being of caregiving grandmothers (Kelley, Whitley, & Campos, 2010).

Because of the link between family resources and emotional distress, mandated work requirements for caregivers receiving Temporary Assistance to Needy Families and disparities in financial assistance to informal kinship care providers versus state-approved foster care parents need to be revisited. When kinship care stipends are available, caregiving grandparents often do not qualify because the children in their care were never officially in the state child welfare system. Additionally, grandparent-friendly adoption policies for those grandparents who wish to permanently legalize their caregiver status are needed (Thomas, Sperry, & Yarbrough, 2000).

Numerous areas of research warrant further study. Research on the multiple caregiving roles of grandmothers raising grandchildren would shed light on other responsibilities that may affect their well-being. In addition, little is known about the birth parents of the grandchildren and why they are unable or unwilling to fulfill their role as parents. While knowledge exists about the physical and emotional health of caregiving grandmothers, only minimal research has been done on concerns related to the grandchildren (e.g., emotional well-being, developmental delays, physical health).

Promoting the psychological health of caregiving grandmothers is clearly not a simple task and necessitates comprehensive, multimodal interventions at the individual, family, community, and societal levels. Caregiving grandmothers provide a safety net of hope and security to vulnerable children. Maintaining their emotional and physical well-being is a high priority. In order to accomplish this, caregiving grandmothers need greater access to the resources necessary to provide a supportive caregiving environment, including services aimed at ameliorating the emotional problems of traumatized children in their care.

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