
RESEARCH TO PRACTICE SUMMARY

Enhancing Parent Engagement and Program Completion in a Home Visiting Parenting Intervention Through the Use of Cellular Phones

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We examined factors that predict parent engagement and intervention completion in a home visiting parenting intervention. In this randomized trial, we compared the effectiveness of a parenting intervention to a cellular phone enhanced parenting intervention for preventing child maltreatment and promoting positive parenting. We randomly assigned 219 mother-child dyads, most of whom were enrolled in Head Start programs to a 5-session home visitation intervention (Planned Activities Training-PAT) or to cellular phone enhanced PAT (CPAT). We found that (1) early parent engagement predicted completion of the parenting intervention, (2) parents in the cellular phone enhanced PAT were twice as likely to complete the intervention than those in traditional PAT, and (3) the quality of parenting prior to entrance in either intervention predicted parent engagement. The implications of this study focus on the importance of early identification of parents who are higher-risk for drop-out in order to provide them additional supports to promote retention.

While a growing number of home visiting parenting programs have shown positive results in reducing child maltreatment and enhancing parenting skills in high-risk populations, the results are mixed for many other programs (Sweet & Appelbaum, 2004). Two common barriers to achieving improved family outcomes in home visiting programs are: (1) low levels of parent participation in the programs due to families dropping out of home visiting programs (McCurdy

& Daro, 2001), and (2) low parent engagement, or in other words, parents who are not actively involved in the intervention or in implementing new skills with their child (Korfmacher et al, 2008).

When families miss home visits or drop out of interventions early, even the most powerful interventions may have limited effects. When parents have limited engagement in the activities and discussion within home visits, or when they fail to follow through on implementing recommended parenting strategies between intervention sessions, parenting outcomes will probably be less than optimal (Sweet & Appelbaum, 2004). Programs that are able to maintain parents' participation and keep them actively engaged both during and between home visits are more likely to achieve the desired results of improved parenting outcomes (Gomby, 2005). Thus, enhancing families' active involvement in parenting programs and striving to keep parents engaged until they complete the intervention have become important goals for home visitors. Yet, research has been limited on the factors that make it more or less likely for parents to remain actively engaged in home visiting programs. Further, few studies have identified effective interventions that home visitors can use to promote parents' engagement in home visiting programs.

WHAT IS PARENT ENGAGEMENT?

Before we can study parent engagement, it is important to acknowledge that the term "engagement" is defined very differently by different researchers. "Engagement" has been defined by some as simply showing up for home visits or staying in treatment (Wagner, Spiker, Linn, & Hernandez, 2003). Others have employed a more dynamic definition describing engagement as the "participation necessary to obtain optimal benefits from an intervention" (Prinz & Miller, 1991; p. 382). This definition acknowledges that there are multiple elements to parent engagement, which includes regular attendance, involvement, and cooperation during intervention session as well as parent effort that goes beyond the home visit. Recognizing that engagement may change over time, many researchers also point to the critical importance of the earliest stages of parents' involvement in an intervention because parents are more likely to drop out early in the course of intervention if they do not anticipate receiving significant benefits from their participation in the intervention (Coatsworth, Santisteban, McBride, & Szapocnik, 2001).

In our work with families, we incorporated these multiple elements into our definition of parent engagement. We define engagement as "the extent that parents participated in each home visit intervention session, practiced and demonstrated mastery of parenting skills targeted during the home visit session, and maintained their engagement independently throughout the session." In the current study, we were interested in examining factors that predicted early parent engagement, as well as mothers' completion of the parenting intervention. One of the primary aims of the study was to determine whether adding cell phones calls and text messages to a parenting intervention would increase parents' engagement and completion of the intervention.

The intervention, Planned Activity Training (PAT; Lutzker & Bigelow, 2002), one of the components of the SafeCare[®] model for preventing child neglect, focused on increasing positive interactions between parents and children by teaching parents skills they can use to structure and engage children in activities. A primary goal of PAT is to teach parents to prevent challenging behavior by attending to and reinforcing their children's appropriate behavior and ignoring minor misbehavior. During home visits, family coaches taught parents to plan stimulating play and

daily living activities in advance, prepare the child for these activities, and engage the child in activities using effective positive interaction skills and incidental teaching.

In order to promote more frequent contact between the coaches and the families and, thus, increase parent engagement, half of the participating families received an adaptation of PAT in which the intervention was enhanced with cell phone contact (CPAT). In addition to the in-home parenting intervention, CPAT parents were provided with a cell phone during the intervention phase of PAT. Cell phones were used to promote increased contact between coaches and parents that consisted of: (1) twice-daily text messages, and (2) phone calls that occurred between home visits.

METHODS USED TO EXAMINE INTERVENTION ENGAGEMENT

A diverse sample of 219 mother-child dyads with multiple risk factors for child maltreatment and poor child developmental outcomes were recruited from community health, early education and social service agencies. Families were randomly assigned to one of two home visiting intervention conditions: PAT or CPAT. Mothers were interviewed prior to the intervention concerning socio-demographic risk and observational measures obtained of their use of PAT strategies and the quality of their parenting interactions using the *Keys to Interactive Parenting* (Comfort & Gordon, 2006). In addition, independent observations of children's positive engagement with their parents were obtained using the *Child Behavior Rating Scales* (Carta, 2006), and mothers' ratings of children's adaptive behavior and internalizing and externalizing behaviors was obtained using the *Behavior Assessment Scale for Children* (Reynolds & Kamphaus, 2004).

For parents assigned to PAT, in the initial intervention visit, the coach helped the parent select at least three daily home activities (e.g., mealtime, getting dressed) that might be improved through the use of PAT strategies. In each subsequent visit, the coach and parent discussed how PAT could be used in one of the selected activities, the coach modeled the skills with the child, parents practiced with the child, and coaches provided feedback. Intervention was considered complete when parents scored 90% correct on a 10-item PAT checklist (e.g., explaining activities and rules, talking about activities with children, ignoring minor misbehavior, etc.) in at least three different daily routine activities.

Cell-Phone Enhanced PAT (CPAT) For parents assigned to CPAT, PAT sessions were conducted as described above, however, parents were also provided with a cellular phone with unlimited service during the course of the intervention. In addition, parents had more frequent contact with their Family Coaches through: (1) phone calls between home visits and (2) twice-daily text messages. Coaches called parents each week to inquire about PAT use, parent and child activities, child behavior, and to guide future intervention. Parents could also contact coaches with their cell phone with expected response times from the coach within 24 hours or by the end of the next day. Parents could use the cell phone for personal use, as well.

Family coaches also sent text messages to the families twice per day, five days per week. Text message content was individualized for each mother, and related to the current focus of the intervention taking place during the home visit during that week. The majority of the text messages consisted of reminders to use PAT strategies and questions to parents about how the strategies worked for them. Some of the 10 text messages sent each week provided suggestions

for low-cost or free activities or resources within the community, and supportive messages to the mother that did not directly pertain to the intervention (e.g., providing resources or praising mothers' efforts). In addition, text messages were sent to remind mothers of their next appointment time, or to ask parents for confirmation that parents would be present for visits. Parents were encouraged, but not required to respond to text messages. Family coaches responded promptly when parents responded to or initiated new text messages.

MAJOR FINDINGS

This study had 3 primary aims: (1) to examine whether early engagement influenced program completion and determine whether the use of cellular phones affected completion rates; (2) to determine how pre-intervention child behavior and maternal characteristics were related to levels of early engagement, and (3) to examine parent satisfaction with the parenting intervention and cellular phone enhancement.

Did Intervention Condition, Early Engagement, and Risk Predict Intervention Completion?

We compared parent drop-out rates for those who received the cellular phone enhanced parenting intervention, and those who received the typical parenting intervention. The odds of completing the intervention were more than twice as high for those who received the cellular phone enhanced parenting intervention (11% drop out rate) than for those who received intervention without the cell phone (23% drop out rate). Parents who were more highly engaged at the first intervention visit were more also likely to complete the intervention, but socio-demographic risk (i.e., whether parents experienced symptoms of depression, were unemployed or low income, etc.) was not related to intervention completion.

Did Baseline Parenting, Child Behavior and Risk Predict Early Engagement?

We found that mothers who used the PAT parenting strategies and who engaged in more positive parenting even before receiving the PAT intervention were more likely to become engaged in the intervention. Mothers who had higher quality interaction skills before the intervention, but who were not already using PAT skills became the most engaged in the intervention. Children's behavior and the families' socio-demographic risk prior to intervention were not related to early engagement in the intervention.

Did the Mothers Like the Intervention?

We asked parents to complete a satisfaction questionnaire after completing the intervention. Satisfaction with both traditional PAT and the cellular phone enhanced PAT was equally very high. Across both intervention groups, most mothers (88%) reported that they would recommend the intervention to someone else and that they used the PAT strategies 'a lot' or 'all

the time'. Nearly all mothers who received the cell phone enhancements enjoyed the frequency of contact with their coaches and thought the amount of texting and number of phone calls was 'just right.'

IMPLICATIONS FOR PRACTICE

Early levels of engagement are important predictors of who will complete home visiting interventions. Home visitors should pay special attention to finding those families who show some difficulties engaging in the intervention and find ways to increase their motivation and level of involvement early on. In our project, cellular phones proved to be helpful in engaging families on a consistent basis and to provide them with encouragement and reminders about their use of the newly learned parenting strategies. We found that using cellular phones to text and call parents between home visits was supportive to parents and in general helped them complete the course of the intervention. Cellular phones are now very common, even among low-income families, and text messaging is fairly inexpensive.

Text messages, by nature, are brief and easy to send. Introducing text messaging to parents within a home visitor's caseload, or even a smaller subset of parents needing additional supports, does not place much additional burden on home visitors' time and resources. With a very small investment in text messaging software and a little time, home visitors could use their computer to create a text messaging plan aimed at providing intervention supports and reminders to promote a variety of positive behaviors, as well as a way to increase communication and contact with parents on a more consistent basis. Text messaging software can be used to schedule text messages in advance and can also be used to send a message to a group of parents. Text messages can be tailored to fit within the focus of most home visitation programs and the frequency and timing of text messages can be individualized to fit within existing programs and parent preferences.

Text messaging is a promising strategy for increasing contact with a hard-to-reach, highly mobile population as well as providing parents with additional support and encouragement aimed at improving parenting practices. Providing additional exposure to the content of the intervention throughout the week, in "real time," helps to encourage parents to use recommended strategies or practices outside of home visits and in novel situations. Identifying parents who are potentially less engaged at the beginning of an intervention, and implementing strategies aimed at engaging these parents within the first session or two, can have a significant impact on their long-term engagement and eventual completion of a home visiting program.

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