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Grandmothers Raising Grandchildren: Results of an Intervention to Improve Health Outcomes

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Abstract

Purpose: To examine the impact of an intervention to improve the health of grandmothers raising grandchildren in parent-absent homes.
Design: A longitudinal, pretest-posttest design.
Methods: The sample was composed of 529 female caregivers with a mean age of 56.7 years (range 38–83) who were predominantly low-income African Americans. Data were collected prior to the intervention and again at 12 months when the intervention was complete. The intervention involved home visitation by registered nurses and social workers, as well as other support services. The Short Form-36 was used to assess physical and mental health, using eight multi-item scales.
Results: A comparison of pre- and posttest mean scores on the SF-36 indicated significantly ($p < .003$) improved mean scores for vitality, physical effects on role functioning, emotional effects on role functioning, and mental health. No significant differences were found for other attributes.
Conclusions: These preliminary findings suggest that grandmothers raising grandchildren may benefit from a home-based intervention designed to improve health attributes. Implications for nursing practice, policy, and research are presented.
Clinical Relevance: The health of grandmother caregivers is critical to their ability to parent grandchildren successfully. Nurses practicing in a variety of settings are in a unique position to identify and address the health challenges of grandmothers who are raising grandchildren.

The phenomenon of grandparents raising grandchildren has increased dramatically over the past several decades. Custodial grandparents often face multiple challenges in their caregiving roles. Research findings indicate that they are at increased risk for health problems, psychological distress, and economic disadvantage. Furthermore, the children they are raising often have developmental delays (Whitley & Kelley, 2008). Therefore, nurses practicing in a variety of settings are in a unique position to identify and address the needs of these intergenerational families who are often referred to as "grandfamilies."

In the United States there are 2.5 million grandparents who are responsible for the basic needs of the grandchildren who live with them (U.S. Census Bureau, 2008). Of these caregivers, 1.6 million are grandmothers and 896,000 are grandfathers. According to the U.S. Census Bureau, an estimated 6 million, or 8.4% of children live with nonparental relatives, a 173% increase since 1970 and a 78% increase since 1990 (U.S. Census Bureau, 2001). Nationally, there are an estimated 963,000 children under 18 years of age living under the primary care of grandparents, in parent-absent households (U.S. Census Bureau, 2005).

Health Status of Grandparents Raising Grandchildren

Factors that place grandmother caregivers at risk for health problems include economic disadvantage, lack of access to health care, increased psychological distress, as well as the special needs of the grandchildren in their care. Using the Census 2000 American Community Survey, researchers found that African American custodial grandparents were more likely than non-caregiving grandparents to be living in poverty and receiving public assistance (Minkler & Fuller-Thomson, 2005). In another study, 31% of grandparents raising grandchildren were found to be single, widowed, or divorced, thus increasing their likelihood of living on limited resources (Bailey, Letiecq, & Porterfield, 2009).

Researchers have found elevated levels of psychological distress, including depression, in grandparents raising grandchildren (Emick & Hayslip, 1999; Fuller-Thomson & Minkler, 2000; Kelley, 1993; Musil, Warner, Zauszniewski, Wykel, & Standing, 2009). Using data from the National Survey of Families and Households, researchers found that, in comparison with noncustodial grandmothers, custodial grandmothers are more likely to have significantly higher levels of depressive symptomatology (Fuller-Thomson & Minkler). Factors found to be predictive of increased psychological distress in a sample of predominantly low-income African American grandmother caregivers include lack of family resources, participants' physical health, and, to a lesser extent, lack of social support (Kelley, Whitley, Sipe, & Yorker, 2000). Other studies have found a positive association between stress related to the parenting role and psychological distress (Kelley; Leder, Grinstead, & Torres, 2007).

The increased psychological distress grandmother caregivers experience may also be related to the circumstances surrounding their caregiving roles. The major reasons why grandparents serve as primary caregivers of grandchildren include substance abuse, incarceration, abandonment, and neglect involving birth parents (Horner, Downie, Hay, & Wichmann, 2007; Kelley et al., 2000; Weber & Waldrop, 2000). Because raising grandchildren is often associated with problems in the adult child's life, the grandparent may experience feelings of loss, anger, and guilt over perceived failure as a parent, thus contributing to psychological distress. Another factor that influences grandparents' physical and psychological functioning is the level of stress associated with the multiple needs of their grandchildren, which often include behavior problems and developmental delays (Smith & Palmieri, 2007; Whitley & Kelley, 2008).

Given the increased poverty, psychological distress, difficulties with adult children, as well as the special needs of the children in their care, it is not surprising that grandparents raising grandchildren experience significant physical health problems as reported in numerous studies (Fuller-Thomson & Minkler, 2000; Hughes, Waite, LaPierre, & Luo, 2007; Minkler & Fuller-Thomson, 2005; Musil & Ahmad, 2002; Whitley, Kelley & Sipe, 2001). Using both objective and subjective data collected by registered nurses, researchers who studied 100 predominantly low-income African American grandmothers found that almost one-fourth had diabetes and high cholesterol, over one half had hypertension, and over three fourths met criteria for obesity placing them at increased risk for such chronic diseases as diabetes, cardiovascular disease, and osteoarthritis (Whitley et al.). Musil and Ahmad recorded similar findings when comparing health reports of 86 custodial grandmothers with grandmothers who had partial caregiver responsibilities and those with no caregiver role. Their results show primary caregivers reported worse self-assessed health than the other groups, but with partial caregivers reporting more depression.

In summary, a body of research has emerged that clearly indicates that grandmother caregivers are at increased risk for health challenges. Most existing studies, however, do not use multidimensional standardized measures to determine health status but rather rely on responses to five or fewer items. Other studies indicate that grandmother caregivers are more likely to experience poverty, limited access to health care, difficulties with adult children, and increased psychological distress, each of which can contribute to poor health outcomes.

Interventions for Grandmothers Raising Grandchildren

Although extant research has documented that grandmothers raising grandchildren are at increased risk for compromised health and increased psychological stress, there is a paucity of literature on interventions with this population. The majority of literature addressing interventions for caregiving grandmothers is limited to descriptions of interventions that lack outcome data or intervention studies with very small sample sizes (Dannison & Smith, 2003; Edwards & Sweeney, 2007; Kolomer, McCallion, & Overeynder, 2003; Kopera-Frye, Wiscott, & Begovic, 2003; Vacha-Haase, Ness, Dannison, & Smith, 2000). Furthermore, the vast majority of the interventions for custodial grandparents described in the literature are limited to support groups and educational programs (Cox, 2002; Edwards & Sweeney; Hayslip, 2003; Kolomer et al.; Kopera-Frye et al.).

Only two health-related intervention studies were found in the literature. Researchers conducted a pilot study to explore the impact of a group educational program on nutrition and physical activity knowledge of African American custodial grandparents (Kicklighter et al., 2007). Results indicated an increase in knowledge among participants; however, changes in behavior were not measured. Another study assessed the efficacy of an interdisciplinary, home-based intervention involving nurses and social workers, with the goal of improving the well-being of African American custodial grandmothers (Kelley, Whitley, & Sipe, 2007). The researchers found improvements in the areas of psychological distress, resources, social support, and coping, but not physical functioning.

Theoretical Model

This current study drew on the resiliency model of family stress, adjustment, and adaptation (McCubbin, Thompson, & McCubbin, 1996) to conceptualize how the stressors placed on the family system might influence the health of grandmothers raising grandchildren. This model, which has been used extensively in nursing research, was developed to provide an understanding of how and why some families are able to cope, endure, and survive when faced with adversity (DeMarco, Ford-Gilboe, Friedmann, McCubbin, & McCubbin, 2000). The model considers how family demands produce change in the family system and how resources affect individual or family adaptation and well-being (e.g., physical and mental health). According to this model, family demands, if not reduced or moderated by resources, may increase the likelihood of negative outcomes, including compromised health. The intervention evaluated in the present study is directed toward positively affecting grandmothers' adaptation by impacting resources related to health. These resources include increased understanding of one's health problems, implementation of strategies to improve health, referrals to healthcare providers, and increased social support.

Purpose

The purpose of the present study was to examine the impact of an intervention to improve the well-being of grandmothers raising grandchildren in parent-absent homes. More specifically, we sought to answer the following question: Which health attributes can be positively impacted by a home-based nursing intervention designed to improve the physical and emotional well-being of grandmothers raising grandchildren?

Method

Design and Sampling Method

A longitudinal, pre- and posttest design was used to address the research question. A convenience sampling method was used for the present study. The 529 participants were recruited from a variety of community-based organizations, including healthcare centers, child welfare agencies, senior centers, and schools. Participants were eligible if they were grandmothers or great-grandmothers raising one or more grandchildren 16 years of age or younger in parent-absent homes.

Procedure

The study took place in a large U.S. southeastern metropolitan area. All participants signed letters of informed consent that were part of the research protocol approved by the university's institutional review board. Once the research protocol was explained to participants, no one who met the study criteria refused to participate in the project. Data were collected at baseline before participants received intervention services and at 12 months when the intervention was complete. Trained research assistants, who read all survey questions out loud because of the low educational attainment of many participants, collected data in the home. Participants were compensated US$20 for data collection at each time point. These data collectors did not participate in the intervention.

Intervention

The intervention is a 12-month program designed to empower custodial grandparents by increasing their personal sense of competence and to help them gain a sense of control over their well-being, including their physical and mental health. For the purposes of this study, empowerment is defined as a process that enhances a grandparent's sense of capacity to affect positive change within their familial and community environments for the well-being of their grandchildren. Using a strengths-based approach (Saleebey, 1997), caregivers participate in multidisciplinary services that allow them to assume a primary role in problem solving.

The intervention included home-based visitation by registered nurses (RNs) and social workers, participation in support groups and parenting classes, referrals for legal services, and early intervention services for children with special needs. The intervention was developed based on the results of a needs assessment conducted by the research team, as well as findings in the research literature. It was subsequently modified during an initial pilot study. For the nursing component, each participant was

assigned an RN who was a graduate research assistant and enrolled in a master's degree program. All RNs underwent training to educate them on the intervention protocol; they also received a protocol manual that contains modules on safe and effective home visitation, initial and continuous nursing assessment, establishing client goals, and data collection guidelines.

During the initial home visit, the RN conducted a health assessment that included measurement of body mass index based on height and weight, visual acuity, glucose and cholesterol blood levels, and blood pressure. In addition, participants' preventive health behaviors were assessed using the Health Risk Appraisal (HRA; Hutchins, 1997). The HRA is a self-assessment of health behaviors, including current diagnosis of diabetes, hypertension, and obesity as well as use of tobacco, alcohol, and seat belts. The outcomes of these assessments are used to educate clients on their individual risk factors and strategies to reduce them. All prescribed and over-the-counter medications are reviewed and their intended purpose, dosage levels, and schedule discussed. The nurse and participant jointly developed goals to address any health concerns and foster health promotion. During subsequent home visits, RNs continue to monitor blood pressure, weight, medications, diet, and physical activity. Referrals are made to healthcare providers or specialists, as necessary.

Participants received monthly or bi-monthly visits according to their health needs. Home visits by RNs occurred over a 12-month time frame, with a mean of 9.2 visits per client. On average, each home visit lasted 1.25 hr. Each participant received a mean of 3.9 telephone contacts as follow-up for health issues. Those who were diabetic were given glucometers to assist in the management of diabetes. Likewise, those who were hypertensive received blood pressure monitoring devices and taught to monitor their blood pressure.

Measures

Short Form-36 General Health Survey. Participants' health was assessed with the Short Form-36 General Health Survey (SF-36; Ware, 1993). The SF-36 measures eight health attributes using multi-item scales with a Likert-type scale. The scales are scored on a 5-point scale, with higher scores indicating better functioning. The eight scales include (a) physical functioning (10 items), which refers to the performance of physical activities such as self-care, walking, and vigorous activities; (b) physical role functioning (4 items), which examines the degree to which an individual's physical state influences activity performance; (c) bodily pain (2 items), which includes the intensity, duration, and frequency of bodily pain as well as limitations in activities due to pain; (d) general health perceptions (5 items), which includes the beliefs of a person's overall health; (e) vitality (4 items), which can include feelings of energy and fatigue; (f) social functioning (2 items), which involves the ability to develop and nurture social relationships with family or friends; (g) emotional role functioning (3 items), which includes the degree to which one's emotional state influences performance of routine activities; and (h) mental health (5 items), which includes a person's emotional, cognitive, and intellectual status (Ware).

Researchers have found precision in the SF-36 scales in numerous studies that exceed accepted standards for measures used in group comparisons (McHorney, Ware, Lu, & Sherbourne, 1994); validity with other widely used health surveys have also been established (McHorney, Ware, & Raczek, 1993). For the present study, Chronbach's α was .93 for the full scale at baseline and .90 at the 12-month assessment; subscale reliability scores ranged from .68 to .92 at baseline and from .69 to .93 at the 12-month assessment. The only subscale with a reliability score below .70 was social functioning at both pre- and posttest.

Analyses

Raw data were transformed to a 0–100 scale for comparison purposes as suggested by the SF-36 manual for scoring items and scales, with 100 indicating the most favorable health status (Ware, 1993). Data for 529 participants were available for analysis. Paired t tests were used to compare sample preintervention data to postintervention data. To avoid the problem of inflated error rates due to the multiple analyses conducted (8 total), the Bonferoni technique was applied for each of the analyses, with the α level set at .006. (.05 divided by 8).

Results

The mean age of participants was 56.7 years ($SD = 8.9$), with a range of 33 to 83. Almost one third (31%) of participants were 60 years of age and older. These caregivers included grandmothers (94.6%) and great-grandmothers (5.4%). At time of enrollment 19.2% of participants were married, 41.3% separated or divorced, 24.3% widowed, and 15.2% single, never married. The mean length of time that participants were the primary care provider for their grandchildren was 4.2 years ($SD = 3.4$), with a range of 1 month to 17 years. The number of grandchildren in their care ranged from 1 to 8 ($SD = 1.5$), with a mean of 2.5. With regard to educational attainment, approximately half (52.5%) had less than a high school education, suggesting the sample was predominantly of lower

Table. Comparison of Sample Means at Pretest-Baseline and Posttest-12 Months

Health attributes		*M*	*SD*	*t*	*p*
Physical functioning	Baseline	66.99	28.73	−0.677	.249
	12 mo	67.74	28.80		
Role functioning: physical	Baseline	58.65	43.95	−2.741	.002*
	12 mo	63.99	42.78		
Bodily pain	Baseline	59.55	28.21	−2.028	.022
	12 mo	62.21	28.91		
General health	Baseline	61.67	22.60	−2.219	.014
	12 mo	63.50	21.99		
Vitality	Baseline	53.48	22.63	−3.168	.000*
	12 mo	56.54	21.96		
Social functioning	Baseline	77.17	27.81	−2.141	.017
	12 mo	80.03	26.88		
Role functioning: emotional	Baseline	66.10	42.60	−3.842	.000*
	12 mo	74.38	39.21		
Mental health	Baseline	70.90	19.93	−3.930	.000*
	12 mo	74.19	18.19		

*$p < .003$.

socioeconomic status. Thirty-two percent of participants were currently employed, while the remainder was either retired (16.2%) or not working for other reasons (51.8%). The majority were African American (98.5%), with the remainder White or Hispanic (1.5%). Grandmothers reported the following as the main reasons the grandchildren were in their full-time care: child abuse or neglect, 78.7%; parental alcohol or drug abuse, 67%; child abandonment, 37%; child removed by child protective services, 18%; one or both parents deceased, 17%; one or both parents incarcerated, 16%; and parent with HIV disease, 3%. Many of these factors are interrelated and thus exceed 100% when totaled.

Comparisons of transformed pre- and posttest scores for each health attribute are displayed in the **Table**. Results show higher scores at posttest, with higher scores being desirable. The only health attributes, however, with significantly ($p < .003$) increased mean scores were role limitations due to physical health problems, vitality, role limitations due to emotional problems, and mental health, suggesting improvements in these health attributes at posttest. There were no significant differences in mean scores for physical functioning, bodily pain, general health, and social functioning.

Discussion

The results of this study provide insight into the potential impact of a home-based intervention designed to improve the physical and mental health of this vulnerable population. Several health attributes that are critical to the role of raising grandchildren showed improvement. This is important in light of the significant body of literature that indicates caregiving grandmothers often have compromised physical and mental health. The findings of improved role functioning, related to both physical and emotional status, is critical given the multiple demands of parenting, particularly later in life. Also noteworthy is the increase in vitality, given the physical and emotional energy needed for parenting. Because the majority of grandchildren experience traumatic events that necessitate their living with grandparents, many have behavioral problems that place even further demands on their caregivers. The finding of improved mental health is noteworthy given the association between caregiving and depression (Gaugler, Linder, Given, Kataria, Tucker, & Regine, 2009; Saunders, 2009).

While these improvements show promise for the intervention, it is, however, impossible to know if these changes can be maintained beyond the intervention period without longitudinal data to determine the sustainability of these improvements. In addition to the nursing intervention, it is likely that the custodial grandmothers were positively impacted by the social support received from other grandmothers in the program as well as the services provided by social workers. It is likely that use of a home-based approach for the intervention increases participation rates with lower income custodial grandmothers, as they often face challenges related to transportation and child care.

While a number of studies have examined the health status of grandmothers raising grandchildren, very few have used standardized, multidimensional health-focused measures such as the one used in the present study. Most studies have, instead, relied on nonstandardized items or a single scale from a measure of general well-being (Butler & Zakari, 2005; Dowdell, 2004; Fuller-Thomson & Minkler, 2000; Musil, 2000). Furthermore, the majority of studies examining the health of grandmother caregivers use relatively small samples. The present study expands our knowledge through use of a well-known, multidimensional standardized measure of health, as well as use of a relatively large sample to assess an intervention designed to improve health.

The demands of caregiving may negatively contribute to a grandmother's health, especially when the role is so demanding that she has little time to practice preventive health measures or seek even basic healthcare services. Furthermore, the demands of parenting grandchildren with mental health issues, physical disabilities, or developmental delays may exacerbate health problems. Poor health may interfere with a grandmother's capacity to parent grandchildren, especially younger ones

where caregiving can be physically demanding. When grandmothers become physically unable to meet the demands of parenting due to health problems, the children are at risk for removal by child protective services and placement in the state foster care system, often living with strangers. Furthermore, they may be separated from siblings. More often than not, children in foster care experience frequent movements among different foster care families. Research has demonstrated that such disruptions in foster care placements are harmful to the emotional well-being of children (Newton, Litrownik, & Landsverk, 2000; Ryan & Testa, 2005).

Findings related to several of the characteristics of the grandmothers also raise concern over some of the challenges facing this group of caregivers. Almost one-third of participants were 60 years of age or older. The health of older grandmothers and great-grandmothers is of particular concern given that advanced age is associated with a decline in health. Only a small proportion of grandmothers were married at the time of the study, suggesting there may not be another adult in the home to share parenting responsibilities or the financial burden of raising grandchildren. Most participants were caring for multiple grandchildren, which may exacerbate their caregiver burden.

The exact role caregiving plays in the health of caregiving grandmothers is yet to be determined. It is unknown whether health status differences exist prior to grandmothers assuming the caregiver role. The fact that these grandmothers are more likely to be poorer and less educated than other women may also contribute to their compromised health status. Nursing interventions designed for this population need to be sensitive to the role that poverty plays as a social determinant of health.

Approximately one-third of the grandmothers in the study are employed in some capacity. It is likely some grandparents may delay retirement or transition into part-time employment for financial reasons. Considering the financial vulnerability experienced by grandparents raising grandchildren, future studies may consider how full- or part-time labor participation, particularly for grandparents at or near retirement age, may impact their health and physical functioning levels, and what types of interventions may be supportive.

There are a number of limitations to the present study that must be considered when attempting to infer any generalizability of the findings. First, there was lack of a comparison group for assessing the effectiveness of the intervention, making it difficult to know whether the intervention positively impacted health or if the improvements occurred for other reasons. Future studies need to use randomized clinical trials and follow-up assessments well beyond the intervention time frame in order to determine long-term impact. Additional research should include participant samples that are more socioeconomically, ethnically, racially, and geographically diverse than in the current study. Furthermore, it is unknown whether caregiving grandmothers who seek participation in a community-based program differ from those who do not seek support services.

Implications for Practice and Policy

It is essential that nurses and other healthcare professionals practicing in a variety of settings be aware that grandparents raising grandchildren are at increased risk for compromised health. Additionally, they should be informed of evidence-based interventions to improve the health of low-income, minority women. Because grandmothers are more likely to seek health care for their grandchildren than for themselves, nurses practicing in child health settings should be particularly sensitive to the healthcare needs of these grandmother caregivers and encourage them to seek primary health care. Findings from the present study may also have global implications, given the large numbers of grandmothers raising orphaned grandchildren due to the HIV/AIDS pandemic (Lee, Li, Jiraphongsa, & Rotheram-Borus, 2010).

Public policy needs to address access to health care for low-income grandparent caregivers. Many grandmothers are too young to receive Medicare benefits, yet have incomes too high to qualify for Medicaid. Grandmothers who leave full-time employment to raise young children or those with special needs often lose health insurance benefits. Furthermore, during the recent economic downturn, many individuals have lost private health insurance due to loss of full-time employment, while others simply cannot afford health insurance premiums. Nurses and other healthcare professionals should be knowledgeable of healthcare agencies that have sliding scales or provide free healthcare services, and refer caregiving grandmothers accordingly. Knowledge of community resources, such as support groups for grandparents raising grandchildren and kinship navigation centers, is also needed.

As society looks more to relative caregivers to assume parental responsibilities as a preference to nonrelative foster care or institutional care, communities must develop innovative, comprehensive, and evidence-based methods to address their needs, including access to health care and social services.

Clinical Resources

- AARP, Help for Grandparents Raising Grandchildren: www.aarp.org/relationships/grandparenting/
- Generations United: http://www.gu.org/
- National Center on Grandparents Raising Grandchildren: http://chhs.gsu.edu/nationalcenter
- Project Healthy Grandparents: www.gsu.edu/hgrandpar

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