Published in final edited form as:

Issues Ment Health Nurs. 2012 October ; 33(10): 680–686. doi:10.3109/01612840.2012.684424.

Resourcefulness Training for Grandmothers raising Grandchildren: Is there a Need?

Jaclene A. Zauszniewski, PhD, RN-BC, FAAN,

Kate Hanna Harvey Professor of Community Health Nursing and Associate Dean for Doctoral Education

Tsay-Yi Au, PhD, RN, and
Project Coordinator

Carol M. Musil, PhD, RN, FAAN
Professor of Nursing

Abstract

Grandmothers raising grandchildren may experience stress that adversely affects their health, and thus they may benefit from interventions to promote resourcefulness. However, before conducting definitive tests for effectiveness of resourcefulness training (RT), it is essential to determine the need for the training. This study of 126 grandmothers therefore examined baseline resourcefulness, attrition rates from the resourcefulness training, and perceived need for RT. Baseline resourcefulness scores indicated that 72% of the grandmothers had more than a moderate need for RT. Reasons for attrition were unrelated to perceived need. After receiving RT, 88% perceived that they needed it. The results support testing RT effectiveness as the next step.

In the United States, approximately 2.7 million grandparents are the primary caregivers for grandchildren (United States Census, 2009), and it is estimated that 4.9 million children live with a grandparent caregiver (United States Census, 2010). The majority of grandparents caring for grandchildren are grandmothers (United States Census, 2009). Taking on the responsibility for raising a grandchild can cause major changes in a grandmother's life (Davidhizar, Bechtel, & Woodring, 2000). This new role may include physical, emotional, social, financial, and legal challenges that affect their quality of life (Yagoda, 2003). In caring for grandchildren, a grandmother may experience psychological and emotional stress and neglect her own health while focusing on the physical, psychosocial, and developmental needs of her grandchild (Blustein, Chan, & Guana, 2004; Davidhizar et al., 2000; Dowdell, 2004; Landry-Meyer, Guzella, & Gerard, 2002; Minkler, Fuller-Thomson, Miller, & Driver, 1997). She may find few "others like her" in similar situations and may therefore lack support from peers (Musil, 1998). A grandmother raising a grandchild may feel stuck at a time in her life when she might otherwise have few child-care responsibilities and be looking forward to retirement (Banquer & Hoganbruen, 2000).

Studies have documented that grandmothers raising grandchildren are at increased risk for both physical and mental health problems (Musil & Ahmad, 2002; Dowdell, 2005; Grinstead, Leder, Jensen, & Bond, 2003; Whitley, Kelley, & Sipe, 2001), and elevations in depressive symptoms have been found among grandmothers raising grandchildren (Musil & Ahmad, 2002; Blustein et al, 2004; Caputo, 2001).

The negative impact of grandchild caregiving stress on quality of life may be preventable with appropriate intervention (Musil & Ahmad, 2002; Musil, Warner, Zauszniewski, Jeanblanc, & Kercher, 2006; Musil, 1998; Kelley, Whitley, Sipe, & Yorker, 2000). Grandmothers caring for grandchildren need not experience depressive symptoms or declines in their physical functioning or psychological well-being. Personal and social resourcefulness are two sets of skills that have the potential to promote psychological, social, and physical functioning (Zauszniewski, 2006; Zauszniewski, Bekhet, Lai, McDonald, & Musil, 2007; Zauszniewski, Eggenschwiler, Preechawong, Roberts, & Morris, 2006). Research has shown that adults who are high on both personal and social resourcefulness have significantly less anxiety and depression, and better self-assessed health and adaptive functioning than those who have only high personal resourcefulness or only high social resourcefulness (Zauszniewski, 1996). Thus, teaching grandmothers both personal and social resourcefulness may affect their psychological and physical health positively. However, before examining the effectiveness of teaching these resourcefulness skills, it is critical to determine whether grandmothers perceive a need for such skills and would use them in the future (Zauszniewski, 2012).

Evaluating Need for Intervention

The need for an intervention or treatment can be assessed from the perspective of medical professionals, family members, and the individuals who are recipients of the intervention; the latter are the most important persons because their beliefs about whether they need an intervention will affect their use of that intervention and hence, their health (Zauszniewski, 2012). Studies of perceived need for medications, including antiasthmatics (Conn et al, 2005), antidepressants (Aikens, Nease, Nau, Klinkman, & Schwenk, 2005; Aikens, Nease, & Klinkman, 2008), antihyperglycemics (Aikens & Piette, 2009), and antihypertensives (Ross, Walker, & MacLeod, 2004) have yielded conflicting findings, though most have shown that perceived need for medication was related to greater adherence over time. Perceived need for formal educational programs, such as cardiac rehabilitation (Cooper, Weinman, Hankins, Jackson, & Horne, 2007), stroke prevention (Pierce et al., 2009), alcohol treatment (Charuvastra, Anderson, Friedmann, & Stein, 2002), parent education (Garvey, Julion, Fogg, Kratovil, & Gross, 2006; Haire-Joshu et al., 2008), bereavement support (Hudson et al., 2008; Shinjo et al., 2010), anxiety management, (Issakidis & Andrews, 2002), and HIV risk reduction (Chandwain, Abramowitz, Koenig, Barnes, & D'Angelo, 2011), have been linked with greater anxiety, increased awareness, increased attendance, greater participation, and greater continued follow-up.

All of those studies evaluated perceived need for a treatment or intervention from the perspective of the intervention recipient; however, none of the studies focused on grandmothers raising grandchildren and none involved teaching cognitive behavioral strategies, such as resourcefulness skills. The study reported collected both qualitative and quantitative data for perceived need for an intervention to teach resourcefulness skills to grandmothers raising grandchildren.

Theoretical Frameworks

Zauszniewski's theory of Resourcefulness and Quality of Life (2006) informed the development of the resourcefulness training intervention examined in the study, and Zauszniewski's model for examining critical parameters of interventions (2012) provided the framework for examining the need for intervention from the perspective of intervention recipients. The Resourcefulness and Quality of Life Theory (Zauszniewski, 2006) defines two forms of resourcefulness skills. Personal resourcefulness consists of self-help skills that individuals perform on their own, without the help of others, such as positive affirmation

and cognitive reframing. Social resourcefulness skills are help-seeking skills that involve pursuing the aid of others in performing daily tasks. Resourcefulness theory suggests that both personal and social resourcefulness are essential for achieving the highest quality of life (Zauszniewski, 2006). The resourcefulness training intervention examined in the study reported here therefore taught both personal and social resourcefulness skills to grandmothers raising grandchildren.

Zauszniewski's model for examining intervention parameters emphasizes the importance of determining whether intervention recipients believe they have a need for the intervention. Although studies have found that resourcefulness training was effective for elders with chronic health problems (Zauszniewski, 1997; Zauszniewski, Eggenschwiler et al., 2006; Zauszniewski et al., 2007), it cannot be assumed that grandmothers raising grandchildren need or would benefit from a similar intervention.

Purpose and research questions

Therefore, this pilot intervention trial evaluated the need to teach resourcefulness skills to grandmothers raising grandchildren. Specifically, we sought to determine: 1) what percentage of the grandmothers sampled scored high on the resourcefulness scale, indicating a low need for resourcefulness training; 2) whether low resourcefulness in grandmothers was associated with greater stress and depressive symptoms; 3) whether grandmothers who dropped out of the study differed from those who continued on measures of resourcefulness, stress, and depressive symptoms; 4) what reasons grandmothers gave for dropping out of resourcefulness training; 5) what percent of grandmothers who completed resourcefulness training said they believed they needed it; and 6) what percent of grandmothers who completed resourcefulness training believed other grandmothers raising grandchildren would need it.

Methods

Design and sample

This community-based study of a convenience sample of grandmothers raising grandchildren randomly assigned the grandmothers to five treatment conditions. Two conditions consisted of resourcefulness training: grandmothers in one treatment condition were asked to keep a daily written journal (expressive writing) to practice and reinforce their use of resourcefulness skills, and grandmothers in the second condition were asked to use a digital voice recorder (verbal disclosure) for the same purpose. The third and fourth treatment conditions did not include resourcefulness training and consisted of journaling or recording. The fifth treatment condition was an attention only control condition in which grandmothers were not taught resourcefulness skills and were not asked to keep a journal or do a voice recording.

Grandmothers had to have grandchildren less than 18 years of age who lived with them for at least 6 months. Data were collected in 4 face-to-face interviews spaced 6 weeks apart using structured instruments and from the written journals and digital voice recordings completed during the resourcefulness training. Prior to subject recruitment, approval was obtained from the University Institutional Review Board. Flyers describing the research were posted in community health centers, churches, and places of business (e.g., grocery stores, department stores, restaurants, coffee houses, bookstores, libraries, etc.) and given to support groups for grandmothers raising grandchildren.

The initial sample included 126 grandmothers. Although the sample was small, it was considered sufficient for examining descriptive statistics, including frequencies and

percentages, and for identifying moderate correlations ($r=.50$) between resourcefulness and perceived stress and depressive symptoms at a significance level of $\alpha=.05$, and power of $B = .80$ (Cohen, 1992).

Resourcefulness Training Intervention

Forty grandmothers were randomly assigned to receive the resourcefulness training intervention. This was delivered by a trained intervention provider in a single 40-minute session, during which personal and social resourcefulness skills were taught followed by a 4-week period during which the grandmothers used either a daily written journal (expressive writing) or digital voice recorder (verbal disclosure) to reinforce the skills they had learned. During the 4 weeks, intervention providers had weekly phone contact with the grandmothers. The intervention took place after the baseline data collection interview and it was completed before the second data collection interview. Measures of resourcefulness, perceived stress, and depressive symptoms were completed before and after the intervention.

Comparison and Control Conditions

Grandmothers who did not receive resourcefulness training participated in a 4-week journaling group or a 4-week voice recorder group. Grandmothers in both of these groups were asked to write or record daily their thoughts and feelings regarding daily activities with their grandchildren. Like the grandmothers who received resourcefulness training, these grandmothers had weekly phone contact with intervention providers. Grandmothers in the attention control condition were not taught resourcefulness skills and did not keep a journal or do the voice recording. However, they did have weekly phone contact with intervention providers to remind them about the study and their next scheduled data collection interview. The comparison and control conditions took place within the 6-week interval between the T1 and T2 data collections.

Instruments

Grandmothers completed a self-report demographic questionnaire and measures of resourcefulness, perceived stress, and depressive symptoms. The self-report demographic questionnaire contained items about age, race/ethnicity, marital status, education, income, and number of health problems, from a checklist of ten leading health problems commonly experienced by women: heart disease, cancer, stroke, respiratory disease, diabetes, hypertension, osteoporosis, kidney disorders, mental disorders, and HIV/AIDS (United States Department of Health and Human Services, 2003).

Perceived stress was measured by the 14-item Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983) on which items are rated on a 5-point Likert scale from “never” to “very often.” Higher scores, after reversing scores on seven items phrased in the opposite direction, indicate greater perceived stress. Internal consistency estimates for the PSS, as indicated by Cronbach’s alpha, have ranged from .84 to .87 (Cohen et al, 1983; Cohen & Williamson, 1988). Test-retest reliability has been reported with a correlation of .85 (Cohen et al, 1983; Cohen & Williamson, 1988). Construct validity has been demonstrated through predictive relationships with theoretically related constructs that include self-assessed health, health service use, health behaviors, help-seeking behavior, and salivary cortisol (Schwartz & Dunphy, 2003; Wright et al., 2004). In this study sample, Cronbach’s alpha was .80.

Depressive symptoms were measured by the 20-item Center for Epidemiological Studies – Depression Scale (CES-D; Radloff, 1977) on which items are rated on a 5-point scale from “rarely” to “always.” Higher scores, after reversing scores for four items phrased in a positive direction, indicate greater depressive symptoms (Radloff, 1977). The CES-D has

widely reported validity and has been standardized for a variety of ages and races / ethnicities (Radloff, 1977). In studies of grandmothers, Cronbach's alphas have ranged from .88 to .91 (Blustein et al., 2004; Caputo, 2001; Musil, 2000; Ruiz, Zhu, & Crowther, 2003). In this sample, Cronbach's alpha was .89.

Resourcefulness was measured by the 28-item Resourcefulness Scale (RS; Zauszniewski, Lai, & Tithiphontumrong, 2006), which contains 16 items reflecting personal resourcefulness and 12 items reflecting social resourcefulness. Item responses are made on a 6-point Likert scale, from extremely non-descriptive of the respondent's behavior (0) to extremely descriptive (5). Scores range from 0 to 140, with higher scores indicating greater resourcefulness (Zauszniewski, Lai & Tithiphontumrong, 2006). A Cronbach's alpha of .83 has been reported (Zauszniewski, Lai, & Tithiphontumrong, 2006). This sample's Cronbach's alpha was .82. Construct validity was supported by confirmatory factor analysis to verify the presence of substantially correlated subscales reflecting personal and social resourcefulness ($r = .41$, $p < .001$) (Zauszniewski, Lai, & Tithiphontumrong, 2006).

In addition to the demographic questionnaire and scales measuring perceived stress, depressive symptoms, and resourcefulness, we tracked attrition and asked grandmothers their reason for dropping out of the study in order to determine whether or not that reflected a perception of little or no need for intervention. Then, at the end of the study, we asked the 40 grandmothers who were randomly assigned to receive resourcefulness training whether they believed they needed the intervention and whether they felt that other grandmothers might need the intervention.

Results

Sample characteristics

The total sample consisted of 126 grandmothers who met the study criteria and were currently raising grandchildren. Of those 126, 19% ($n = 24$) withdrew from the study after the baseline data collection interview. The remaining 81% ($n = 102$) were randomly assigned to the five treatment conditions as follows: 20 to RT with expressive writing (journal) and 20 to RT with verbal disclosure (digital voice recorder); 21 to expressive writing without RT and 20 to verbal disclosure without RT and 21 to the attention only control condition.

Ages of the study participants ranged from 40 to 82 with an average age of 58 years. One third (33%) of the sample was married while 17% were single, 29% reported living apart from their spouse, and 21% were widowed. Almost half of the grandmothers (47%) reported having some college education, and 13% reported completing a college degree; 31% had completed high school / GED, and 9% reported less than a high school education. More than half of the grandmothers (51%) reported an annual income less than \$20,000; 29% reported an income between \$20,001 and \$40,000; 18% reported an income greater than \$40,001; and 2% did not report their income. The grandmothers were in relatively good health; of the 10 health conditions listed on the checklist, they reported on average between 1 and 2 conditions. The most frequently reported conditions were hypertension (40%), diabetes (18%), and depression (15%).

Baseline resourcefulness

Scores on the Resourcefulness Scale (RS) were examined at baseline for all grandmothers initially enrolled in the study ($N=126$), including the 24 who later withdrew. Scores on the RS can range from 0 to 140. To determine grandmothers' level of need for resourcefulness training, we divided the possible RS range into five levels of need based on a mean score of 87 obtained in previous research (Zauszniewski, Lai & Tithiphontumrong, 2006) and

allocating 20 points to each need level, ranging from very low to very high need. Table 1 shows the RS score ranges with corresponding level of need along with the percentage and number of grandmothers who fell in each level of need. Based on their scores on the RS at the beginning of the study, 72% of the grandmothers who enrolled in the study had a moderate to very high need for resourcefulness training.

Correlates of resourcefulness

Next we examined correlations between resourcefulness scores and measures of perceived stress and depressive symptoms at baseline. Our premise was that if resourcefulness in grandmothers was significantly associated with greater perceived stress and depressive symptoms, resourcefulness training would be needed to provide them with the personal and social resourcefulness skills to reduce their stress and minimize their depressive symptoms. We conducted this analysis for the total sample of grandmothers (N=126), but also conducted separate analyses for those who later withdrew from the study and compared those who completed it. Table 2 shows the correlations between resourcefulness and perceived stress and depressive symptoms for the total sample, those who withdrew and those who remained in the study.

As shown in Table 2, correlations between resourcefulness and perceived stress and between resourcefulness and depressive symptoms were significant and in the expected direction, though modest in size. Less resourcefulness was associated with greater perceived stress and more depressive symptoms in the total sample of grandmothers, but these correlations were a little stronger among those who dropped out of the study.

Reasons for withdrawing

As noted earlier, 24 grandmothers withdrew from the study at some point after initial enrollment and baseline data were collected. More specifically, ten grandmothers dropped out after the first interview (baseline data collection), but before the intervention phase of the study; three of these were in the RT-EW group but none were in the RT-VD group. Eleven dropped out during the 4-week intervention phase of the study, including four from the RT-EW group and one from the RT-VD group. Another three grandmothers dropped out after completing the 4-week intervention phase but before the second data collection; however, none of these three were in either the RT-EW or RT-VD groups. None of the grandmothers who withdrew from the study were in the attention only control condition.

Although none of the grandmothers directly stated that they wished to withdraw from the study because they felt they did not need the intervention, eight said that they lost interest; it is not known whether their diminished interest came about because they felt they did not need the intervention though they did not specifically report this. Of the eight grandmothers who said they lost interest, three were in the RT-EW group but none were in the RT-VD group; five were in the comparison (EW or VD) groups. Their baseline RS scores averaged 90.38, indicating a moderate need for RT. Table 3 shows the means and standard deviations of baseline resourcefulness scores by reason for attrition. Overall, the average baseline resourcefulness score for the 24 grandmothers who withdrew from the study suggested moderate need for RT.

Grandmother's perceived need for RT

We also examined data from grandmothers who participated in both the RT intervention groups, those who used EW (journal) and those who used VD (digital voice recorder) for 4 weeks to reinforce the RT skills they had learned. Following the 4-week intervention period, we asked them whether they thought they needed resourcefulness training and whether they

felt that other grandmothers raising grandchildren would need resourcefulness training. The findings are displayed in Table 4.

Of the 40 grandmothers who participated in the resourcefulness training, 35 (88%) felt they needed the intervention, and 37 (92%) felt that other grandmothers would also need it. Baseline resourcefulness scores for those in the RT groups (N=40) indicated that none had a very low need for RT, 2 had a low need, 6 had a moderate need, 21 had a high need, and 11 had a very high need for RT. The percentages reflecting need for resourcefulness training by the grandmothers and others like them were higher for those who used VD (digital voice recorder) than for those who used EW (journals). Resourcefulness scores of grandmothers who did not think they needed RT (n=5) ranged from 85 to 104 (M=91.80; SD=7.60); one fell into the category of a somewhat low need for RT; four scores indicated a moderate need for RT.

Discussion

The baseline resourcefulness data from this study and the perceptions of need reported by participants showed a substantial need for resourcefulness training for grandmothers raising grandchildren. In this sample, 18% of grandmothers scored very low on resourcefulness, indicating a significant need to increase resourcefulness skills, and over 50% showed room for improvement. Further, the association of low resourcefulness with more depressive symptoms and stress among these grandmothers and other grandmothers (Musil, Warner, Zauszniewski, Wykle, & Standing, 2009), and with perceptions of worse family functioning in other research (Musil et al., 2006) point to the risks that low resourcefulness poses for grandmother-headed families.

In prior research, resourcefulness training improved mental health and decreased stress among older adults (Zauszniewski, Eggenschwiler, et al, 2006), and it may be particularly useful for reducing stress and depressive symptoms among custodial grandmothers. Further, RT is a low-cost intervention that is ideally suited for those with limited financial resources. In this study, the grandmothers who completed resourcefulness training in both the EW and VD groups, overwhelmingly endorsed the need for the training for themselves and grandmothers like them. However, there were study drop-outs in all but the attention control group. Grandmothers dropped out of the RT arm and out of the two comparison conditions at similar rates, and thus there might be a trade-off between effort required and perceived need that we were not able to assess for those who dropped out. Correlations of baseline resourcefulness with stress and depressive symptoms were similar among drop-outs and those who continued. However, drop-outs did convey that their level of interest, study demands, and amount of compensation all affected their participation; the association of these factors with perceived need for an intervention and study continuation are worth further attention.

This study is among the first to examined perceived need for an intervention from the perspective of the intervention recipient while also capturing the level of need by using baseline scores from a scale that measures the behavioral characteristic targeted for improvement, e.g., resourcefulness. Only one grandmother of the five who reported they did not believe they needed RT had a baseline score on the resourcefulness scale that reflected a somewhat low need for the intervention. Therefore, while an individual's appraised need for an intervention may not always be in accord with external indicators, in this study the concordance between self-appraised and objectively evaluated need was quite high.

Appraising need for an intervention is complex. It is not clear whether it is best to measure beliefs or expectancies about the outcome of the intervention, or to assess the need for

intervention by others like the recipients, or to ask, in retrospect, whether recipients thought they needed the intervention. Some studies, including the medication studies cited in the introduction, measured beliefs about medications to indicate perceived need. Perrino, Coatsworth, Briones, Pantin and Szapocznik (2001), however, determined need for their parenting intervention by defining an adolescent or parent problem that could be addressed by the intervention. Another study (Hudson et al, 2008) evaluated intervention recipients' thoughts about whether a bereavement program might be needed by others like them, similar to the qualitative component of our study, although Hudson and colleagues did not directly measure the target variable, bereavement.

All of these approaches provide useful information, but adding indicators may provide a more comprehensive picture of need. In this study, evaluation of baseline resourcefulness skills and grandmother's responses post-intervention when asked whether they thought they needed the training showed good concordance, although there were very few grandmothers whose baseline resourcefulness scores indicated a very low or low need for improving such skills. The positive findings about need for the resourcefulness intervention by intervention recipients supports moving forward to test the effectiveness of resourcefulness training in grandmothers raising grandchildren. Quantitative and qualitative data analyses to evaluate the acceptability, feasibility, fidelity, safety, and effectiveness of the intervention are the next steps in refining a potentially useful intervention for grandmothers and other caregivers.

Acknowledgments

Funding for the study was provided by the National Institutes of Health, National Institute of Nursing Research (R21-NR-010581) awarded to Dr. Jaclene A. Zauszniewski.

The authors acknowledge the editorial assistance of Elizabeth M. Tornquist of the University of North Carolina at Chapel Hill.

References

- Aikens JE, Nease DE, Nau DP, Klinkman MS, Schwenk TL. Adherence to maintenance-phase antidepressant medication as a function of patient beliefs about medication. *The Annals of Family Medicine*. 2005; 3(1):23–30.
- Aiken JE, Nease DE Jr, Klinkman MS. Explaining patients' beliefs about the necessity and harmfulness of antidepressants. *The Annals of Family Medicine*. 2008; 6:23–29.
- Aikens JE, Piette JD. Diabetic patients' medication underuse, illness outcomes, and beliefs about antihyperglycemic and antihypertensive treatments. *Diabetes Care*. 2009; 32(1):19–24. [PubMed: 18852334]
- Banquer ML, Hoganbruen K. I never thought I'd be doing this now": Grandparents Raising grandchildren, an example of community program development in a mental health promotion agency. *Journal of Geriatric Psychiatry*. 2000; 33(2):229–246.
- Blustein J, Chan S, Guanais FC. Elevated depressive symptoms among caregiving grandparents. *Health Services Research*. 2004; 39(6):1671–1689. [PubMed: 15533181]
- Caputo RK. Depression and health among grandmothers co-residing with grandchildren in two cohorts of women. *Families in Society*. 2001; 82(5):473–483.
- Chandwain S, Abramowitz S, Koenig LJ, Barnes W, D'Angelo L. A multimodal behavioral intervention to impact adherence and risk behavior among perinatally and behaviorally HIV-infected youth: Description, delivery, and receptivity of adolescent impact. *AIDS Education and Prevention*. 2011; 23(3):222–235. [PubMed: 21696241]
- Charuvastra A, Anderson BJ, Friedmann PD, Stein MD. Perceived addiction treatment needs among alcohol using injection drug users. *Journal of Addictive Diseases*. 2002; 21(4):93–106. [PubMed: 12296505]
- Cohen J. A power primer. *Psychological Bulletin*. 1992; 112:155–159. [PubMed: 19565683]

- Cohen S, Kamarck T, Mermelstein R. A global measure of perceived stress. *Journal of Health and Social Behavior*. 1983; 24:385–396. [PubMed: 6668417]
- Cohen, S.; Williamson, G. Perceived stress in a probability sample of the United States. In: Spacapan, S.; Oskamp, S., editors. *The Social Psychology of Health*. Newbury Park, CA: Sage; 1988.
- Conn KM, Halterman JS, Fisher SG, Yoos HL, Chin NP, Szilagyi PG. Parental beliefs about medications and medication adherence among urban children with asthma. *Ambulatory Pediatrics*. 2005; 5:306–310. [PubMed: 16167856]
- Cooper AF, Weinman J, Hankins M, Jackson G, Horne R. Assessing patients' beliefs about cardiac rehabilitation as a basis for predicting attendance after acute myocardial infarction. *Heart*. 2007; 93:53–58. [PubMed: 16905630]
- Davidhizar R, Bechtel GA, Woodring BC. The changing role of grandparenthood. *Journal of Gerontological Nursing*. 2000; 26(1):24–29. [PubMed: 10776166]
- Dowdell EB. Grandmother caregivers and caregiver burden. *The American Journal of Maternal Child Nursing*. 2004; 29(5):299–304.
- Dowdell EB. Grandmother caregiver reactions to caring for high risk Grandchildren. *Journal of Gerontological Nursing*. 2005; 31(6):31–37. [PubMed: 16138528]
- Garvey C, Julion W, Fogg L, Kratovil A, Gross D. Measuring participation in a prevention trial with parents of young children. *Research in Nursing & Health*. 2006; 29:212–222. [PubMed: 16676341]
- Grinstead LN, Leder S, Jensen S, Bond L. Review of research on the health of caregiving grandparents. *Journal of Advanced Nursing*. 2003; 44(3):318–326. [PubMed: 14641402]
- Haire-Joshu D, Elliott MB, Caito NM, Hessler K, Nanney MS, Hale N. High 5 for kids: The impact of a home visiting program on fruit and vegetable intake of parents and their preschool children. *Preventive Medicine*. 2008; 47:77–82. [PubMed: 18486203]
- Hudson P, Quinn K, Kristjanson L, Thomas T, Braithwaite M, Cockayne M. Evaluation of a psycho-educational group programme for family caregivers in home-based palliative care. *Palliative Medicine*. 2008; 22:270–280. [PubMed: 18477722]
- Issakidis C, Andrews G. Service utilization for anxiety in an Australian community sample. *Social Psychiatry and Psychiatric Epidemiology*. 2002; 37:153–163. [PubMed: 12027241]
- Kelley SJ, Whitley D, Sipe TA, Yorker BC. Psychological distress in grandmother kinship care providers: The role of resources, social support, and physical health. *Child Abuse & Neglect*. 2000; 24(3):311–321. [PubMed: 10739075]
- Landry-Meyer L, Guzell J, Gerard J. Grandparent caregivers: Social support and life satisfaction. *Gerontologist*. 2002; 4(1, Special Issue):53–53.
- Minkler M, Fuller-Thomson E, Miller D, Driver D. Depression in grandparents raising grandchildren: Results of a national longitudinal study. *Archives of Family Medicine*. 1997; 6(5):445–452. [PubMed: 9305687]
- Musil CM. Health, stress, coping, and social support in grandmother caregivers. *Health Care for Women International*. 1998; 19(5):441–455. [PubMed: 9849191]
- Musil CM. Health of grandmothers as caregivers: A ten month follow-up. *Journal of Women and Aging*. 2000; 12(1/2):129–145. [PubMed: 10986855]
- Musil CM, Ahmad M. Health of grandmothers: A comparison by caregiver status. *Journal of Aging and Health*. 2002; 14:96–121. [PubMed: 11892763]
- Musil CM, Warner CB, Zauszniewski JA, Jeanblanc A, Kercher K. Grandmothers, caregiving, and family functioning. *Journal of Gerontology Series B: Psychological Science and Social Sciences*. 2006; 61(2):S89–S98.
- Musil CM, Warner CB, Zauszniewski JA, Wykle M, Standing T. Grandmother caregiving, family stress and strain, and depressive symptoms. *Western Journal of Nursing Research*. 2009; 31(3):389–408. [PubMed: 19261805]
- Perrino T, Coatsworth JD, Briones E, Pantin H, Szapocznik J. Initial engagement in parent centered preventive Interventions: A family systems perspective. *Journal of Primary Prevention*. 2001; 22(1):21–44.
- Pierce C, Fahs PS, Dura A, Fronczek A, Morgan LL, Leppert T, Srnka-Debnar F, Terriquez-Kasey L, Hamilton B, Buel V. Raising stroke awareness among rural dwellers with a Facts for Action to

- Stroke Treatment-based educational program. *Applied Nursing Research*. 2011; 24(2):82–87. [PubMed: 20974062]
- Radloff L. The CES-D scale for research in the general population. *Applied Psychological Measurement*. 1977; 1:385–401.
- Ruiz D, Zhu C, Crowther M. Not on their own again: Psychological, social, and health characteristics of custodial African American grandmothers. *Journal of Women and Aging*. 2003; 15(2/3):167–187. [PubMed: 14604007]
- Ross S, Walker A, MacLeod MJ. Patient compliance in hypertension: Role of illness perceptions and treatment beliefs. *Journal of Human Hypertension*. 2004; 18:607–613. [PubMed: 15029218]
- Schwartz KA, Dunphy G. An Examination of Perceived Stress in Family Caregivers of Older Adults with Heart Failure. *Experimental Aging Research*. 2003; 29(2):221–235. [PubMed: 12623730]
- Shinjo T, Morita T, Hirai K, Miyashita M, Sato K, Tsuneto S. Care for imminently dying cancer patients: Family members' experiences and recommendations. *Journal of Clinical Oncology*. 2010; 28(1):142–148. [PubMed: 19901113]
- United States Census. U.S. Census Bureau, 2009 American Community Survey. 2009. Retrieved from <http://factfinder.census.gov/>
- United States Census. U.S. Census Bureau: America's Families and Living Arrangements: 2010. 2010. Retrieved from <http://www.census.gov/population/www/socdemo/hh-fam/cps2010.html>
- United States Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. Women's Health USA 2003. Rockville, Maryland: U.S. Department of Health and Human Services; 2003.
- Whitley DM, Kelley SJ, Sipe TA. Grandmothers raising grandchildren: Are they at increased risk of health problems? *Health & Social Work*. 2001; 26(2):105–114. [PubMed: 11378995]
- Wright RJ, Finn P, Contreras JP, Cohen S, Wright RO, Staudenmayer J, Gold DR. Chronic caregiver stress and IgE expression, allergen-induced proliferation, and cytokine profiles in a birth cohort predisposed to atopy. *Journal of Allergy and Clinical Immunology*. 2004; 113:1051–1057. [PubMed: 15208584]
- Yagoda L. Grandparent-headed households: Implications for the older adults. 2003 from http://www.socialworkers.org/practice/aging/Aging-PU_0403.pdf.
- Zauszniewski JA. Self-help and help-seeking behavior patterns in healthy elders. *Journal of Holistic Nursing*. 1996; 14(3):223–236. [PubMed: 8900615]
- Zauszniewski JA. Teaching resourcefulness skills to older adults. *Journal of Gerontological Nursing*. 1997; 23(2):16–20.
- Zauszniewski, JA. Resourcefulness. In: Fitzpatrick, JJ.; Wallace, M., editors. *Encyclopedia of Nursing Research*. New York: Springer Publishing; 2006. p. 256-258.
- Zauszniewski JA. Intervention development: Assessing critical parameters from the intervention recipient's perspective. *Applied Nursing Research*. 2012; 25(1):31–39. [PubMed: 20974101]
- Zauszniewski JA, Bekhet AK, Lai CY, McDonald PE, Musil CM. Effects of teaching resourcefulness and acceptance on affect, behavior, and cognition of chronically ill elders. *Issues in Mental Health Nursing*. 2007; 28(6):575–592. [PubMed: 17613157]
- Zauszniewski JA, Eggenschwiler K, Preechawong S, Roberts BL, Morris DL. Effects of teaching resourcefulness skills in elders. *Aging and Mental Health*. 2006; 10(4):1–9. [PubMed: 16338807]
- Zauszniewski JA, Lai CY, Tithiphontumrong S. Development and testing of the resourcefulness scale for older adults. *Journal of Nursing Measurement*. 2006; 14(1):57–68. [PubMed: 16764178]

Table 1

Baseline scores on the Resourcefulness Scale (RS) and corresponding level of need for resourcefulness training (N=126)

RS score range	% of Grandmothers	Level of need for RT
119 to 140	4% (<i>n</i> = 5)	Very low need
98 to 118	24% (<i>n</i> = 31)	Somewhat low need
77 to 97	54% (<i>n</i> = 68)	Moderate need
56 to 76	16% (<i>n</i> = 20)	Somewhat high need
0 to 55	2% (<i>n</i> = 2)	Very high need

Table 2

Correlations between resourcefulness and perceived stress and depressive symptoms

Variable	Correlations with Resourcefulness		
	Withdrawn from study (n = 24)	Remained in study (n = 102)	Total sample (N = 126)
Perceived stress	-.43 *	-.37 **	-.38 **
Depressive symptoms	-.41 *	-.40 **	-.36 **

*
p < .01**
p < .001

Table 3

Reasons for grandmothers' attrition and baseline resourcefulness score

# Grandmothers	Reason for attrition	Baseline RS score
9	Phone disconnected	<u>M</u> = 90.00 (moderate need)
8	Lost interest in participation	<u>M</u> = 90.38 (moderate need)
3	Became ill / hospitalized	<u>M</u> = 82.33 (moderate need)
2	Participation too difficult	<u>M</u> = 105.50 (somewhat low need)
2	Inadequate compensation	<u>M</u> = 110.00 (somewhat low need)
All (<u>n</u> =24)		<u>M</u> = 95.54; <u>SD</u> = 16.16

Table 4

Perceived need for RT by grandmothers

Need	Perceived Need for Resourcefulness Training		
	RT - journal (n = 20)	RT - recorder (n = 20)	Both RT groups (N = 40)
Self	85%	90%	88%
Other Grandmothers	85%	100%	92%