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Patterns of Enrollment and Engagement of Custodial Grandmothers in a Randomized Clinical Trial of Psychoeducational Interventions

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Abstract

The authors used Andersen's (2008) behavior model to investigate patterns of enrollment and treatment engagement among 343 custodial grandmothers who participated in a randomized clinical trial of three psychosocial interventions:(a) a behavioral parenting program, (b) a cognitive behavioral coping program, or (c) an information-only condition. Treatment completion was superior to that typically found with birth parents, even though the grandmothers and their target grandchildren both had high levels of mental and physical health challenges. Compliance did not differ significantly by condition but was higher among grandmothers who self-reported less positive affect, were older, and were using mental health professionals. Treatment satisfaction was highest in grandmothers who attended more treatment sessions, reported lower annual family income, had a health problem, and were using mental health professionals. The practice and policy implications of these findings are discussed, especially in terms of strategies for enhancing the engagement of custodial grandfamilies in future psychoeducational interventions.

Keywords

randomized clinical trial; treatment compliance; treatment satisfaction

Shifts in child welfare policy, increased caseloads, declines in traditional foster care homes, and case workers' favorable view of kin as foster parents have made placement with relatives the most common type of foster care when relatives are willing and able to assume care (Dolan, Casanueva, Smith, & Bradley, 2009). Grandparents often accept this role, and

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more than 900,000 grandparent householders provide care to custodial grandchildren (CGCs) under age 18 in absence of coresident birth parents (U.S. Census Bureau, 2011). These families are known as *custodial* or *skipped generation* grandfamilies, with equal proportions being headed by a lone custodial grandmother (CGM) or both grandparents. However, because less than 1% of households are headed by a lone grandfather (Ellis & Simmons, 2014) our focus is on CGMs.

Although CGMs and CGCs face higher risk of mental health difficulties than their age peers in the general population (Kelley, Whitley, & Campos, 2011; G. C. Smith & Palmieri, 2007), no studies addressing issues of enrollment and treatment satisfaction regarding evidence-based interventions involving custodial grandparents have been published. Instead, programming for these caregivers has largely involved descriptive studies of support groups that vary greatly in terms of leadership and content and are not evidence based (Littlewood, 2014). Less common support services for this population include warm lines, resource centers, websites, and respite (Minkler, Driver, Roe, & Bedeian, 1993).

Little research exists that has dealt with interventions targeting grandparent caregivers, and that which is published does not address questions bearing on sample recruitment, study enrollment, and satisfaction with interventions. For example, Vacha-Hasse, Ness, Dannison, and Smith (2000) found that, during an 8-hour psychoeducational group, group leaders perceived CGMs as having gained mastery in such areas as parenting skills, personal well-being, relationships, managing finances, and exploring legal issues. Kelley and Whitley (2003) found that a community-based interdisciplinary intervention improved grandmother caregivers' physical health and depression. In a separate study (Project Healthy Grandparents), Whitley, Kelley, and Campos (2013) demonstrated the positive effects on empowerment of a case management support group/parenting skills intervention among predominantly African American grandmothers. Smith, Dannison, and James (2013) reported on a multisite services-oriented curriculum-based intervention (The Second Time Around) that focused on the enhancement of parenting skills in custodial grandparents with attendant benefits for the grandchild (see also Dannison & Smith, 2003; A. B. Smith & Dannison, 2008). These studies, however, lacked a control group against which to evaluate programmatic impact. In contrast, in a study with a randomized control design, Hayslip (2003) found both the quality of grandparent–grandchild relationships and parental efficacy improved after participation in a six-session psychoeducational program targeting both grandparent caregiver and grandchild-related issues bearing on raising a grandchild. However, participants also reported more depression and parental role strain, reflecting frustrations they felt in not having control over many aspects of their own and their grandchildren's lives.

Given the scarcity of past evaluative intervention research in this population, it is vital to know whether custodial grandparents with elevated need actually enroll in interventions intended for them as well as whether they are more satisfied with and likely to complete a particular type of intervention. In this article we report information on 343 CGMs who participated in a longitudinal randomized clinical trial (RCT) conducted across four states in which two evidence-based interventions were compared in regard to facilitating health promotion/risk reduction behaviors benefiting the mental health of CGMs and custodial

grandchildren alike. Although the study was originally designed to compare the relative efficacy of cognitive behavioral therapy (CBT), behavioral parent training (BPT), and an information-only condition (IOC), findings regarding characteristics of enrollees as well as their intervention attendance and satisfaction can provide valuable insights on the feasibility of conducting such research as well as participant acceptance of the experimental conditions.

We address three questions that inform future clinical research and practice with this target population:

1. What characterizes the CGMs who enrolled in the RCT?
2. What levels of engagement, as indexed by treatment compliance and satisfaction, were demonstrated by GCMs?
3. Which factors are related to treatment engagement?

These questions are considered from the perspective of Andersen's (2008) behavioral model of health services use. Variations of this model have informed numerous health service utilization studies since the 1960s, including several on custodial grandfamilies per se (Montoro-Rodriguez, Smith, & Palmieri, 2012; G. C. Smith, Montoro-Rodriguez, & Palmieri, 2010; Yancura, 2013). According to Andersen, service use is affected by three broad characteristics: (a) predisposing factors that directly influence use (e.g., as age and gender), (b) enabling resources that assist or impede use (e.g., income and social support), (c) and need variables (e.g., clinical symptoms). This model also recognizes that contextual features of the health care system influence service use and satisfaction.

Our use of Andersen's (2008) model is consistent with that of Lippens and Mackenzie (2011), who employed it uniquely to examine treatment satisfaction and dropout among older users of mental health services. The categorization of study variables according to the Andersen model is shown in Tables 1 and 3. Because of the scarcity of past research on the enrollment and engagement of CGMs within intervention studies, we formulated the research questions stated above rather than specific hypotheses.

Events leading to surrogate parenting, along with the stressors of full-time parenting, have adverse psychological, physical, and social effects on both CGMs and CGCs (Hayslip & Kaminski, 2005; Park & Greenberg, 2007). Thus, it is important to examine whether grandfamilies enroll in and complete interventions intended for them. Because interventions are most likely to succeed when they are congruent with the participants' beliefs, values, and needs (Czaja & Schulz, 2003), understanding what influenced participants' response to our RCT will also be instructive for future recruitment and retention efforts (Kirby & Sanders, 2012, 2014). Our focus on compliance and satisfaction reflects the stance that treatment engagement encompasses both attitudinal and behavioral facets (Lindsey et al., 2014).

The comparisons of completion and satisfaction rates for BPT, CBT and IOC within our RCT makes the question "What predicts treatment compliance and satisfaction?" especially meaningful. Given that the IOC involved only the delivery of pertinent information to CGMs within a supportive group format, it approximated the current standard of care, which is a support group approach that provides information and opportunities to share experiences

(Littlewood, 2014; Minkler et al., 1993). The BPT and CBT conditions, on the other hand, were evidence based and targeted the development of specific and distinctive skills. The aim of BPT is changing caregivers' behaviors, perceptions, communication, and understanding to effect desired changes in child behavior (Lundahl, Risser, & Lovejoy, 2006). Although it has been used and evaluated extensively with birth parents, we know of only one study that applied BPT with caregiving grandparents (Kirby & Sanders, 2014). Unlike the CGMs in our study, however, their sample included grandparents who were not the grandchild's full-time caregiver.

The primary aim of CBT is to have caregivers reduce their own distress by using cognitive and behavioral strategies to deal with demanding situations, modify negative thoughts, increase positive activities, improve problem-solving and coping skills, and modify core beliefs (Beck, Rush, Shaw, & Emery, 1979). Although CBT has been examined for use with diverse types of family caregivers (Pinquart & Sorensen, 2006), we know of no research on its use with caregiving grandparents. Here we investigate not only whether BPT and CBT yield greater engagement than the IOC standard of care approximation but also whether they produce different levels of engagement compared to one another.

Treatment engagement may well vary by intervention type and by different CGM and CGC characteristics. Past studies, for example, suggest that the degree of behavioral difficulties in CGCs differentiates subgroups of grandparents (Hayslip, King, & Jooste, 2008; Young & Dawson, 2003). In turn, it may be that treatment engagement and satisfaction associated with BPT is greater among CGMs raising CGCs with higher levels of adjustment difficulties. In contrast, CBT may be valued more by CGMs with higher emotional distress that is independent of the CGC's behavior problems. It is also possible that CGMs prefer CBT over BPT because participating in CBT does not imply having any parenting deficits, as attending BPT might do (Chronis, Gamble, Roberts, & Pelham, 2006). Being viewed as a "good parent" is important to CGMs, who have decades of experience in childrearing and may resist the idea that their parenting skills could be enhanced (Hayslip & Kaminski, 2005).

We also explore whether key CGM and CCG characteristics are related to engagement. The only published work to draw on for this purpose is a rare in-depth investigation on how caregiving grandparents react to an intervention targeted for them, conducted by Kirby and Sanders (2012). Other studies on engagement within the mental health literature focus on specific interventions intended for specific client populations and do not involve comparisons across different types of intervention approaches, as we do here. In addition, the present study is unique in several respects from the earlier work done by Kirby and Sanders with caregiving grandparents. One difference is that Kirby and Sanders focused only on how a single BPT program (Triple P) was accepted without a comparison to other interventions. Another difference is that they used focus groups to see how grandparents viewed a parenting program developed for them without having them participate in the program. In contrast, we examine how CGMs respond as actual intervention participants. Finally, because Kirby and Sanders obtained data from only 14 grandparents, they were unable to look for potential group differences as was permitted by our much larger sample in the present study

Method

Participants

Institutional review board approval was obtained at all four sites (California, Maryland, Ohio, and Texas). The participants were 343 CGMs enrolled in a multisite National Institutes of Health–funded longitudinal RCT comparing the efficacy of BPT, CBT, and an IOC, to improve and/or maintain the mental health of CGMs and CCGs alike. Inclusion criteria were that CGMs provided care to a target CCG between ages 4 and 12 for at least 3 months at her home in complete absence of the CCG's birth parents; were fluent in English; could attend 10 two-hour group sessions at a community site; and self-identified as being White, Black, or Hispanic. If a CGM cared for multiple CGCs between ages 4 and 12, then a target CGC was selected by asking CGMs to identify the child who was "most difficult" to care for. Recruitment was identical across sites and involved a multipronged approach (e.g., media announcements; schools, social service and health providers, courts, libraries, faith communities, support groups; brochures; and purchased targeted mailing lists). The most productive recruitment sources were helping professionals (19.6%), newspapers (17.6%), social networks (16.3%), and support groups (14.4%;for details Strieder et al., 2013).

The RCT was called Project COPE (Caring for Others as a Positive Experience) and was described to participants as providing "information to help grandmothers get through the difficult job of caring for grandchildren in changing times." Although 540 interested CGMs met the above inclusion criteria, only 343 expressed the capability of participating in a group at a specific time and location and thus were included in the RCT. Key background characteristics of the 343 CGMs and the target CCGs are presented in Table 1.

Procedure

The 343 enrolled CGMs were randomly assigned across the four sites to BPT, CBT, or IOC. Each condition was delivered across 10 two-hour sessions in groups co-led by a professional leader and peer CGM in community settings.. Free child care and meals were provided at each session to foster attendance. All RCT conditions were manualized to provide structure for intervention delivery, enable the interventions to be delivered consistently by different leaders, facilitate staff training, and allow treatment replication (McMurran & Duggan, 2005). Treatment fidelity was monitored by trained raters who used checklists derived from the manual corresponding to each intervention.

Participants in the BPT condition received the Level 4 group version of Triple P (Sanders, Markie-Dadds, Tully, & Bor, 2000), CGMs in the CBT group received an adaptation of the Coping With Caregiving program originally developed by Gallagher-Thompson et al. (2002) for use with caregivers of persons with dementia, and CGMs in the IOC received informational readings (on such topics as the importance of self-care, keeping your grandchild healthy, and the art of discipline) that were compiled by our research team for discussion in the group sessions. The content covered within each intervention condition is available from the first author.

Baseline data were collected within 1 month before each RCT group began, and postintervention interviews occurred within a month after each group ended. Verbal and

written consent was obtained from all CGMs. Data reported here are from baseline interviews, a satisfaction questionnaire completed at postintervention, and the attendance records kept by group leaders. Although long-term efficacy continued to be measured on CGMs and CGCs every 6 months up to 2 years after intervention, those data are not pertinent to the present study.

CGM psychological distress—Depression was assessed by the 20-item Center for Epidemiological Studies Depression scale (Radloff, 1977). On each item, CGMs rated how often they had felt a particular way in the past week on a 4-point scale that ranged from 0 (*rarely or none of the time—less than 1 day*) to 3 (*most or all of the time—5 to 7 days*). Potential scores range from 0 to 60 (α = .91). Scores ≥ 16 reflect clinical depression. Anxiety was assessed by the five-item Overall Anxiety Severity and Intensity Scale (Norman, Cissell, Means-Christensen, & Stein, 2006). Items (e.g., “In the past week, how often have you felt anxious?”) was rated on a 5-point scale that ranged from 0 (*never*) to 4 (*all the time*). Potential scores range from 0 to 20 (α = .86). Scores ≥ 8 reflect clinical levels of anxiety.

CGC adjustment—The parent-informant version of the Strengths and Difficulties Questionnaire (SDQ; Goodman, 2001) was administered to CGMs to assess CGC mental health. Externalizing problems were assessed by summing the Hyperactivity–Inattention (e.g., “Easily distracted, concentration wanders”) and Conduct Problems (e.g. “Often loses temper”) scales (α = .75). Internalizing problems were assessed by summing the Emotional Symptoms (e.g. “Many worries or often seems worried”) and Peer Problems (e.g., “Picked on or bullied by other children”) scales (α = .74). Grandmothers rated each item as being either 0 (not true), 1 (somewhat true), or 2 (certainly true) on the basis on the target CGC’s behaviors over the last 6 months. The above procedures are consistent with the sanction that the broader internalizing and externalizing subscales may be used instead of the hypothesized five SDQ subscales (Goodman, Lamping, & Ploubidis (2010). Scores for both the internalizing and externalizing scales range from 0 to 20. Clinical cutpoints were computed separately for the Emotional Symptoms, Peer Problems, Conduct Problems, and the Hyperactivity–Inattention subscales according to the original three-band (normal, borderline, abnormal) categorization procedures specified by Goodman (see http://www.sdqinfo.org).

Positive affect was measured by the Positive Affect scale from the Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988). Grandmothers were asked to describe the extent to which they experienced each of 11 positive emotions (e.g., excited, enthusiastic) on a regular basis on a scale that ranged from 0 (*very slightly or not at all*) to 4 (*extremely*); possible scores range from 0 to 44 (α = .91).

Social support was measured by the eight-item Expressive Support Scale (Pearlin, Mullan, Semple, & Skaff, 1990). Each item (e.g., “You have friends that you can talk to when you are feeling down or discouraged” was rated on a scale that ranged from 1 (*strongly disagree*) to 5 (*strongly agree*), with potential scores ranging from 8 to 40 (α = .87).

Treatment compliance was assessed by whether or not a CGM attended at least four of 10 group sessions across the RCT, including any make-up sessions completed. The developers of both the BPT and CBT interventions regard this number as the minimum dose for clinical impact. In contrast, intent-to-treat (ITT) status was operationalized as attending 0 to three sessions. We also computed the total number of sessions attended by each CGM, which could range from 0 to 10 (which included make-up sessions).

Treatment satisfaction was measured by five items from the Client Satisfaction Survey used for evaluating the Triple P program along with five items developed specifically for the present study. Each item (e.g., "To what extent has the program met your needs?") was rated at posttest by CGMs on a 5-point scale from 0 (*not at all*) to 4 (*very much*). Exploratory factor analysis (conducted with SPSS Version 21) showed that these 10 items form a one-dimensional scale with factor loadings ranging from .68 to .89 (α =. 95). Possible scores range from 0 to 40.

CGM health was measured by the following three items, scored as 0 (no) or 1 (yes): (a) "Do you have any health problems right now?", (b) "Are you limited in the kinds of work or activities that you can do?", and (c) "Do you accomplish less than you would like?"

CGC health was measured by asking CGMs to rate the present health status of the target CGC along a 5-point scale that ranged from 0 (*poor*) to 4 (*excellent*).

Missing data were less than 15% for all variables and were missing completely at random: (Little's MCAR test: $\chi^2(832) = 848.150$, $p = .341$, with missingness being distributed fairly evenly across study measures with highest missing on family income. Ten imputed data sets were used in the Bayesian multiple-imputation procedure of Mplus 7.1 (Muthén & Muthén, 1998–2012), with results pooled across all 10 data sets.

Results

Table 1 presents the key characteristics of the CGMs and CGCs enrolled in our RTC, with the left column providing a portrait of the overall sample that elected to enroll. In regard to predisposing factors, the average age of CGMs was 58.4 years and that of the target CGCs was 7.8 years. Although we attempted to recruit equal numbers of White (44.3%), Black (43.4%), and Hispanic families, the last group comprised only 11.1% of the sample. Participating CGCs comprised approximately an equal number of boys and girls, and they had been cared for by the GCMs for an average of 5.2 years. The most common reasons for care provision were parental drug abuse and abuse of the CGC by a birth parent. The average number of CGCs being cared for was 1.8.

In regard to enabling factors, the majority of CGMs were unmarried, unemployed, had a yearly family income under $45,000, reported at least one current health problem, and had an educational attainment of at least some college.

In regard to need factors, clinical cutoff scores suggested that depression was present among nearly 40% of CGMs, although fewer grandmothers (21.6%) fell within the clinical range for anxiety. Correspondingly, nearly one third of the CGMs reported using a mental health

professional for their own needs. The mental health needs of the target CGCs were similarly high, with about 40% of CGCs were reported by CGMs to be at either the borderline or abnormal cutoff scores across all five subscales on the SDQ. Nearly one third of the CGCs were reported by CGMs to be using mental health professionals. About 25% of CGMs rated the CGC's physical health as less than excellent.

In regard to contextual factors, approximately equal numbers of CGMs were randomly assigned to each RCT condition and were located within each of the participating four states (as per study design). On average, CGMs were willing to travel about 17 miles to attend the RCT sessions, but the extent of variability among participants was high.

The middle columns of Table 1 show a comparison between compliant and ITT families; independent-group *t* tests were conducted for all continuous variables, and chi-square tests of independence were conducted for categorical variables. Among the significant predisposing factors, compliant CGMs were more likely to be older, caring for older CGCs, have fewer CGCs in their care, and less likely to be providing care because of parental unwillingness. Positive affect was the only significant enabling factor related to compliance, with compliant CGMs reporting less positive affect. Among need factors, a greater proportion of CGMs using a mental health professional were compliant. No need factors regarding the CGCs were significantly related to compliance. Among contextual factors, compliance was lowest for CGMs assigned to CBT and highest at the Maryland site.

Not shown in Table 1 is that ITT status comprised both CGMs who attended no sessions at all ($n = 70$) and those who attended only one to three sessions ($n = 39$). In other words, 64% of ITT CGMs (or 20% of the entire sample) attended no sessions. Further analyses revealed that a higher percentage (44%) of CGMs assigned to the CBT condition attended no sessions compared to CGM assigned to the other two conditions. Willingness to travel was unrelated to compliance.

The variables associated with treatment compliance at the univariate level were then entered into a logistic regression analysis to identify the most salient predictors. In addition, the following variables were entered as sociodemographic controls even though they were unrelated to treatment compliance at the univariate level: CGM race, marital status, family income, CGM education, and CGM employment status. RCT condition was excluded given the unequal distribution of those assigned to the CBT condition who attended no sessions, thereby making interpretation of RCT condition difficult as a predictor of compliance. Three variables within this analysis (see Table 2) emerged as significant predictors; specifically, CGMs were more likely to be compliant if they had less positive affect, were older, and were using a mental health professional. None of the variables included as sociodemographic controls were significantly associated with treatment compliance.

The analyses regarding satisfaction were limited to CGMs who attended at least one session regardless of compliance or ITT status and for whom complete data were available ($n = 163$). The mean satisfaction score for this subsample was 32.6 ($SD = 8.9$ along a scale from 0 [*not at all*] to 4 [*very much*]). The median was 36.0. Most (73.6%) CGMs had a mean greater than or equal to 30.0, and 24.5% had a mean score of 40.

Table 3 summarizes the findings regarding treatment satisfaction according to the Andersen (2008) model. In these analyses, relationships involving continuous independent variables were examined with Pearson product–moment correlations, those involving dichotomous categorical independent variables were examined with independent *t* tests, and those involving independent variables with multiple categories were examined using a one-way analysis of variance. No predisposing factors were related to satisfaction at statistically significant levels. As for enabling factors, greater satisfaction was associated with the CGM having a physical health problem and lower family income. In terms of need factors, CGMs who were using a mental health professional for their own needs showed significantly higher satisfaction than CGMs who did not. Among the contextual factors examined, satisfaction was significantly higher for CGMs who attended more sessions. No differences regarding satisfaction were found across the three RCT conditions.

Next, the variables associated with treatment satisfaction at the univariate level were entered simultaneously into a linear regression analysis to identify the most salient predictors. To control for potential sociodemographic influences the following variables were also entered: CGM race, marital status, CGM education, and CGM employment status: As shown in Table 4, four variables in the analysis ended up as statistically significant predictors. Greater satisfaction was associated with attending more treatment sessions, lower family income, using a mental health professional, and CGM having a health problem. None of the sociodemographic control variables were related to treatment satisfaction significantly. This model explained 25% of the variance in treatment satisfaction.

Discussion

From the framework of Andersen's (2008) behavioral model, we addressed three questions with data from 343 CGMs enrolled in an RCT in which two evidence-based interventions (CBT and BPT) were compared to each other and to an IOC. We examined three questions: (a) What attributes characterize CGM who enrolled in the RCT? (b) What levels of engagement, as indexed by treatment compliance and satisfaction, were demonstrated? and (c) Which factors predict treatment compliance and satisfaction? The findings are discussed with emphasis on how they inform research and practice.

Who Enrolled?

It is worth noting that 540 CGMs expressed interest in and were screened as eligible for participating in our RCT. However, only 343 said that they could actually attend on the days and times the groups were offered. This response rate suggests that CGMs are receptive to psychoeducational interventions targeted for them, even within the unusual context of a clinical trial study.

Of the 343 enrolled CGMs, the need for interventions provided was high with respect to the psychological difficulties identified among CGMs and target CGCs. Although nearly 40% of the CGMs were at or above the clinical cutoff for depression, a smaller percentage (32.7) reported using mental health professionals. Similarly, although half the CGCs were at the borderline or abnormal levels on the SDQ subscales, only one third were receiving mental health services. These findings are consistent with past reports of elevated risk for

psychological difficulties among population-based samples of CGMs (for reviews, see Hayslip & Kaminski, 2005, and Park & Greenberg, 2007) and CGCs (G. C. Smith & Palmieri, 2007). They further suggest that CGMs are attracted to needed services when made available to them, select themselves into such services, and will travel to attend them (M = 17.1 miles) if transportation is available.

As for enabling factors, an alarming number of physical health issues were present, with nearly half of the CGMs experiencing a health problem themselves and about 25% of CCGs reported to be in only poor to good health. This corresponds to reports that CGMs are likely to experience adverse health changes in the caregiver role (Hughes, Waite, LaPierre, & Luo, 2007; Musil & Ahmad, 2002; Park & Greenberg, 2007) and that CGCs frequently also have physical difficulties stemming from fetal exposure to toxic substances in the womb, prior abandonment, and the limited abilities of their caregivers (Kennedy & Keeney, 1988). Our findings suggest that health care providers may be excellent sources of referral to psychoeducational interventions and that practitioners should be vigilant for potential unmet health needs among custodial grandfamilies. It is also remarkable that our sample of CGMs with cars were willing to travel considerable distances to attend RCT sessions despite their self-reported health challenges. The enrolled CGMs were low in other enabling resources, too. Most were unmarried, had an income below $45,000, and were unemployed. This corresponds to reports that CGMs tend to be older, single, and have lower incomes than non-kin (foster) carers (Dolan et al., 2009). Yet most CGMs in our study had at least some college education, which may explain their commitment to an RCT conducted by research universities.

Among predisposing factors, it is interesting that the distribution of boys and girls was equivalent, despite past findings that male CGCs tend to exhibit greater behavioral difficulties than do females (G. C. Smith & Palmieri, 2007). In addition, few Hispanic families enrolled despite our extensive efforts to recruit them. Reasons for care reported by CGMs were those typically found in most studies of custodial grandfamilies, with parental drug abuse being predominant.

Patterns and Predictors of Treatment Compliance

Although far from ideal, the 68% level of compliance observed in our RCT is considerably better than the 50% rate that typically occurs in family-oriented intervention research with birth parents (Jensen & Grimes, 2010). In fact, over 75% of the CGMs who attended at least one RCT session ended up reaching our defined level of treatment compliance. This relatively good rate may be partially explained by our use of “continuous enhancement” strategies often recommended in the literature for increasing compliance within family-oriented intervention programs (Becker et al., 2013; Lindsey et al., 2014). These included making personal reminder phone calls, offering free child care and meals, involving peers as co-leaders, providing make-up sessions, requiring homework, and using convenient community settings for intervention sites.

On the other hand, we did not systematically use any approaches for reducing failure to attend any sessions after CGMs officially enrolled in the RCT. In retrospect, the systematic use of strategies designed for this purpose (e.g., assessing barriers to treatment, promoting

accessibility more fully, and providing psychoeducation about services) may have increased first-session attendance (Becker et al, 2013). In fact, the superior compliance observed at the Maryland site may have occurred because it provided better accessibility assistance than did our other three sites because of its greater experience in conducting intervention research with at-risk families. We also believe that compliance by CGMs would have been even higher if they had been given choice of treatment times and locations (Oldham, Kellett, Miles, & Sheeran, 2012). Finally, although compliance was significantly lower for the CBT compared to the BPT or IOC groups, further investigation revealed that this condition was disproportionately affected by non-initiators. Thus, the lower compliance rate does not reflect dissatisfaction with the content delivered within CBT.

At the univariate level, statistically significant predictors of compliance emerged across all four Andersen (2008) model components. Greater compliance occurred (a) when both CGMs and CGCs were older, and fewer CGCs were being cared for (predisposing); (b) if CGMs had less positive affect (enabling); (c) when CGMs were using a mental health professional (need); and (d) when families were in the BPT or IOC conditions or were from the Maryland site (contextual). However, when these individual correlates of compliance were examined at the multivariate level we found that greater compliance was significantly related only to lower CGM positive affect, use of mental health professionals by CGMs, and when CGMs were older.

That older CGMs were more compliant than younger CGMs is in line with findings in the mental health literature that older age is associated with lower dropout rates, presumably because older persons are more likely to trust service providers and to adhere to their recommendations (Lippens & Mackenzie, 2011). It is also likely that older CGMs give care to older CGCs, which may explain why compliance was higher at the univariate level among CGMs who were caring for older children. Despite the absence of supporting evidence, it is tempting to conclude that compliance was positively related to use of mental health professionals because the latter were supportive of grandmothers' participation in the present study. Finally, although we viewed positive affect as an enabling factor because less treatment dropout is typical among older adults with lower levels of personal distress (Lippens & Mackenzie, 2011), our finding that compliance was higher among CGMs with less positive affect suggests that it might be best viewed as a need factor. As widely noted in the parenting literature, caregivers are likely to find parenting a challenge even when they experience only daily hassles in the absence of explicit psychological dysfunction (see, e.g., Conley, Caldwell, Flynn, Dupre, & Rudolph, 2004). In this respect, attempts to increase CGM positive affect may be as important as diminishing their psychological distress.

Patterns and Predictors of Treatment Satisfaction

On a 10-item satisfaction scale with items positively worded and response alternatives ranging from 0 (*not at all*) to 4 (*very much*), the majority (73.6%) of CGMs had average satisfaction scores greater than or equal to 30.0, with the median at 36. Not only was the overall level of satisfaction high, but also mean scores were nearly identical across the three RCT conditions. Thus, no clear favorite intervention type emerged.

It should be noted that although we viewed the IOC as representing “usual care,” this condition was highly structured, led by professionals, allowed CGMs to express themselves in a safe group environment, and provided useful information to participants. Unfortunately, it is rare to find support groups with these exact characteristics being widely available to custodial grandparents (Littlewood, 2014; G. C. Smith, 2003). Thus, our findings do not necessarily imply that CGMs will be equally satisfied with receiving “usual care” as compared to evidence-based interventions.

Correlates of treatment satisfaction were considerably different than those identified for compliance, which reinforces the belief that treatment engagement is a multidimensional construct with different elements associated with different engagement domains (Becker et al., 2013; Lindsey et al., 2014). At the univariate level, greater satisfaction was related to poorer CGM health, less family income, use of mental health professionals by CGMs, and higher attendance. At the multivariate level, all four of these variables remained as significant correlates of treatment satisfaction.

It not surprising that better attendance was associated with higher satisfaction because one would expect continued attendance to depend on service satisfaction. Not examined in the present study, yet important to consider, is that treatment satisfaction also increases the likelihood of attending follow-up services (Lippens & Mackenzie, 2011). Of considerable note is our finding that greater satisfaction occurred when CGMs had a lower family income and a health problem given that these factors are typically viewed as barriers to service access and utilization (Lippens & Mackenzie, 2011; McKay, McCadam, & Gonzales, 1996). However, we purposely eliminated barriers for vulnerable CGMs by not charging for services, providing child care, serving free meals, and holding sessions in close geographic proximity to participants’ homes. These gestures, combined with the attention received from group leaders, may have been especially satisfying to vulnerable grandfamilies, whose needs are often disregarded by service providers within the community (Hirshon, 1998). The fact that use of mental health professionals emerged as a statistically significant predictor of both treatment compliance and satisfaction points to the potentially important role these practitioners may play in encouraging custodial grandfamilies to use supportive services.

Further Implications for Practice With CGMs

The overall positive level of treatment satisfaction and higher than typical compliance rates observed in the present study suggest that BPT and CBT are interventions that would be well received by CGMs if they were to be disseminated within the broad community. In turn, this suggests that service providers and community agencies may wish to expand the limited types of interventions typically available to custodial grandparents (Fruhauf & Hayslip, 2013; Hayslip & Kaminski, 2005; Littlewood, 2014) to also include evidence-based programs that are aimed at developing specific parenting and coping skills. Yet, because significant numbers of families failed to attend at least one session and many others attended fewer than the minimal dose of four sessions, it is critical to identify strategies for promoting optimal engagement.

In addition to the various “continuous enhancement” strategies noted above for fostering attendance during the course of treatment, community professionals who offer

psychoeducational programs to custodial grandfamilies might also consider using various "preparatory enhancement" approaches designed to help families attend their first session by improving accessibility or by providing preintervention education about services to families (Lindsey et al., 2014). For example, preintervention education could provide caregiving grandparents with information regarding the structure, content, process, and outcomes to expect from a given intervention being offered along with an assessment of barriers (both attitudinal and pragmatic) that might preclude attendance (Mah & Johnston, 2008).

For parent training programs in particular, preintervention education might include motivational enhancement techniques as well as acknowledgment of the custodial grandparent's positive parenting experiences in the past in order to minimize resistance to parenting advice (Hayslip & Kaminski, 2005; Mah & Johnston, 2008; Kirby & Sanders, 2014). After receiving such preintervention education, grandparents could then choose if they want to proceed with the intervention. Not only would this ability to choose enhance attendance among those who do enroll (Mah & Johnston, 2008), it might also likely reduce the number of eventual dropouts from treatment dissatisfaction. Unfortunately, the random assignment required by our RCT did not allow CGMs their choice of experimental treatment conditions.

Levels of compliance and satisfaction across the three RCT interventions was similarly high, supporting their acceptability to our population. Many agencies and organizations serving grandfamilies have the resources to offer traditional information and support groups, and the growing literature on related best practices can optimize this standard treatment. The minimal differences in levels of attendance and treatment satisfaction that we found between the BPT and CBT conditions is also encouraging. Yet these types of evidence-based programs are much less widely available to CGMs (Fruhauf & Hayslip, 2013), even though there appeared to be an important need for them among the majority of custodial grandfamilies who enrolled in our RCT.

In is interesting that our CGMs were equally satisfied with CBT and BPT, in view of the recent call for combining low-intensity parenting interventions like Triple P with low-intensity cognitive behavioral coping interventions (Palmer, Henderson, Sanders, Keown, & White, 2013). The expected outcomes of this merger would be improved parenting practices, decreased child problem behaviors, reduced caregiver stress, and improved well-being. The families who enrolled in our RCT were high in both CGM and CGC mental health difficulties, supporting the need for this dual approach. Organizations should consider training staff in these models in order to enhance the domains of support available to grandfamilies. Optimally, a variety of psychosocial interventions could be available, using a screening process to both match the family to the appropriate intervention and enhance their opportunities to take part in service choice decisions. Furthermore, systematically tracking attendance and measuring satisfaction will allow service providers to report on and be responsive to feedback from participants.

Limitations and Future Directions

There are several limitations associated with the present study that point to important directions for future research. One shortcoming is that the present sample of families who

enrolled in a university-based RCT may be unlike those who would otherwise access services through more traditional channels. Thus, more naturalistic program evaluation studies of similar interventions offered within the general community are needed as well (Littlewood, 2014).

Similarly, universities may be able to mobilize a unique pool of professionals and other resources that are less available to community providers. Both the CBT and BPT interventions are generally delivered by master's-level practitioners who have received specific training in the models. The staffing demands and costs associated with developing proficiency in evidence-based programs may contribute to the fact that they are much less widely available than traditional support groups, yet the minimal differences in levels of attendance and treatment satisfaction reported indicates their high levels of acceptance.

It should also be noted that our classification of variables according to the Andersen (2008) model may be inexact. For example, Anderson believed that the role of need in predicting social service use is more complicated than it is for health services because need may interact with predisposing factors when determining social service use (Montoro-Rodriguez, Kosloski, & Montgomery, 2003). Thus, our characterization of CGC behavioral problems as an indicator of need by CGMs for the types psychoeducational interventions examined in the present study should perhaps be expanded to reflect this perspective.

Another limitation is that we considered only session attendance and satisfaction as indices of treatment engagement, although other indicators (e.g., therapeutic alliance, quality of within session participation, punctuality, homework completion, and out-of-session practice) need to be examined as well (Becker et al., 2013). Because of sample size issues, we also combined CGMs who never attended at all with those who attended a low number of sessions into a single ITT category for our analyses. In turn, important differences between these two types of families may have been overlooked. Our sample was also limited in several key ways. For example, not included were grandfathers or CGMs caring for CGCs beyond the ages of 4–12. Also, only a small number of Hispanics were represented despite our diligence to recruit them. We believe that future studies are necessary to identify barriers to participation among Hispanic grandfamilies and the corresponding strategies for offsetting them. It should also be observed that a great number of statistical tests were performed in exploring questions of study enrollment and treatment compliance. Thus, there is the possibility of inflated Type I errors in our findings.

Finally, our analysis of the relationship between treatment engagement and key treatment-related outcomes (e.g., enhanced parenting among CGMs and improved mental health status for CGMs and CGCs), although not discussed in this article, are forthcoming.

Despite these limitations, the present study offers a rare and much-needed glimpse into how custodial grandfamilies respond to psychoeducational interventions targeted specifically for them. As Kirby and Sanders (2014) so aptly stated, "Assessing for acceptability of a programme and its strategies is a necessary step in helping improve the reach of psychological interventions, as effectiveness alone does not equate to successful programme dissemination" (p. 286).

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Table 1

Characteristics of Enrolled Families by Compliance Level and Intent-to-Treat Status According to the Andersen (2008) Model

Characteristic and test	Compliance vs. intent to treat			Statistical difference
	Entire sample (n = 343)	Compliant (n = 233)	Intent to treat (n = 110)	
Predisposing				
CGM age (years, *M*/*SD*)	58.4/8.2	59.2/8.1	57.0/8.2	$t(341) = -2.34^{*}$
CGC mean age (years)	7.8/2.6	8.0/2.6	7.3/2.5	$t(341) = -2.30^{*}$
[a]CGM race/ethnicity (%)				
White	44.3	43.5	47.7	$\chi^2(2) = 0.91$
Black	43.4	45.7	40.2	
Hispanic	11.1	10.8	12.1	
Miscellaneous other	1.2			
CGC gender (%)				
Male	51.0	51.3	50.5	$\chi^2(1) = 0.20$
Reasons for care (% yes)[a]				
Parental drug abuse	47.2	47.4	46.8	$\chi^2(1) = 0.01$
Parental child abuse	38.5	41.9	31.2	$\chi^2(1) = 3.59$
Parental incarceration	28.3	29.5	25.7	$\chi^2(1) = 0.53$
Parental unwillingness	23.3	21.4	27.5	$\chi^2(1) = 1.58$
Parental mental health	21.0	20.5	22.0	$\chi^2(1) = 0.10$
Parental death	10.2	11.1	8.3	$X^2(1) = 0.66$
Teen pregnancy	7.6	6.0	11.0	$\chi^2(1) = 2.68$
Parental physical health	4.1	5.1	1.8	$\chi^2(1) = 2.06$
Miscellaneous other	18.6			
Number of CGCs cared for (*M*/*SD*)	1.8/1.0	1.7/1.0	2.0/1.1	$t(341) = 2.17^{*}$
Enabling				
Current marital status (%)				
Married	38.5	37.6	45.0	$\chi^2(1) = 1.67$

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Characteristic and test	Compliance vs. intent to treat			Statistical difference
	Entire sample (*n* = 343)	Compliant (*n* = 233)	Intent to treat (*n* = 110)	
Unmarried	61.5	62.4	55.0	
Family yearly income				
< $15,000–$30,000	47.2	46.6	48.6	$\chi^2(2) = 2.39$
$30,000–$75,000	39.7	41.9	34.9	
> $75,000	13.1	11.5	16.5	
CGM education (%)				
> High school	14.6	12.4	16.5	$\chi^2(3) = 4.53$
High school graduate	21.0	18.8	21.1	
Some college	45.5	49.6	37.8	
Bachelor's or above	19.0	19.2	24.8	
CGM employment status				
Working	42.3	38.9	45.9	$\chi^2(1) = 1.50$
Not working	57.7	61.1	54.1	
Positive affect (*M*/*SD*)	32.7/7.7	31.9/7.5	33.7/8.0	$t(341) = 1.96^{*}$
CGM physical health (self-reported)				
Current health problems (%)	51.9	53.4	45.0	$\chi^2(1) = 2.13$
Limited in work/activity (%)	36.2	36.8	34.9	$\chi^2(1) = 0.02$
Accomplish less would like (%)	39.7	39.3	38.5	$\chi^2(1) = 0.02$
Social support (*M*/*SD*)	18.1/4.3	17.8/4.2	18.4/4.4	$t(341) = 1.07$
Need				
CGM mental health				
Clinical cutoffs (and by category)				
Depression—CES–D: ≥ 16	37.6	37.6	37.6	$\chi^2(1) = 0.00$
Anxiety—OASIS: ≥ 8	21.6	22.6	20.2	$\chi^2(1) = 0.27$
% Using mental health professionals	32.7	36.8	22.9	$\chi^2(1) = 6.49^{**}$
CGM adjustment problems				
SDQ cutoff categories (%)				

Characteristic and test	Compliance vs. intent to treat			Statistical difference
	Entire sample (n = 343)	Compliant (n = 233)	Intent to treat (n = 110)	
Emotional problems				$\chi^2(2) = 3.64$
Borderline	11.4	14.1	9.2	
Abnormal	27.7	30.3	24.8	
Peer problems				$\chi(2) = 3.00$
Borderline	16.9	17.9	12.8	
Abnormal	30.0	32.1	17.9	
Hyperactivity/inattention				$\chi^2(2) = 1.89$
Borderline	7.3	9.4	5.5	
Abnormal	39.47	37.2	42.2	
Conduct problems				$\chi^2(2) = 3.44$
Borderline	16.0	18.8	11.0	
Abnormal	36.4	35.0	40.4	
% Using mental health professionals	32.7	32.5	30.3	$\chi^2(1) = 0.16$
CGC physical health				$\chi^2(1) = 0.99$
Poor to fair	25.0	24.7	24.8	
Good to excellent	75.0	75.3	75.2	
Contextual factors				
Experimental condition (%)				$\chi^2(2) = 7.92^*$
BPT	33.5	71.3	28.7	
CBT	37.3	59.4	40.6	
IOC	29.2	76.0	24.0	
Experimental site				$\chi^2(3) = 8.63^*$
California	23.9	61.0	39.0	
Maryland	21.6	79.7	20.3	
Ohio	26.8	67.4	32.6	
Texas	27.7	66.3	33.7	
Miles willing to travel for group sessions (M/SD)				

Characteristic and test	Compliance vs. intent to treat			Statistical difference
	Entire sample (*n* = 343)	Compliant (*n* = 233)	Intent to treat (*n* = 110)	
With outliers	17.1/16.0	16.4/10.8	18.3/13/4	*t*(341) = 0.90
Outliers removed (*n* = 341)	16.4/11.7	15.8/12.1	17.5/10.9	*t*(239) = 1.26

Note. CGM = custodial grandmother; CGC = custodial grandchild; CES–D = Center for Epidemiologic Studies Depression Scale; OASIS = Overall Anxiety Severity and Intensity Scale; SDQ = Strengths and Difficulties Questionnaire; BPT = behavioral parent training; CBT = cognitive behavioral therapy; IOC = information-only condition.

[a]The "miscellaneous other" category was eliminated from the chi-square test because of a low *n*.

*$p < .05$.

**$p < .01$.

Table 2

Predictors of Treatment Compliance Status (n = 343)

Predictors	Wald	*df*	*p*	Odds ratio	95% Confidence interval
Positive affect	3.91	1	.05	0.97	[0.93, 1.00]
CGC age	2.49	1	.12	1.09	[0.98, 1.20]
Number CGCs under CGM care	3.23	1	.07	0.81	[0.64, 1.02]
CGM age	5.04	1	.02	1.04	[1.01, 1.07]
CGM mental health services use	5.29	1	.02	1.92	[1.10, 3.37]
RCT site (ref.: Maryland)	4.47	3	.22		
Texas	1.85	1	.17	0.53	[0.21, 1.32]
Ohio	1.55	1	.21	0.61	[0.28, 1.33]
California	4.46	1	.04	0.38	[0.15, 0.93]
Control variable					
CGM married or not	0.21	1	.65	0.87	[0.47, 1.59]
CGM employed or not	0.01	1	.91	0.97	[0.55, 1.71]
CGM race (ref.: White)	0.36	2	.84		
Black	0.14	1	.71	1.13	[0.60, 2.14]
Hispanic	0.30	1	.59	1.28	[0.52, 3.15]
CGM education	0.20	1	.65	1.07	[0.80, 1.44]
Family income	1.04	1	.31	1.27	[0.80, 2.01]

Note. CGC = custodial grandchild; CGM = custodial grandmother; ref. = reference category.

Table 3

Treatment Satisfaction by Key Characteristics of Attending Families and Contextual Factors (n = 163)

Characteristic	Satisfaction score		Test statistic
	M	*SD*	
Predisposing			
CGM age			r = .08
CGC age			r = .11
CGM race/ethnicity (n = 161)			
White	31.1	10.0	$F(2, 158) = 1.74$
Black	33.7	7.8	
Hispanic	34.0	8.3	
CGC gender			$t(161) = 1.24$
Male	33.5	8.8	
Female	31.7	9.0	
Reasons for care			
Parental drug abuse			$t(161) = -0.87$
Yes	33.2	7.7	
No	32.0	9.8	
Parental child abuse			$t(161) = 0.00$
Yes	32.6	9.1	
No	32.6	8.8	
Parental incarceration			$t(161) = -1.47$
Yes	34.3	8.0	
No	32.0	9.1	
Parental unwillingness			$t(161) = 0.74$
Yes	31.6	9.1	
No	32.8	8.8	
Parental mental health			$t(161) = -1.48$
Yes	34.7	7.3	
No	32.1	9.2	
Number of CGCs cared for (*M*)	—	—	r = −.03
Enabling			
Current marital status			$t(161) = 1.38$
Married	31.4	10.3	
Unmarried	33.3	7.8	
Family yearly income	—	—	$r = -.25^{***}$
CGM education			r = −.05
CGM employment status			$t(161) = 1.51$
Working	31.2	10.2	

Characteristic	Satisfaction score		Test statistic
	M	*SD*	
Not working	33.4	8.0	
Positive affect	—	—	$r = .02$
Social support	—	—	$r = .03$
Physical health			
Current health problems			$t(161) = -3.29^{*}$
Yes	34.2	7.2	
No	30.1	10.0	
Limited in kind of work/activity			$t(161) = -0.56$
Yes	32.3	8.2	
No	32.1	9.4	
Accomplish less than she would like			$t(161) = -0.97$
Yes	33.5	8.1	
No	32.1	9.3	
CGM mental health			
Clinical ratings			$t(161) = -1.22$
Depression (CES–D)			
≥ 16	33.7	7.9	
< 16	31.9	9.4	
Anxiety (OASIS)			$t(161) = -0.58$
≥ 8	33.4	9.0	
< 8	32.4	8.9	
Using mental health professionals			$t(161) = -2.81^{**}$
Yes	35.2	7.0	
No	31.2	9.4	
CGC adjustment problems			
Emotional problems			$F(2, 160) = 0.86$
Normal	32.2	9.4	
Borderline	31.6	9.5	
Abnormal	34.0	8.9	
Peer problems			$F(2, 160) = 2.50$
Normal	31.9	9.4	
Borderline	30.9	9.3	
Abnormal	34.9	7.2	
Hyperactivity/inattention			$F(2, 160) = 1.51$
Normal	31.8	9.5	
Borderline	30.2	9.5	
Abnormal	33.9	7.8	
Conduct problems			$F(2, 160) = 1.08$

Characteristic	Satisfaction score		Test statistic
	M	*SD*	
Normal	32.7	8.9	
Borderline	30.5	9.0	
Abnormal	33.4	8.7	
Use of mental health professionals			$t(161) = 0.48$
Yes	32.1	8.2	
No	32.8	9.3	
CGC physical health			$r = -.03$
Contextual factors			
Experimental condition			$F(2, 160) = 0.59$
BPT	31.5	9.4	
CBT	33.3	8.1	
IOC	32.9	9.3	
Experimental site			$F(3, 159) = 2.55$
California	32.5	8.3	
Maryland	35.4	6.3	
Ohio	31.0	9.5	
Texas	31.0	10.4	
Miles willing to travel for group sessions			
With outliers			$r = -.09$
Outliers removed ($n = 167$)			$r = .02$
Number of sessions attended			$r = .28^{**}$

Note. CGM = custodial grandmother; CGC = custodial grandchild; CES–D = Center for Epidemiologic Studies Depression Scale; OASIS = Overall Anxiety Severity and Intensity Scale; BPT = behavioral parent training; CBT = cognitive behavioral therapy; IOC = information-only condition.

$^{*}p < .05$.

$^{**}p < .01$.

$^{***}p < .005$.

Table 4

Predictors of Treatment Satisfaction for Attending Families (n = 163)

Predictors	Beta	B	95% confidence interval
Number of sessions attended	.33	1.27	[0.72, 1.83]***
Family income	−.28	−3.54	[−5.88, −1.20]**
CGM use of mental health professionals	.17	3.17	[0.53, 5.82]*
CGM health problems.	.22	3.90	[1.27, 6.54]**
Sociodemographic controls			
CGM married or not	.15	2.65	[−0.61, 5.90]
CGM employed or not	.01	0.21	[−2.65, 3.07]
CGM race			
Black	.06	1.01	[−1.78, 3.79]
Hispanic	.08	2.35	[−1.90, 6.59]
CGM education	−.03	−0.28	[−1.17, 1.14]

Note. CGM = custodial grandmother.

* $p < .05$.

** $p < .005$.

*** $p < .001$.