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Using Caregiver Strain to Predict Participation in a Peer-Support Intervention for Parents of Children With Emotional or Behavioral Needs

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Abstract

Children receiving services for severe emotional and behavioral difficulties are less likely to have parents who are involved in their education and support services. Peer-to-peer family support programs are one approach to increasing the self-efficacy and empowerment of parents' engagement in the treatment of a child's mental health conditions. Furthermore, programs providing parental support may reduce the strain and negative consequences caregivers may experience due to the stress of caring for a child with emotional and behavioral needs. Although much is known about the relation between caregivers' strain and children's use of mental health services, less is known about caregiver strain and parents' participation in family support programs. This study evaluated whether caregiver strain predicted parents' (N = 52) participation in a phone-based, peer-to-peer support intervention. Results of the regression analysis indicated that highly strained parents participated in four to seven more phone conversations over the course of intervention, which occurred across the academic year. Therefore, findings have implications for the school and mental health providers aiming to increase the involvement of parents of children with emotional and behavioral disorders.

Keywords

parent engagement, caregiver strain, parent support, intervention participation, emotional disturbance, mental health services

For the parents of children with emotional or behavioral needs, there has been growing interest in investigating methods to provide support to families to increase their engagement in mental health and community services for their child (Hoagwood, 2005; Hoagwood et al., 2010; Robbins et al., 2008). Both the Every Child Succeeds Act (ESSA) and the Individuals With Disabilities Education Act (IDEA) stress the importance of parental involvement to elevate educational outcomes for children. The effectiveness of parental involvement in improving academic outcomes is supported by an extensive empirical base, including four recent meta-analyses synthesizing the results of 168 studies, which produced findings that indicate moderate to large effect sizes (Fan & Chen, 2001; Hill & Tyson, 2009; Jeynes, 2005, 2007). However, findings from national, longitudinal studies (Wagner et al., 2006; Wagner, Kutash, Duchnowski, & Epstein, 2005) demonstrate that, compared with peers who have either other types of disabilities or no disabilities, students who have an emotional or behavioral disorder (EBD) are the least likely to have families who are involved in their education. Thus, Newman (2005) concluded that to better support families' involvement in their child's education, schools need to expand current strategies and broaden their focus from programs that bring families to the school building to programs that support family involvement at home and expand family expectations, both of which are associated with better outcomes.

Parent Connectors Intervention

One promising approach for providing family support is a peer-to-peer model, designed to enhance self-efficacy and empowerment surrounding understanding the child's mental health condition and treatment options available, while also providing parental support with regard to the strain,

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anxiety, and depression often experienced by caregivers (Hoagwood, 2005; Hoagwood et al., 2010; Robbins et al., 2008). A promising example of a peer-to-peer family support model is Parent Connectors (Kutash, Duchnowski, Green, & Ferron, 2011, 2013), which was developed to increase parents' engagement in their child's educational and mental health services that are available within the school and community. The target population is middle-school-aged students with an Individualized Education Program (IEP) for emotional and behavioral needs that negatively affect their functioning within the school day. The core components of Parent Connectors include the provision of emotional support, informational support (e.g., special education regulations and procedures, strategies to support academic success), instrumental support (e.g., basic needs such as food, clothing, and shelter assistance), and the support of positive attitudes toward engagement in school and community mental health services. The latter component is accomplished by considering social norms of the family, parental perceptions of control surrounding the aspects of their child's behavior, and the perceived parental benefits of engagement in services for their child (see Kutash, Cross, Madias, Duchnowski, & Green, 2012 or Kutash, Duchnowski, et al., 2013 for additional information). These core components are delivered via weekly phone calls from veteran parents called PCs. Over the course of 3 days, PCs are trained in communication skills, appropriate self-disclosure, and the program model using a manualized training curriculum. The implementation of the intervention is monitored via weekly supervision activities by a licensed mental health practitioner (Kutash et al., 2012). Results from a small randomized-controlled trial (RCT) found support for improved proximal outcomes such as perceptions of parental benefits of engagement in mental health services, social norms in regard to educational services, and parental involvement in mental health services (Kutash, Duchnowski, et al., 2013). Moreover, results suggested improved distal outcomes such as increased parental involvement in their child's mental health services, child participation in school-based counseling services, the number of days the student was enrolled in school, and number of times the student was suspended (Kutash, Duchnowski, et al., 2013). This initial study also found that benefits of the Parent Connectors intervention were the greatest on these respective variables for parents with higher levels of caregiver strain.

Barriers to Intervention Participation

Despite the promise of family support interventions, one common problem is the issue of attrition, as some families never attend services or drop out early. This is such an important issue that the National Institute of Mental Health (2001) declared low treatment engagement as a serious challenge for the implementation of evidence-based health services. For example, in regard to parenting programs, it is not uncommon to have attrition rates from 30% to 80%, even when steps are taken to reduce barriers to participation by providing assistance such as childcare or transportation (Baker, Arnold, & Meagher, 2011; Ingoldsby, 2010; Kazdin, 1997; Sanders & Prinz, 2008; Snow, Frey, & Kern, 2002; Spoth, Clair, Greenberg, Redmond, & Shin, 2007). Research has identified several factors related to low participation in services, ranging from family characteristics (e.g., single-parent status, family income, minority status, family/child functioning; Bloomquist et al., 2009, Eisner & Meidert, 2011; Utting, Monteiro, & Ghate, 2007) to more practical barriers such as scheduling conflicts, transportation issues, childcare, program fees, and compatibility of the program services with the family (Girio-Herrera, Owens, & Langberg, 2013; Gross, Julion, & Fogg, 2001; Ingoldsby, 2010; Lim, Follansbee-Junger, Crawford, & Janicke, 2013). Thus, examining factors that may play a role in understanding the participation of families in services is essential.

Within peer-to-peer family support programs for children with emotional or behavioral needs, little has been done to examine factors that may influence participation rates. However, some interventions, such as the Parent Connectors program, have several key program features designed to help improve participation rates. First, the program is delivered by peers that may have had similar experiences to the participants, which should improve the relevance of the intervention. Second, the intervention is delivered completely over the phone, reducing issues surrounding the transportation and childcare required when meeting with others in person. Finally, the PC schedules and initiates the phone calls with parents, which eliminates the chance that parents forget to make an appointment. Furthermore, if the scheduled phone call is not answered, the PC is trained to leave voice mail messages and continue calling the parent several other times during the week, until they either reach the parent or it is time for their next scheduled phone call. Although parents may still miss the calls or simply choose not to answer the call, the PC actively attempts to reach each family every week. While these intervention components should help participation rates, there are still other barriers that may influence participation rates in peer-to-peer support programs; one important consideration for families of children with emotional and behavioral needs is caregiver strain (Angold et al., 1998; Brannan, Heflinger, & Foster, 2003).

Impact of Caregiver Strain

Historically, caregiver strain has been referred to as caregiver burden, which is the additional strain of caring for someone with special health needs such as individuals with chronic diseases (Carcone, Ellis, & Naar-King, 2012).

Brannan, Heflinger, and Bickman (1997) reconceptualized the idea of caregiver burden as caregiver strain, which is the negative consequences, difficulties, and demands of caring for a child with emotional and behavioral problems. There are two primary dimensions of caregiver strain: objective strain and subjective strain (Brannan & Heflinger, 2001). Objective strain refers to the negative observable occurrences (e.g., financial stress or missing work) that stem from the child's problems, and subjective strain refers to the negative feelings (e.g., guilt, worry, anger) the caregiver experiences as a consequence of these negative occurrences and the strain of parenting a child with emotional and behavioral difficulties.

A large body of research exists supporting the association between caregiver strain and a child's emotional and behavioral problems, a child's use of mental health services, and parent characteristics. For instance, greater caregiver strain is associated with having a male child (Bussing, Zima, Mason, Porter, & Garvan, 2003), and higher levels of a child's symptom severity and functional impairment (Angold et al., 1998; Vaughan, Feinn, Bernard, Brereton, & Kaufman, 2013). Moreover, parents of child with externalizing problems report more caregiver strain than parents of a child with internalizing problems (Angold et al., 1998; Bussing et al., 2003). Furthermore, parent characteristics such as racial minority status, female gender, older age, and lower income predict increased use of mental health services (Burnett-Zeigler & Lyons, 2010). Research also suggests that African American parents report lower levels of caregiver strain than Caucasian parents (Shin & Brown, 2009), even after controlling for demographic variables, child problem severity, and child engagement in services (McCabe, Yeh, Lau, Garland, & Hough, 2003).

Evidence also indicates that highly strained parents are more likely to seek out and access mental health services for their children (Burnett-Zeigler & Lyons, 2010; Bussing, Zima, Mason, Porter, & Garvan, 2011; Shin & Brown, 2009). Even after controlling for family and child characteristics (Brannan et al., 2003) or child diagnosis (Angold et al., 1998), caregiver strain remains a strong predictor of use of mental health services. Yet, while we understand that caregiver strain is related to parents seeking mental health services for their children, very little research has been done on the role of caregiver strain in regard to participation in family support services designed to help parents reduce their sense of isolation or stress due to their child's mental health needs, provide education or information to parents, teach skills to parents, and help empower families to effectively address the mental health needs of their child (Hoagwood et al., 2010). One recent study found that parents with higher caregiver strain were more likely to participate in family support services, which included a range of activities such as services to educate a parent on caring for a child with emotional or behavioral problems like behavior management training, parenting classes and support groups (Kutash, Garraza, et al., 2013). However, we do not know if participation rates in peer-to-peer family support interventions differ for highly strained parents as compared with less strained parents. It is possible that these peer-to-peer approaches will encourage highly strained parents to be open to seeking out additional community supports for their children. Alternatively, participating in a parent-to-parent family support program may be perceived as an extra burden for these highly strained families.

The Current Study

Understanding how the characteristics of an individual may affect their participation in an intervention is important for identifying which interventions are effective for whom. Although it has been demonstrated that parents of children who are highly strained are more likely to access mental health services for their children, it is unknown whether caregiver strain would be related to parents' participation in a peer-to-peer-support intervention. Therefore, the purpose of the present study was to extend the caregiver strain literature by examining whether the degree of participation in the peer-to-peer Parent Connectors intervention would be predicted by caregivers' strain. Given the relation between caregiver strain and children's behavior problems and characteristics, we also controlled for the child's gender, age, number of siblings in the home, and days of in-school suspensions as a proxy measure of child behavior problems. The following research question guided this study: Do parents who are highly strained have greater levels of participation in the peer-to-peer Parent Connectors intervention than parents who are not highly strained? It was hypothesized that parents who were highly strained would have greater participation in the Parent Connectors intervention.

Method

Participants and Setting

Participants were 52 parent–child dyads enrolled in a RCT of Parent Connectors, a peer-to-peer support program for parents of children who receive special education services for an identified emotional disturbance (for a detailed description of the RCT, see Kutash, Duchnowski, et al., 2013). Potential participants were recruited from 20 middle schools and special education centers with self-contained classrooms for students with EBD. Parents were eligible for the study if they had a student whose primary special education eligibility classification was EBD and if their student received at least 50% of their services within the special education setting. Participants were not eligible for the study if (a) the child did not reside at home, (b) the parent was not fluent in English, or (c) there was a conflict of

interest (e.g., a parent worked for the school district). School staff identified eligible participants and contacted parents to notify them of the opportunity to participate in the study. Parents who gave permission for their information to be provided to the researchers were subsequently contacted about the study. There were 169 parents eligible for the study, of which 128 agreed to participate. Those participants were randomized into either the intervention group (n = 66) or the control group (n = 62). Participants in both groups received three mailings over the course of the school year (9 months) that included information on topics related to parenting, special education, and psychiatric disorders. Participants in the intervention condition were also contacted via phone weekly by a PC who provided support consistent with the goals of the PCs program.

For this study, in addition to being assigned to the treatment group (N = 66), participants had to have valid data on all of the variables (see below) used in this study (N = 52). Participating parents were primarily biological mothers (73.1%) but also included grandmothers (9.6%), biological fathers (7.7%), and other relatives (3.8%). Children ranged in age from 12 to 16 years (M = 13.65, SD = 0.95) at the beginning of the study, were primarily male (76.9%), and were enrolled in Grades 6 (19.2%), 7 (34.6%), and 8 (42.3%). On average, children began receiving services at age 6.47 (SD = 2.59) and had been receiving special education services for 6.42 years (SD = 2.51). The number of children in each family ranged from 1 to 7 with an average of 2.63 children (SD = 1.51) per family. According to parents, 57.7% of children were Black (non-Hispanic), 26.9% were White (non-Hispanic), 11.5% were Hispanic/Latino, and 3.8% were identified as another race or ethnicity. Nearly two thirds (63.5%) of the families' household income fell below federal poverty guidelines, and most students (86.5%) received free or reduced-price meals. Children were enrolled in one of 20 middle schools and special education centers located within a large school district in the southeastern United States.

Measures

Caregiver Strain Questionnaire (CGSQ). The Caregiver Strain Questionnaire–Short Form (CGSQ-SF) is a seven-item self-report instrument that measures the impact of caring for a child with emotional and behavioral problems (Brannan et al., 1997). Parents rated each item on a 5-point Likert-type scale from *not at all* (1) to *very much* (5) to indicate the extent to which an occurrence (e.g., financial strain) or feeling (e.g., embarrassment) is problematic as a result of the child's emotional and behavioral problems. Responses are summed across all items to yield a Global Caregiver Strain score. Consistent with the aims of this study, a dichotomous low/high strain variable was created, using the cutoff value of 3.4, given research suggesting an identified threshold (Bickman et al., 2010) and its use as a dichotomous variable in previous research (e.g., Kutash et al., 2013). Internal consistency of the CGSQ-SF is adequate (Brannan, Athay, & de Andrade, 2012) and similar to the full version (Brannan et al., 1997). In the present study, the internal consistency of the CGSQ-SF was .86, as estimated by coefficient alpha. Parents completed the CGSQ-SF at baseline and at post-intervention; however, for the current study, participants' baseline CGSQ-SF data were utilized.

In-school suspensions. The number of days children received in-school suspensions in the prior year was used as an indicator of severity of the child's behavior problems. In-school suspension rates were obtained from official school records maintained by the district. On average, students were suspended 0.88 days (SD = 2.02; range = 0–12).

Participation. Each PC completed a Family Contact Log (FCL) to record the details of each weekly conversation that they had with parents (Kutash et al., 2012). On the FCLs, the date, start time, and end time of each phone conversation that was made to parents were recorded. Participation was defined in the present study as the number of conversations per month that occurred between participants and their PC. Consistent with the Parent Connectors manual, PCs would call families between 2 and 5 times each week (leaving voice mail messages, if possible) to connect if a scheduled call was missed.

Data Analysis Plan

Multiple regression was used to evaluate the effect of caregiver strain on treatment participation measured by the number of conversations per month while controlling for other important factors such as the child's gender (coded as male = 1), age, total number of siblings in the home, and number of days of in-school suspensions. The unstandardized regression coefficient (B) for caregiver strain is interpreted as the difference in the mean number of conversations per month for the *highly strained* families (n = 23) compared with *not highly strained* families (n = 29) while holding other predictors constant. The standardized regression coefficient (β) represents the same difference in standard deviation units.

Cohen's d and common language (CL) effect sizes were computed for the effect of caregiver strain. The Cohen's d value, based on the regression coefficient (i.e., adjusted for the covariates), expresses the difference between the two group means in standard deviation units. CL effect sizes express the difference between the two group distributions in terms of the *probability* that a randomly selected family from the highly strained group would have participated in more phone conversations than a randomly selected family from the not highly strained group. General guidelines suggest that

Table 1. Linear Regression Predicting Number of Calls per Month.

Predictor	*B*	β	*p* value
Caregiver strain	0.758	.427	.003
In-school suspensions	0.145	.326	.015
Male child	0.008	.004	.978
Child age	−0.073	−.082	.542
Number of siblings (in household)	−0.034	−.057	.672

Note. Intercept = 2.448.

d values between 0.10 and 0.30 can be considered to represent *small* effects, values between 0.30 and 0.50 represent *moderate* effects, while values larger than 0.50 represent *large* effects (Cohen, 1988).

Results

All 52 participants received a "full" amount of the intervention (i.e., at least 60 min of phone conversations with the interventionist; Kutash, Duchnowski, et al., 2013) with an average family receiving 430 min of conversation over the course of the intervention (58.84 min per month). On average, participants were engaged in the intervention for 7.67 months. Conversations per month ranged from 0.36 to 3.52 ($M = 1.86$, $SD = 0.90$) with a median of 1.80. There was no significant difference in the number of PC attempted phone contacts (i.e., every phone dial made to a parent) between the high and low strained parents ($t = 1.04$, $p = .30$).

The regression model including caregiver strain, child gender, child age, number of days of in-school suspensions, and the number of siblings in the household fits the data significantly, $F(5, 47) = 3.09$, $p < .05$, and explained 24.7% of the variance in the number of phone conversations per month ($R^2 = .247$; $R^2_{adj} = .167$); however, 8.0% of the explained variance was due to sampling variation, indicating the population-corrected explained variance estimate was 16.7%. As shown in Table 1, the effect of caregiver strain, when controlling for the other predictors, was statistically significant at the .01 alpha level and represents a large effect (Cohen, 1988; $d = 0.95$; CL = 0.75). Caregiver strain explained 15.6% unique (sample) variance of the number of phone conversations per month. Highly strained parents participated in approximately 50% more conversations each month compared to the not strained families (2.30 vs. 1.53 calls per month). This difference amounts to approximately four to seven more phone conversations over the course of the intervention for highly strained families, depending on the length of treatment. In addition to caregiver strain, the number of days of in-school suspension significantly predicted the number of PC phone conversations per month, where parents of children with more days of in-school suspension engaged in a greater number of PC conversations ($B = 0.145$, $\beta = .326$, $p < .05$). On average (for an average length of treatment), parents engaged in slightly more than one phone conversation over the course of treatment for every one day of in-school suspension during the prior school year.

Discussion

The aim of this study was to evaluate the impact of caregiver strain on parents' participation in a parent-to-parent support intervention for children with significant emotional and behavioral difficulties. Provided that existing literature suggests increased levels of strain are related to the severity of a child's problems (measured in this study as days of in-school suspensions) and having a male child, we controlled for these variables in our analyses. Furthermore, we suspected that increases in strain would also be related to the child's age and number of siblings; therefore, we also controlled for the child's age and total number of children in the home at the beginning of the intervention. It was expected that parents who were highly strained at the beginning of the intervention would participate in more PC phone conversations per month than parents who were not highly strained.

Overall, findings supported the hypothesis that highly strained parents would participate in a peer-to-peer support intervention at a higher rate than parents who were not highly strained, even after controlling for the child's behavioral problems resulting in in-school suspension and the child's age, gender, and the number of siblings in the household. Thus, the specific aspects of caregiver strain related to the child's behavior problems (e.g., caregiver missing work or financial strain due to child's problems) or the caregiver's feelings of sadness, worry, and tiredness regarding the child's problems predicted increased frequency of phone conversations with their PC. Over the course of this nearly 8-month intervention, parents who were highly strained engaged in four to seven more phone conversations, on average, with their PC than parents who were not highly strained, even when controlling for other variables. This finding is consistent with the aims of the Parent Connectors intervention, which is to provide peer-to-peer social support to parents experiencing substantial strain and to help encourage them to engage with mental health and educational services for their children.

Results of the present study add to a growing literature base evaluating the impact of caregiver strain on parents' use of mental health services. Prior research indicates that parents with high levels of caregiver strain had higher rates of initiation in family education services (Kutash, Garraza, et al., 2013). Furthermore, although highly strained parents are more likely to seek treatment for their children (Burnett-Zeigler & Lyons, 2010; Bussing et al., 2011), these families tend to drop out of treatment at higher rates (Gopalan et al.,

2010). Therefore, our findings that highly strained parents participated in this peer-to-peer intervention at greater rates than those who were not highly strained are encouraging. It suggests that peer-to-peer interventions are not perceived as an extra burden for highly strained families; rather, highly strained families are more likely to participate in a peer-to-peer, phone-based intervention. Our findings suggest that, over and above other stressful family issues such as child age, number of siblings, or issues with serious school infractions, caregiver strain related to a child's emotional or behavioral issues plays a significant role in predicting the frequency of contact with peer-support providers. This holds promise that peer-to-peer, phone-based family support interventions may be able to effectively engage highly strained parents of children with severe emotional and behavioral needs.

Limitations

The findings from this study must be understood with several potential limitations considered. First, parents in this study participated in a peer-support intervention delivered via phone, it may be that findings would differ for an intervention that was delivered in an alternative format, such as in person. In addition, the children in this study were primarily middle-school students with a special education eligibility of EBD. These factors may limit the generalizability of these findings to parents of children with different characteristics than those in this sample. Finally, the small sample size limits the types of analyses that may be conducted and increases the chance that the findings are due to idiosyncrasies of this particular sample. The study needs to be replicated with a larger sample from different geographical regions, to determine if the findings are replicable with different populations.

Implications for Practice and Future Directions

Despite the limitations, present findings have important implications for schools and mental health care providers aiming to increase the involvement of parents of children with an emotional disturbance. It is difficult for schools to successfully reach parents of middle-school children with significant emotional or behavioral needs (Wagner et al., 2006). Yet, the Parent Connectors intervention, using a peer-to-peer-support model delivered via weekly phone calls, found high participation rates among these parents, with the most participation among parents who reported being highly strained. That is, parents who are highly strained were more likely to engage in conversations with their PCs, even when including other relevant variables in the regression model. Moreover, there was no difference in the number of PC contacts made between high and low strained parents; the highly strained families simply had more phone conversations with their PCs. This suggests that this innovative program may be effective for the hard-to-reach parents who are feeling overwhelmed with issues related to their child's emotional or behavioral needs. Perhaps it would be too much of a burden to come into a school meeting or attend a small-group session, but highly strained parents are interested in picking up the phone to talk with another parent who has had similar experiences. Additional research needs to be conducted to see if these findings can be replicated, as well as extended to other groups of parents who might be receptive to phone-based peer-to-peer support. Further consideration also needs to be given regarding strategies to engage families with low perceived caregiver strain who might benefit from family support programs. Given the significant barriers that must be overcome for parents to participate in support programs (Ingoldsby, 2010; Nock & Ferriter, 2005), these findings of high participation rates, especially for the parents who are the most strained, are encouraging. Additional research is needed to further investigate the factors related to participation rates of peer-to-peer family support programs. Exploring these mental health services issues will help practitioners to better understand methods to improve the likelihood that parents can participate fully in interventions available to their at-risk children.

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References

Angold, A., Messer, S. C., Stangl, D., Farmer, E. M. Z., Costello, E. J., & Burns, B. J. (1998). Perceived parental burden and service use for child and adolescent psychiatric disorders. *American Journal of Public Health*, *88*, 75–80. doi:10.2105/AJPH.88.1.75

Baker, C. N., Arnold, D. H., & Meagher, S. (2011). Enrollment and attendance in a parent training prevention program for conduct problems. *Prevention Science*, *12*, 126–138. doi:10.1007/s11121-010-0187-0

Bickman, L., Athay, M. M., Riemer, M., Lambert, E. W., Kelley, S. D., Breda, C., . . . Vides de Andrade, A. R. (Eds.). (2010). *Manual of the Peabody Treatment Progress Battery* (2nd ed.) [Electronic version]. Nashville, TN: Vanderbilt University.

Bloomquist, M. L., Horowitz, J. L., August, G. J., Lee, C.-Y.C.S., Realmuto, G. M., & Klimes-Dougan, B. (2009). Understanding parent participation in a going-to-scale implementation trial of the early risers conduct problems prevention program. *Journal of Child and Family Studies*, *18*, 710–718. doi:10.1007/s10826-009-9277-7

Brannan, A. M., Athay, M. M., & de Andrade, A. R. V. (2012). Measurement quality of the Caregiver Strain Questionnaire-Short Form 7 (CGSQ-SF7). *Administration and Policy in Mental Health and Mental Health Services Research*, *39*, 51–59. doi:10.1007/s10488-012-0412-1

Brannan, A. M., & Heflinger, C. A. (2001). Distinguishing caregiver strain from psychological distress: Modeling the relationships among child, family, and caregiver variables. *Journal of Child and Family Studies*, *10*, 405–418. doi:10.1023/A:1016705306848

Brannan, A. M., Heflinger, C. A., & Bickman, L. (1997). The Caregiver Strain Questionnaire: Measuring the impact on the family of living with a child with serious emotional disturbance. *Journal of Emotional and Behavioral Disorders*, *5*, 212–222. doi:10.1177/106342669700500404

Brannan, A. M., Heflinger, C. A., & Foster, E. M. (2003). The role of caregiver strain and other family variables in determining children's use of mental health services. *Journal of Emotional and Behavioral Disorders*, *11*, 78–92. doi:10.1177/106342660301100202

Burnett-Zeigler, I., & Lyons, J. S. (2010). Caregiver factors predicting service utilization among youth participating in a school-based mental health intervention. *Journal of Child and Family Studies*, *19*, 572–578. doi:10.1007/s10826-009-9331-5

Bussing, R., Gary, F. A., Mason, D. M., Leon, C. E., Sinha, K., & Garvan, C. W. (2003). Child temperament, ADHD and caregiver strain: Exploring relationships in an epidemiological sample. *Journal of the American Academy of Child & Adolescent Psychiatry*, *42*, 184–192. doi:10.1097/00004583-200302000-00012

Bussing, R., Zima, B. T., Mason, D. M., Porter, P. C., & Garvan, C. W. (2011). Receiving treatment for attention-deficit hyperactivity disorder: Do the perspectives of adolescents matter? *Journal of Adolescent Health*, *49*, 7–14. doi:10.1016/j.jadohealth.2010.08.014

Carcone, A. I., Ellis, D. A., & Naar-King, S. (2012). Linking caregiver strain to diabetes illness management and health outcomes in a sample of adolescents in chronically poor metabolic control. *Journal of Developmental and Behavioral Pediatrics*, *33*, 343–351. doi:10.1097/DBP.0b013e31824eaac8

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.

Eisner, M., & Meidert, U. (2011). Stages of parental engagement in a universal parent training program. *The Journal of Primary Prevention*, *32*, 83–93. doi:10.1007/s10935-011-0238-8

Fan, X., & Chen, M. (2001). Parental involvement and students' academic achievement: A meta-analysis. *Educational Psychology Review*, *13*, 1–22. doi:10.1023/A:1009048817385

Girio-Herrera, E., Owens, J. S., & Langberg, J. M. (2013). Perceived barriers to help-seeking among parents of at-risk kindergarteners in rural communities. *Journal of Clinical Child & Adolescent Psychology*, *42*, 68–77. doi:10.1080/15374416.2012.715365

Gopalan, G., Goldstein, L., Klingenstein, K., Sicher, C., Blake, C., & McKay, M. M. (2010). Engaging families into child mental health treatment: Updates and special considerations. *Journal of the Canadian Academy of Child and Adolescent Psychiatry*, *19*, 182–196.

Gross, D., Julion, W., & Fogg, L. (2001). What motivates participation and dropout among low-income urban families of color in a prevention intervention? *Family Relations*, *50*, 246–254. doi:10.1111/j.1741-3729.2001.00246.x

Hill, N. E., & Tyson, D. F. (2009). Parental involvement in middle school: A meta-analytic assessment of the strategies that promote achievement. *Developmental Psychology*, *45*, 740–763. doi:10.1037/a0015362

Hoagwood, K. E. (2005). Family-based services in children's mental health: A research review and synthesis. *Journal of Child Psychology and Psychiatry*, *46*, 690–713. doi:10.1111/j.1469-7610.2005.01451.x

Hoagwood, K. E., Cavaleri, M. A., Serene Olin, S., Burns, B. J., Slaton, E., Gruttadaro, D., & Hughes, R. (2010). Family support in children's mental health: A review and synthesis. *Clinical Child and Family Psychology Review*, *13*, 1–45. doi:10.1007/s10567-009-0060-5

Ingoldsby, E. M. (2010). Review of interventions to improve family engagement and retention in parent and child mental health programs. *Journal of Child Family Studies*, *19*, 629–645. doi:10.1007/s10826-009-9350-2

Jeynes, W. H. (2005). A meta-analysis of the relation of parental involvement to urban elementary school student academic achievement. *Urban Education*, *40*, 237–269. doi:10.1177/0042085905274540

Jeynes, W. H. (2007). The relationship between parental involvement and urban secondary school student academic achievement: A meta-analysis. *Urban Education*, *42*, 82–110. doi:10.1177/0042085906293818

Kazdin, A. E. (1997). Parent management training: Evidence, outcomes, and issues. *Journal of the American Academy of Child & Adolescent Psychiatry*, *36*, 1349–1356. doi:10.1097/00004583-199710000-00016

Kutash, K., Cross, B., Madias, A., Duchnowski, A. J., & Green, A. L. (2012). Description of a fidelity implementation system: An example from a community-based children's mental health program. *Journal of Child and Family Studies*, *21*, 1028–1040. doi:10.1007/s10826-012-9565-5

Kutash, K., Duchnowski, A. J., Green, A. L., & Ferron, J. M. (2011). Supporting parents who have youth with emotional disturbances through a parent-to-parent support program: A proof of concept study using random assignment. *Administration and*

Policy in Mental Health and Mental Health Services Research, *38*, 412–427. doi:10.1007/s10488-010-0329-5

Kutash, K., Duchnowski, A. J., Green, A. L., & Ferron, J. M. (2013). Effectiveness of the Parent Connectors program: Results from a randomized controlled trial. *School Mental Health*, *5*, 192–208. doi:10.1007/s12310-013-9106-4

Kutash, K., Garraza, L. G., Ferron, J. M., Duchnowski, A. J., Walrath, C., & Green, A. L. (2013). The relationship between family education and support services and parent and child outcomes over time. *Journal of Emotional and Behavioral Disorders*, *21*, 264–276. doi:10.1177/1063426612451329

Lim, C. S., Follansbee-Junger, K. W., Crawford, M. S., & Janicke, D. M. (2013). Treatment outcome research in rural pediatric populations: The challenge of recruitment. *Journal of Pediatric Psychology*, *36*, 696–707.

McCabe, K. M., Yeh, M., Lau, A., Garland, A., & Hough, R. (2003). Racial/ethnic differences in caregiver strain and perceived social support among parents of youth with emotional and behavioral problems. *Mental Health Services Research*, *5*, 137–147. doi:10.1023/A:1024439317884

National Institute of Mental Health. (2001). *Blueprint for change: Research on child and adolescent mental health's council's workgroup on child and adolescent mental health intervention development and deployment* (DHHS Publication No. CG 031-591). Washington, DC: U.S. Government Printing Office.

Newman, L. (2005). *Family involvement in the educational development of youth with disabilities: A special topic report of findings from the National Longitudinal Transition Study-2 (NLTS-2)*. Menlo Park, CA: SRI International.

Nock, M. K., & Ferriter, C. (2005). Parent management of attendance and adherence in child and adolescent therapy: A conceptual and empirical review. *Clinical Child and Family Psychology Review*, *8*, 149–166. doi:10.1007/s10567-005-4753-0

Robbins, V., Johnston, J., Barnett, H., Hobstetter, W., Kutash, K., Duchnowski, A. J., & Annis, S. (2008). *Parent to parent: A synthesis of the emerging literature*. Tampa, FL: Department of Child & Family Studies, The Louis de la Parte Florida Mental Health Institute, University of South Florida.

Sanders, M. R., & Prinz, R. J. (2008). Ethical and professional issues in the implementation of population-level parenting interventions. *Clinical Psychology: Science and Practice*, *15*, 130–136. doi:10.1111/j.1468-2850.2008.00121.x

Shin, S. H., & Brown, T. A. (2009). Racial and ethnic disparities in caregiver strain and the use of child mental health services: A structural equation model. *Psychiatric Services*, *60*, 1039–1045. doi:10.1176/appi.ps.60.8.1039

Snow, J. N., Frey, M. R., & Kern, R. M. (2002). Attrition, financial incentives, and parent education. *The Family Journal*, *10*, 373–378. doi:10.1177/106648002236755

Spoth, R., Clair, S., Greenberg, M., Redmond, C., & Shin, C. (2007). Toward dissemination of evidence-based family interventions: Maintenance of community-based partnership recruitment results and associated factors. *Journal of Family Psychology*, *21*, 137–146. doi:10.1037/0893-3200.21.2.137

Utting, D., Monteiro, H., & Ghate, D. (2007). *Interventions for children at risk of developing antisocial personality disorder*. London, England: Policy Research Bureau.

Vaughan, E. L., Feinn, R., Bernard, S., Brereton, M., & Kaufman, J. S. (2013). Relationships between child emotional and behavioral symptoms and caregiver strain and parenting stress. *Journal of Family Issues*, *34*, 534–556. doi:10.1177/0192513X12440949

Wagner, M., Friend, M., Bursuck, W. D., Kutash, K., Duchnowski, A. J., Sumi, W. C., & Epstein, M. H.. (2006). Educating students with emotional disturbances: A national perspective on school programs and services. *Journal of Emotional and Behavioral Disorders*, *14*, 12–30. doi:10.1177/10634266060140010201

Wagner, M., Kutash, K., Duchnowski, A. J., & Epstein, M. H. (2005). The Special Education Elementary Longitudinal Study and the National Longitudinal Transition Study: Study designs and implications for children and youth with emotional disturbance. *Journal of Emotional and Behavioral Disorders*, *13*, 25–41. doi:10.1177/10634266050130010301