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Resourcefulness Training for Grandmothers: Feasibility and Acceptability of Two Methods

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Abstract

Grandmothers raising grandchildren may benefit from interventions to minimize stress and promote mental health. This pilot intervention trial with 40 grandmothers examined acceptability and feasibility of resourcefulness training (RT) using expressive writing (EW) or verbal disclosure (VD). Grandmothers in RT-EW reported challenges with the daily journaling, facing reality, and not using names; those in RT-VD listed daily recording, sharing feelings, and device failures. Word counts were greater with VD than EW but EW was used more frequently than VD. However, both EW and VD were found acceptable and feasible for practicing RT skills in grandmothers raising grandchildren and warrant further evaluation.

The phenomenon of grandmothers raising grandchildren dates back to the late 1980's. However, in recent years, the number of these women has increased dramatically. The United States Census Bureau (2009) has noted that 1.7 million grandmothers are currently providing care to meet the basic needs for food, shelter, and clothing of one or more grandchildren under the age of 18 years who live in their household. Reasons for raising grandchildren vary and include abuse and neglect, substance abuse and mental illness, incarceration, illness or death of parent, military deployment, young age of parents, unemployment, divorce, and homelessness (Del Bene, 2010; Kelley, Whitley, & Campos, 2010). Whatever the reason, many grandmothers have assumed the role of primary care-taker in addition to other responsibilities, including caring for ill spouses or parents (Kelley et al., 2010), working outside the home (Kolomer, 2008) and managing the household (McGowen, Ladd, & Strom, 2006).

In addition, although grandmothers who are older and married tend to experience less caregiver strain in raising grandchildren, possibly owing to role adaptation over time and the availability of spousal support (Conway, Jones, & Speakes-Lewis, 2011), some studies of grandmothers raising grandchildren have found that their average age was less than 59 years (McGowen et al., 2006) and most were unmarried (Fuller-Thompson & Minkler, 2000). Thus, the majority of grandmothers raising grandchildren may be at risk for experiencing considerable caregiver strain in being torn in multiple directions to meet competing demands and role responsibilities.

Stress and strain associated with providing care to grandchildren have been well-documented, as have the challenges these grandmothers face in terms of their own mental and physical health (Fuller-Thompson & Minkler, 2000; Goodman, Tan, Ernandes, & Silverstein, 2008; Kelley et al., 2010; Musil, Gordon, Warner, Zauszniewski, Standing, & Wykle, 2011; Musil, Warner, Zauszniewski, Wykle, & Standing, 2009). Thus, grandmothers raising grandchildren may benefit from interventions to reduce their stress and promote their physical and mental health. Our pilot intervention trial with such women found that these grandmothers felt a strong need for intervention to reduce stress and depressive symptoms and thought that other grandmothers like them had a similar need (Zauszniewski, Au, & Musil, 2012).

However, there have been few published intervention studies with grandmothers raising grandchildren, and most of these looked only at the effectiveness of support groups and educational programs (e.g., Collins, 2011; Kelley et al., 2007; Kelley et al., 2010; Kicklighter, Whitley, Kelley, Shipskie, Taube, & Berry, 2007), though a few incorporated health-related interventions (Kelley et al., 2007; Kelley et al., 2010; Kicklighter et al., 2007; Collins, 2011).

In a qualitative study by Brown and colleagues (2000), a 4-day health-promotion intervention was implemented through a focus group to empower grandmothers (n=28) with knowledge, skills, and confidence in raising grandchildren. Cox (2002) provided a twice a week empowerment training program for 6 weeks for 15 African-American grandmothers (one did not complete the sessions), and Collins (2011) conducted a 4-month faith-based support program with monthly group meeting for 10 elderly African American grandmothers. In intervention studies by Kelley and colleagues (2007, 2010), 120 and 529 African American grandmothers or great-grandmothers attended monthly (Kelley et al., 2007) or bi-monthly (Kelley et al., 2010) support groups, and parenting classes, and had legal resources for a year. In the most recent study, Kelley and colleagues (2010) provided an additional intervention and individual home visits to meet the children's special needs.

The interventions involved in these studies had various components, such as support groups, parenting education, health-promotion, and resources. All of the interventions included a group-based component, but this may not be feasible for grandmothers who are balancing the responsibilities of raising their grandchild, working outside the home, and maintaining their household. In addition, most of the interventions lasted from 4 days to 1 year and some required twice a week, weekly, or bi-weekly group sessions, making attendance a challenge for grandmothers with multiple demands on their time and limited access to childcare. Interventions for these grandmothers that included self-help and help-seeking skills, which grandmothers can learn and apply in a flexible and independent manner, were absent from the studies.

The study reported here therefore examined the acceptability and feasibility of two resourcefulness training (RT) methods for grandmothers raising grandchildren: expressive writing (EW, journaling) and verbal disclosure (VD, digital voice recording). Specifically, we sought answers to the following questions: 1) Is there a difference in the number of days that grandmothers keep a daily journal (RT-EW) or use a digital voice recorder (RT-VD)? 2) Is there a difference in word counts between a journal (RT-EW) and a digital voice recorder (RT-VD)? 3) Are baseline stress, depressive symptoms, and resourcefulness associated with the number of days of journaling (RT-EW) or recording (RT-VD)? 4) Are baseline stress, depressive symptoms, or resourcefulness associated with the word counts in journal entries (RT-EW) and recordings (RT-VD)? 5) What challenges are noted by grandmothers in response to journaling (RT-EW) or recording (RT-VD)? and 6) What challenges are described by intervention providers in relation to the acceptability and feasibility of RT?

Methods

Design and sample

A convenience sample of 40 grandmothers raising grandchildren was recruited from the community through posting and distribution of flyers in community health centers, churches, and local businesses (e.g., grocery stores, department stores, restaurants, coffee houses, bookstores, libraries, etc.). To be included in the study, grandmothers had to have a grandchild less than 18 years of age and living with the grandmother for at least 6 months. Approval for the study was obtained from the University Institutional Review Board (IRB).

The 40 grandmothers in the study are a subsample of a larger study of grandmothers who received a variety of treatments. This study focused on assessing the acceptability and feasibility of two resourcefulness training (RT) methods. The grandmothers were randomly assigned to keep a daily written journal (expressive writing) to practice and reinforce their use of resourcefulness skills (RT-EW) or to use a digital voice recorder (verbal disclosure) for the same purpose (RT-VD).

Although the sample of 40 was small, it was considered sufficient for examining descriptive statistics, including frequencies and percentages, and for assessing moderate correlations ($r = .50$) between number of days and words and perceived stress, depressive symptoms, and resourcefulness and large between group differences at a significance level of $\alpha = .05$, and power of $B = .80$ (Cohen, 1992).

Resourcefulness Training Intervention

The eight skills constituting RT were taught by a trained intervention provider during a single 40-minute session. These resourcefulness skills included three social (help-seeking) and five personal (self-help) resourcefulness skills. The three help-seeking strategies included: relying on family and friends, exchanging ideas with others, and seeking professionals or experts. The five self-help strategies were: organizing daily activities, positive self-talk, positive reframing, changing from usual reaction, and exploring new ideas. All grandmothers received a laminated reference card on which these eight resourcefulness skills were listed.

After the training session, the grandmothers were given further instructions (as determined by the random assignment to RT-EW or RT-VD) about how they were to practice the skills they were taught for the next four weeks. Grandmothers in the RT-EW group were asked to write 3–5 pages in a daily journal; grandmothers in the RT-VD group were asked to use a digital voice recorder for 5–7 minutes each day. In their journals or recordings, grandmothers were asked to describe what resourcefulness skills they used, whether the skills worked or not, and which were most effective. The grandmothers were told that if they became distressed while journaling or recording, they should stop. They were given contact information for places where they could receive immediate psychological support if needed.

In addition, the interventionists made weekly phone calls to remind grandmothers about journaling or recording; if days were missed, they were asked to “catch up” by summarizing that day. During these calls, the interventionists assessed each grandmother’s level of comfort or distress in relation to the intervention and were trained to make referrals for psychological support if needed. Interventionists also maintained field notes throughout the intervention.

Instruments

To evaluate the acceptability and feasibility of the two methods for reinforcing RT, qualitative and quantitative measures were needed. The characteristics of the grandmothers were assessed by a self-report demographic questionnaire, which 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 (U.S. Department of Health and Human Services, 2003).

Open-ended questions to assess acceptability and feasibility were asked of the grandmothers after they completed the RT intervention. To determine acceptability, we asked grandmothers to describe the most and least interesting aspects of the RT intervention. To ascertain feasibility, we asked grandmothers to describe the easiest and most challenging aspects of the RT intervention. To further assess feasibility, we examined the number of days during which the grandmothers maintained the daily journal (RT-EW) or digital recordings (RT-VD) and the number of words expressed in either the daily written journals (RT-EW) or on the digital voice recordings (RT-VD). By comparing the numbers of days and words used in the two methods, we sought to determine whether one method was perhaps more acceptable or feasible than the other.

In addition, we examined the field notes retained by the interventionists during the 4-week intervention in order to obtain information on the acceptability and feasibility of the RT interventions from their perspectives. Finally, we used three quantitative measures to determine whether the number of days of writing/recording and the number of words used in the journals/recordings were associated with the grandmothers' perceived stress, depressive symptoms, and resourcefulness. Data were collected on these measures prior to delivery of the RT interventions. The measures are described in Table 1.

Results

Sample demographics

Demographic features of the 40 grandmothers who participated in this analysis are summarized in Table 2. The average participant was 58 years old, rather healthy, unmarried, and fairly well educated. Half of the grandmothers were African American.

Baseline characteristics

During the first data collection interview, which took place prior to the RT intervention, the grandmothers completed measures of perceived stress, depressive symptoms, and resourcefulness. Means and standard deviations on these scales for the total sample (N=40) and subgroups in RT-EW and RT-VD are shown in Table 3.

As shown in Table 3, grandmothers in the two groups were similar on stress, depressive symptoms, and resourcefulness prior to receiving the RT intervention. Perceived stress and depressive symptom scale scores for the total sample (N=40) indicate that these grandmothers experienced fairly low stress and minimal depressive symptoms. Their baseline resourcefulness scores, however, indicated a moderate to high need for resourcefulness training (Zauszniewski et al., 2012).

Journaling vs. Recording: days and words

We examined differences between the number of days of journaling versus recording and the words counts obtained with each method. Table 4 shows the means and standard deviations for days and words for the total sample of grandmothers (N=40) and the two

subgroups defined by practice method, RT-EW or RT-VD. Results from the two independent sample t-tests are also displayed.

The possible number of days for practicing RT during the study was 28 days. As shown in Table 4, the mean number of days for the grandmothers in the journaling group (RT-EW) was on average 5 days more than that of the digital voice recording group (RT-VD), although the difference was not statistically significant. The possible number of days for practicing RT during the study was 28 days. The difference in the word counts between the two methods was substantial, with those in the recorder group using on average more than three times as many words, although this difference was also not statistically significant.

Stress, depressive symptoms, and resourcefulness

Next we examined the grandmothers' perceived stress, depressive symptoms, and resourcefulness in relation to the number of days of practicing the RT intervention and the word counts in their journals (RT-EW) or recordings (RT-VD). We found no significant associations between these variables and the number of practice days or word counts, as shown in Table 5. However, the absolute values of the correlations between the words spoken during verbal disclosure and perceived stress and resourcefulness and the correlations between expressive writing days and stress were of a magnitude suggesting moderate associations (Cohen, 1992) between these variables.

Challenges expressed by grandmothers

To further evaluate the two methods for practicing/reinforcing RT, we queried grandmothers on the most and least interesting (i.e., acceptability) and most difficult (feasibility) aspects of the RT intervention.

In regard to *acceptability*, 6 grandmothers in the RT-EW group and 2 in the RT-VD group provided irrelevant responses to the item about what was most interesting by describing the data collection or interview process instead of the actual RT intervention method. No responses were given by 3 grandmothers in the RT-EW group and 4 in the RT-VD group. In the RT-EW group, 2 grandmothers said that all parts of the RT were interesting; 4 thought the opportunity for reflection was interesting; and 5 believed that daily journaling was interesting. In the RT-VD group, 6 said that all parts of the RT were interesting; 7 found their increased self-awareness to be interesting; and 1 believed that use of the resource card listing the eight resourcefulness skills was most interesting. Four grandmothers in the RT-EW group said that keeping the journal was not interesting while the other 16 had no comment. In the RT-VD group, 2 grandmothers said that listening to themselves while recording was least interesting; 1 said that "getting started" was least interesting; and 17 gave no response to this item.

In terms of *feasibility*, 4 grandmothers in the RT-EW group and 5 grandmothers in the RT-VD group said that the whole RT intervention was easy to do. In the RT-EW group, major difficulties expressed included keeping the daily journal (n=11), facing reality (n=2), and not being allowed to mention names in the journal (n=1). Two grandmothers did not respond and 4 gave responses unrelated to the intervention. In the RT-VD group, the major difficulties expressed included remembering to record daily (n=7), sharing private feelings (n=2), and difficulties with the recorder (n=2). Nine grandmothers did not respond to this item. Other responses to feasibility items were not relevant (i.e., they were descriptions of the data collection or interview process).

Challenges recorded in field notes of interventionists

Additional information about the acceptability and feasibility of the two methods for practicing/reinforcing RT was obtained from the field notes maintained by the interventionists who taught RT skills and conducted the weekly phone follow-up calls during the 4-week intervention. Their field notes corroborated what the grandmothers reported to us as described above.

In addition, in terms of *acceptability*, interventionists noted that in the RT-EW group, 12 grandmothers admitted to missing some days of journaling, 2 said they wrote every day, 6 said that they enjoyed journaling, and 3 believed they did fine with keeping their journals. Interventionists noted that 3 grandmothers perceived that they wrote a lot while 2 felt they did not write as much as they should have. Two believed they wrote less when they felt less stressed. In the RT-VD group, only 1 grandmother told the interventionist that the intervention made her anxious and she forgot to record, and 1 said she did not like recording.

In terms of *feasibility*, interventionists noted that in the RT-EW group, 8 grandmothers said they had no problem with the intervention. However, 2 said it was challenging because it made them anxious or sad; 1 said it added to her stress in the beginning, but she later enjoyed it. Two grandmothers found it challenging because they did not know what to write since they had no stress; 1 felt it to be too time-consuming; 1 thought she could have benefitted from more frequent phone reminders than once a week, and 1 said she had difficulty applying the resourcefulness skills. One had difficulty writing because of carpal tunnel syndrome. In the RT-VD group, 8 grandmothers told the interventionist that they had no problem with the intervention; 1 grandmother reported having problems with the recording device itself; 1 said she enjoyed doing the recording; and 1 said she found it hard to remember to record but was doing her best.

Discussion

This study examined the acceptability and feasibility of resourcefulness training with reinforcement through expressive writing or verbal disclosure via a recording device in grandmothers raising grandchildren. Thus, the findings cannot be generalized to grandfathers who may be taking on similar responsibilities (Bullock, 2006; Kolomer & McCalion, 2005). However, in comparison to custodial grandfathers, grandmothers raising grandchildren have been found to express more depressive symptoms and have higher anxiety levels (Kolomer & McCallion, 2005; Smith & Hancock, 2010) and are therefore more likely to benefit from resourcefulness training interventions.

Both acceptability and feasibility of the RT intervention were generally supported in the study, which is important because of the nature of the sample. This sample, with a mean age of 58 years, was similar to samples of grandmothers participating in other studies. Although the wide range of grandmother's ages, from 40 to 82 years suggests that the intervention can be practiced by women of all age groups, it may be interesting to explore whether grandmothers within discrete age categories find one practice method more acceptable or feasible than the other.

Half of the grandmothers were African American, demonstrating the general acceptability of the intervention and reinforcement methods across Caucasian women and women of color. Over 50% of the sample reported some college education, which may have influenced participation or engagement in the reinforcement activities. Although the sample size was small in this pilot study, the demographic distribution of the study participants was encouraging relative to the overall acceptability and feasibility of the intervention.

At the study outset, grandmothers' stress scores were low, and their level of depressive symptoms did not reach the threshold for psychological distress (score = 16), but there was some mild symptomatology for the sample as a whole. Resourcefulness scores suggested moderate need for resourcefulness training (Zauszniewski et al., 2012). We were interested in examining these psychosocial variables in conjunction with days of journaling/recording and word counts in each method to see if performing the intervention when grandmothers are under more stress or feel more depressed or less resourceful would be less acceptable or feasible. While there were no significant effects of the psychosocial variables on days of journaling or recording or on word counts, perhaps because of the small sample size, there were moderate correlations ($-.35$ and $-.36$) suggesting that perceived stress might affect the number of days grandmothers write in their journals or the number of words that grandmothers use to describe their daily skills use. Interestingly, two grandmothers reported to the intervention providers that they felt they wrote less when feeling less stressed. This finding would be expected since the purpose of the journaling was to practice resourcefulness skills that they would use in response to stressful situations.

Baseline resourcefulness scores showed low to moderate correlations with words generated by either method, but not with days of practice. A larger sample is needed to evaluate whether fewer words spoken or days writing translate into less effective practice of resourcefulness skills. The negligible correlations of depressive symptoms with both reinforcement techniques are encouraging, especially since depressed individuals may be more likely to withdraw from daily activities (Radloff, 1979), but such withdrawn behavior, e.g., not using expressive reflection, was not shown by these grandmothers. This is particularly relevant because grandmothers raising grandchildren often have elevated depressive symptoms (Fuller-Thomson & Minkler, 2000; Goodman et al., 2008; Musil et al., 2009). However, performing this intervention was not associated with depressive symptoms, which reduces concern that if grandmothers are too depressed they would not be able to follow through with the RT training. Thus, these data provide general support for the acceptability/feasibility of the intervention.

Of particular interest is the overall output via writing or verbal disclosure. T-tests show no significant differences between RT-EW and RT-VD in terms of number of days that grandmothers recorded their use of resourcefulness skills or the word counts, however, the sample size may have been too small to detect such differences between the two methods. Nevertheless, grandmothers who journaled did so for 20 out of 28 days on average while grandmothers who recorded did so for 15 out of 28 days on average. Yet, grandmothers who recorded used many more words than those who kept written journals (5,000 some as compared to about 1,400). Thus, writing may require more effort to achieve clearer expression, while voice recording may allow participants to engage in more "stream of consciousness" reflection.

Among these grandmother participants, 45% (11 of 20 who kept journals and 7 of 20 who made voice recordings) commented that doing either method on a daily basis was a challenge. Despite this, the journaling group wrote, on average, on over 70% of days, though the voice recorders did so only 54% of the time. It is possible that journaling was easier for them to do than dealing with a recording device. Only one grandmother commented that additional reminders might have been useful. Acceptability issues appear less salient; only 4 journal keepers and 2 recorders suggested potential unacceptability of the reinforcement aspect of the intervention, primarily because they found it "not interesting," and only 1 felt it was too time consuming. Two thirds of the grandmothers in both groups said they enjoyed the expressive reflection, whether by journal or voice. While the intervention may have required effort, many grandmothers reported receiving benefit from it.

Interventionists mentioned that during the weekly phone calls few grandmothers described feelings of stress, anxiety, or sadness while journaling or recording. Indeed, psychological distress has been highly associated with raising grandchildren (Blustein et al, 2004; Conway-Speakes et al, 2011) and these grandmothers may have experienced heightened awareness of these feelings through the expressive disclosure methods. However, none of the grandmothers expressed severe psychological distress that warranted a referral for mental health services. Other challenges expressed to the interventionists, such as remembering to do it, having time to do it, problems with the recording device, or simply not liking it, were not unusual, unexpected, or harmful.

Overall, these data suggest that both reinforcement methods (journal and recorder) are acceptable and feasible for practicing skills taught to grandmothers during resourcefulness training, suggesting the possibility of allowing grandmothers to choose a method for practicing resourcefulness skills in the future. Having established the need for resourcefulness training in grandmothers raising grandchildren (Zauszniewski et al., 2012) and its acceptability and feasibility in the study reported here, examination of the fidelity and effectiveness of the resourcefulness training intervention are the next steps in the development and refinement of this intervention.

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References

- Brown EJ, Jemmott LS, Outlaw FH, Wilson G, Howard M, Curtis S. African American grandmothers' perceptions of caregiver concerns associated with rearing adolescent grandchildren. *Archives of Psychiatric Nursing*. 2000; 14(2):73–80. [PubMed: 10783525]
- 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.
- Cohen J. A power primer. *Psychological Bulletin*. 1992; 112:155–159. [PubMed: 19565683]
- Collins WL. A strengths-based support group to empower African American grandmothers raising grandchildren. *Social Work & Christianity*. 2011; 38(4):453–466.
- Conway F, Jones S, Speakes-Lewis A. Emotional strain in caregiving among African American grandmothers raising their grandchildren. *Journal of Women & Aging*. 2011; 23(2):113–28. [PubMed: 21534103]
- Cox CB. Empowering African American custodial grandparents. *Social Work*. 2002; 47(1):45–54. [PubMed: 11829244]
- 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.
- Cohen S, Kamarck T, Mermelstein R. A global measure of perceived stress. *Journal of Health and Social Behavior*. 1983; 24:385–396. [PubMed: 6668417]
- Del Bene SB. African American grandmothers raising grandchildren: A phenomenological perspective of marginalized women. *Journal of Gerontological Nursing*. 2010; 36(8):32–40. [PubMed: 20438017]
- Fuller-Thomson E, Minkler M. African American grandparents raising grandchildren: A national profile of demographic and health characteristics. *Health & Social Work*. 2000; 25(2):109–118. [PubMed: 10845145]

- Goodman CC, Tan PP, Ernandes P, Silverstein M. The health of grandmothers raising grandchildren: Does the quality of family relationships matter? *Families, Systems & Health: The Journal of Collaborative Family HealthCare*. 2008; 26(4):417–30.
- Kelley SJ, Whitley D, Sipe TA. Results of an interdisciplinary intervention to improve the psychosocial well-being and physical functioning of African American grandmothers raising grandchildren. *Journal of Intergenerational Relationships*. 2007; 5(3):45–64.10.1300/J194v05n03_04
- Kelley SJ, Whitley DM, Campos PE. Grandmothers raising grandchildren: Results of an intervention to improve health outcomes. *Journal of Nursing Scholarship*. 2010; 42(4):379–386.10.1111/j.1547-5069.2010.01371.x [PubMed: 21091620]
- Kicklighter JR, Whitley DM, Kelley SJ, Shipskie SM, Taube JL, Berry RC. Grandparents raising grandchildren: A response to a nutrition and physical activity intervention. *Journal of the American Dietetic Association*. 2007; 107:1210–1213.10.1016/j.jada.2007.04.006 [PubMed: 17604753]
- Kolomer S. Grandparent caregivers. *Journal of Gerontological Social Work*. 2008; 50(Supp #1):321–344.10.1080/01634370802137991 [PubMed: 18924399]
- Kolomer S, McCallion P. Depression and caregiver mastery in grandfathers caring for their grandchildren. *International Journal of Aging & Human development*. 2005; 60(4):283–294. [PubMed: 15954679]
- McGowen M, Ladd L, Strom R. On-line assessment of grandmother experience in raising grandchildren. *Educational Gerontology*. 2006; 32(8):669–684.10.1080/03601270500494048
- Musil C, Ahmad M. Health of grandmothers: A comparison by caregiver status. *Journal of Aging and Health*. 2002; 14 (1):96–121. [PubMed: 11892763]
- Musil C, Gordon NL, Warner CB, Zauszniewski JA, Standing T, Wykle M. Grandmothers and caregiving to grandchildren: Continuity, change, and outcomes over 24 months. *The Gerontologist*. 2011; 51(1):86–100. doi: 10.1093/geront/gnq 061. [PubMed: 20724656]
- Musil C, Warner C, Zauszniewski JA, Wykle M, Standing T. Grandmother caregiving, family stress and strain, and depressive symptoms. *Western Journal of Nursing Research*. 2009; 31(3):389–408.10.1177/0193945908328262 [PubMed: 19261805]
- Radloff L. The CES-D scale for research in the general population. *Applied Psychological Measurement*. 1997; 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; 15:167–187. [PubMed: 14604007]
- 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]
- Smith GC, Hancock GR. Custodial grandmother-grandfather dyads: Pathways among marital distress, grandparent dysphoria, parenting practice, and grandchild adjustment. *Family Relations*. 2010; 59(1):45–59.10.1111/j.1741-3729.2009.00585.x [PubMed: 20454600]
- United States Census. 2009 American Community Survey. U.S. Census Bureau; 2009. <http://factfinder.census.gov/>
- U.S. 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.
- Wright RJ, Finn P, Contreras JP, Cohen S, Wright RO, Staudenmayer J, Wand M, Perkins D, Weiss ST, 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(6):1051–1057. [PubMed: 15208584]
- 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, 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]

Zauszniewski JA, Au TY, Musil CM. Resourcefulness training for grandmothers raising grandchildren: Is there a need? *Issues in Mental Health Nursing*. 2012; 33(10):680–686. [PubMed: 23017045]

Table 1

Quantitative measures of stress, depressive symptoms, and resourcefulness.

Variable	Measure	Description	Psychometrics
Perceived stress	Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983)	14 items; 5-point scale; Higher scores = greater stress	Cronbach's alpha = .84–.87 (Cohen, et al, 1983; Cohen & Williamson, 1988). Construct validity supported by correlations with self-assessed health, health service use, health behaviors, help-seeking behavior, and salivary cortisol (Schwartz & Dunphy, 2003; Wright, Finn, Contreras, Cohen, Wright, Staudenmayer, Wand, Perkins, Weiss, & Gold, 2004).
Depressive symptoms	Center for Epidemiological Studies – Depression Scale (Radloff, 1977)	20 items; 5-point scale; Higher scores = greater depressive symptoms	Cronbach's alpha = .88–.91 (Blustein, Chan, & Guanais, 2004; Caputo, 2001; Musil, 2000; Ruiz, Zhu, & Crowther, 2003). Widely reported and standardized for a variety of ages and races/ethnicities (Radloff, 1977).
Resourcefulness	Resourcefulness Scale (Zauszniewski, Lai, & Tithiphontumrong, 2006)	28-items; 6-point scale; Higher scores = greater resourcefulness	Cronbach's alpha = .85 (Zauszniewski, et al, 2006) Construct validity supported by confirmatory factor analysis verifying subscales reflecting personal and social resourcefulness (Zauszniewski et al, 2006).

Table 2

Demographic characteristics of grandmothers in the study

Demographics	Descriptive Statistics (N = 40)			
Age	Mean = 57.92 (10.1)		Range: 40 to 82 years	
Health problems	Mean = 1.22 (1.46)		Range: 0 to 6 (of 10 common conditions)	
Race	Other= 5%	Caucasian=45%	African American=50%	
Marital status	Single=18%	Married=25%	Apart=32%	Widowed=25%
Education	< HS=12%	HS/GED=32%	Some college=46%	College degree=10%
Income	< 20K=5%	20 to 40K=23%	> 40K=17%	Unknown=5%

Table 3

Baseline measures of stress, depressive symptoms, and resourcefulness

Variable	Total RT sample (N = 40)			RT - EW (n = 20)		RT - VD (n = 20)	
	Mean	St. Dev.	Alpha	Mean	St. Dev.	Mean	St. Dev.
Perceived stress	23.65	7.26	.78	23.75	8.38	23.55	6.17
Depressive symptoms	13.75	8.24	.84	13.75	8.44	13.75	8.24
Resourcefulness	88.17	16.41	.79	88.25	14.15	88.10	18.78

Table 4

Differences between RT-EW and RT-VD on practice days and word counts.

Variable	RT – ALL (N = 40)	RT – EW (n = 20)	RT – VD (n = 20)	Comparison between groups	
	Mean (st.dev)	Mean (st.dev)	Mean (st.dev)	T-test	p-value
Days	17.65 (11.16)	20.30 (8.92)	15.00 (12.69)	1.53	0.14
Words	3197.85 (6198.72)	1380.05 (1438.61)	5015.65 (8357.29)	-1.92	0.07

Table 5

Correlations between stress, depressive symptoms, and resourcefulness and practice days and word counts.

Variable	RT-ALL (N = 40)		RT-EW (n = 20)		RT-VD (n = 20)	
	Days	Words	Days	Words	Days	Words
Perceived stress	-.19 (p=.24)	-.23 (p=.16)	-.35 (p=.13)	-.19 (p=.43)	-.07 (p=.76)	-.36 (p=.12)
Depressive symptoms	-.08 (p=.61)	-.10 (p=.55)	-.06 (p=.78)	-.11 (p=.65)	-.10 (p=.66)	-.13 (p=.59)
Resourcefulness	-.01 (p=.94)	.22 (p=.18)	.16 (p=.50)	.35 (p=.12)	-.10 (p=.66)	.25 (p=.30)