Effects of a Foster Parent Training Intervention on Placement Changes of Children in Foster Care

Joseph M. Price[1,3], **Patricia Chamberlain**[2], **John Landsverk**[3], **John Reid**[2], **Leslie Leve**[2], and **Heidemarie Laurent**[2]

1*San Diego State University*

2*Oregon Social Learning Center, Eugene, Oregon*

3*Child and Adolescent Services Research Center, San Diego, California*

Abstract

Placement disruptions undermine efforts of child welfare agencies to promote safety, permanency, and child well-being. Child behavior problems significantly contribute to placement changes. The aims of this investigation were to examine the impact of a foster parent training and support intervention (KEEP) on placement changes and to determine whether the intervention mitigates placement disruption risks associated with children's placement histories. The sample consisted of 700 families with children between ages 5 and 12 years, from a variety of ethnic backgrounds. Families were randomly assigned to the intervention or control condition. The number of prior placements was predictive of negative exits from current foster placements. The intervention increased chances of positive exit (e.g., parent/child reunification) and mitigated the negative risk-enhancing effect of a history of multiple placements. Incorporating intervention approaches based on a parent management training model into child welfare services may improve placement outcomes for child in foster care.

Keywords

parent management training; foster parents; placement disruptions

The child welfare system provides services designed to promote the well-being of children by ensuring safety, achieving permanency, and strengthening families to care successfully for their children (National Survey of Child and Adolescent Well-being Research Group, 2005). For a number of families serviced by the child welfare system this may require removing the child from the home and placing him/her in the care of either a relative or a foster family. Once in foster care, the goals of promoting safety, permanency, and child well-being can be undermined by disruptions in placement. Recent research suggests that one of the major contributors to placement disruptions is the externalizing behavior problems exhibited by many foster children (Chamberlain et al., 2006; Newton, Litrownik, & Landsverk, 2000). The primary goals of the current study were twofold: to examine the impact of a foster parent training and support intervention on placement changes and disruptions, and to determine whether the intervention mitigated placement disruption risks associated with children's placement histories.

Correspondence should be directed to Joseph M. Price, Department of Psychology, San Diego State University, 6363 Alvarado, Ct., Suite 103, San Diego, CA 92120; (619) 594-5241; fax, (619) 594-6780; email, jprice@sunstroke.sdsu.edu.

Importance of Stability in Family Settings

Stability in safe, nurturing family settings affords children opportunities to develop positive and supportive relationships, especially with caregivers and other significant adults (e.g., teachers) that, in turn, facilitates normative development (Cicchetti & Valentino, 2006; Sroufe, Duggal, Weinfield, & Carlson, 2000; Thompson, Flood, & Goodwin, 2006). Stability in family settings also provides continuity in school settings, peer networks, health care providers, and access to community resources and activities. Children who enter foster care have been exposed to family instability and to adverse experiences that increase their risk for maladaptive outcomes (see Cicchetti & Valentino, 2006 for a review of this literature). Thus, provision of a stable family environment that promotes well-being may help to ameliorate some of the consequences of family instability and adversity and alter poor developmental trajectories (Harden, 2004).

Unfortunately, once placed in care, a sizeable proportion of children continue to experience changes in placement. Data from the National Survey of Child and Adolescent Well-Being (NSCAW) study (Rubin, O'Reilly, Luan, & Localio, 2007) reveal that over an 18-month period nearly 30% of foster children experienced placement instability. Other reports of prevalence of placement instability range from 22% (Pardeck, 1984) to 56% (Kufeldt, Armstrong, & Dorosh, 1989) of children in care. A principal reason for such changes, as identified by James (2004) and others (e.g., Chamberlain et al., 2006; Leathers, 2006), is child behavior problems, especially those that are externalizing in nature (e.g., aggressive, disruptive, destructive, and oppositional behaviors). Other reasons for placement changes include reuniting siblings, foster family moving out of the service area, foster parents cease foster parenting, conflicts between foster parent and biological parent, and complaints or abuse allegations against the foster family (James, 2004)

Prevalence of Externalizing Problems and Links to Placement Changes

Findings from the NSCAW study indicate that a high proportion (43% based on teacher report, 50% based on parent report) of children in foster care evidence some form of externalizing behavior problems (National Survey of Child and Adolescent Well-being Research Group, 2003). In addition, other studies reveal that the levels of antisocial behavior in children receiving child welfare services are statistically indistinguishable from children in intensive mental health treatment programs (Stein, Evans, Mazumdar, & Rae-Grant, 1996; Trupin, Tarico, Low, Jennelka, & McClellan, 1993; see Keil & Price, 2006 for a review of this literature). What makes this overall pattern of findings so troubling is evidence that the severity of the problems presented by foster children appears to be on the rise (Haugaard & Hazan, 2002). This may be attributable, in part, to efforts by child welfare agencies to keep children in their birth homes whenever possible. Consequently, it is possible that only children from the most troubled families, or with the most difficult behavior problems, are entering foster care.

Results from several investigations have revealed an association between child behavior problems and placement disruptions. Using a longitudinal design, Newton et al. (2000) found that externalizing behavior problems, as assessed by the Child Behavior Checklist (CBCL, Achenbach, 1991), was the strongest predictor of placement changes for a sample of 415 youth in San Diego County. Corroborating this finding, Chamberlain et al. (2006) found that for each increase in the number of behavior problems above six in a 24-hour period there was a 17% increase in the risk for a placement disruption within the next 12 months. Newton et al. (2000) also found that placement histories characterized by multiple placements contributed to an increase in internalizing and externalizing behavior of foster children, even after controlling for levels of prior behavior problems. Moreover, for children who did not initially exhibit behavior problems, the number of placement changes was significantly related to each

of the CBCL broadband scale scores approximately 12 months later. Consistent with this finding, Rubin et al. (2007) examined a sub-sample of the NSCAW study and found that children with unstable placements during an 18-month period had twice the odds of having behavior problems (as assessed by the CBCL) as children who achieved early stability in their foster placements. Thus, children who enter foster care displaying high levels of disruptive behaviors are at increased risk for experiencing a change in placement, and that the number of changes in placement after entering foster care contributes to the development of behavior problems, even among those who may not enter foster care displaying high levels of behavior problems.

There is evidence to suggest that child behavior problems may also interfere with efforts to reunify children in foster care with their biological parents. Children with externalizing behavior problems have been found to be one half as likely to be reunified as children without problems, even after controlling for background characteristics and type of maltreatment (Landsverk et al., 1996). It is not surprising that children with behavior problems have been shown to experience longer lengths of stay in foster care (Lawder, Poulin, & Andrews, 1986). Caseworkers may consider that the risks of a poor outcome to reunification are higher when parent and family problems are combined with child behavior problems and, therefore, sway the caseworker to either delay reunification or even recommend against reunification.

Need for Addressing Placement Changes

In addition to changes in placement undermining the family stability required for normal development and thereby increasing the risk for child behavior problems, changes in placement can also result in economic costs to child welfare agencies. Recently, in a series of focus group sessions conducted with caseworkers and caseworker supervisors in San Diego County, it was estimated that each placement change required an average of over 25 hours of casework and support staff time to process the change of placement, including time in identifying and placing a child in a new setting, staff meetings, court reports, and accompanying paper work (Price, 2007). Furthermore, using administrative child welfare data linked to Medicaid claims, Rubin et al. (2004) found that multiple placements and episodic foster care increased the predicted probability of high mental health service use.

The deleterious effects of multiple placements on children within child welfare settings have long been a concern of caseworkers, child welfare administrators, and health care providers. Legislative initiatives, such as the Child Welfare Act and Adoption and Safe Families Act of 1997 (Public Law 105-89), have led child welfare agencies to place a greater emphasis on shorter lengths of stay in foster care and greater placement stability. The U.S. Department of Health and Human Services (DHHS) now monitors the number of placement changes recorded for children in foster care as part of the national outcomes standards Child and Family Services Review (DHHS, 2002). The critical issue now being addressed across child welfare agencies is how best to reduce placement disruptions and increase placement stability. One approach that has been suggested is to provide foster parents with the training and support that would enable them to understand and manage the behavioral challenges of the children in their care (Chamberlain et al. 2006; Grimm, 2003).

Fortunately, there is a body of research supporting the effectiveness of several treatments in addressing disruptive behaviors, especially those using a parent management training model. One of these approaches has been specifically designed for use in a foster family setting. Based on the basic tenants of social learning theory and two decades of empirical research with troubled families and youth, researchers from the Oregon Social Learning Center (OSLC) began testing a parent-mediated intervention model with youth displaying severe emotional and behavioral problems, and with severely delinquent youth, which eventually led to the development of the Multidimensional Treatment Foster Care (MTFC) model. The basic MTFC

model involves placing one youth in a well-trained and supervised foster home. The findings from a number of studies reveal the effectiveness of the MTFC model among youth with severe emotional and behavior problems (Chamberlain, Leve, & DeGarmo 2007; Chamberlain & Reid, 1991, 1994; Eddy & Chamberlain, 2000; Leve & Chamberlain, 2004). Following from this research, Chamberlain, Moreland, and Reid (1992) examined whether it was feasible and useful to use components of the MTFC model to address the needs of "regular" foster and kinship families, with the goal of reducing child behavior problems and negative changes in placement and increasing foster parent retention. Foster parents in Lane County Oregon with a new placement were randomly assigned to one of three conditions: parenting training using MFTC components, payment and assessments only, and assessments only. Compared to the group receiving a payment only and the control group, parents in the parent-training group evidenced significantly greater decreases in child behavior problems, fewer failed placements due to child behavior or emotional problems, and significantly less attrition. The intervention examined in the current investigation uses this same treatment approach and represents an extension of this earlier research. The specifics of the intervention, entitled KEEP (Keeping foster and kinship parents trained and supported), are provided in the Methods section.

The first aim of this investigation was to examine the effects of the KEEP intervention on placement changes among children currently in foster care. In an effort to expand on the research on placement changes by differentiating types of placement changes, the distinction was made between positive vs. negative changes of placement. Positive placement changes were represented by any exit from the foster or kinship placement home that was made for a positive reason, such as a reunion with biological parent or other relative or an adoption. Negative changes of placement were represented by moves to another foster placement, a more restrictive environment such as a psychiatric care or juvenile detention center, or child runaways.

The second aim of the current investigation was to examine the impact of the KEEP intervention within the context of children's placement history within the child welfare system. Fisher, Burraston, and Pears (2005) examined the effectiveness of a version of MTFC designed for preschoolers (MTFC-P) on permanent placement outcomes for children in foster care. Their results indicated that children in MTFC-P had significantly fewer failed placements relative to children in the regular foster care comparison condition. Furthermore, they found the MTFC-P intervention served to moderate the relation between the prior number of placements and permanent placement failure. This outcome suggests that the intervention served to mitigate the risks associated with a history of multiple placements.

In this study, we attempted to replicate and extend the work of Fisher and colleagues (Fisher et al., 2005) in an effectiveness trial conducted within the child welfare system in San Diego County. We examined (1) the effect of the number of prior foster care placements on exit rates (positive and negative), (2) whether participation in the KEEP foster parent training intervention changed the likelihood of the child having either positive or negative placement changes, and (3) whether participation in the KEEP intervention moderated the effect of prior placements on the probability of positive or negative placement exits.

Method

Participants

Eligible study participants included all foster and kinship parents receiving a new placement of a child aged 5 to 12 years from the San Diego County Department of Health and Human Services child welfare system between 1999 and 2004. In addition, in order to minimize selecting children in temporary shelters or emergency foster placements children had to have been in the new placement for at least 30 days, including children in their first foster home and

those moved from another foster home. The inclusion of children with first placements and multiple previous placements increases the potential generalizability of the study findings to include all of those who populate the foster care system (excluding those in short-term shelter or emergency placements). The resulting sample was comprised of 700 foster families (34% kinship placements, 66% non-relative placements). Families were randomly assigned to either the intervention or control (i.e., usual child welfare casework services) condition. State law requires all foster parents to participate in some form of parent training and support group each year in order to maintain their licenses. Foster parents participating in the KEEP intervention were permitted to use participation in this training to count toward their licensing requirements. During the course of the year, foster parents in the control condition also participated in some type of parent training and support group made available to them through usual child welfare services. Table 1 shows baseline demographic characteristics for intervention and control families. Comparisons revealed that children in the intervention group were more likely to be Spanish-speaking, $\chi^2(1) = 13.88$, $p < .001$, than control group children (no other significant differences were found between intervention and control groups). The sample was ethnically diverse, comprising 21% African American, 33% Latino, 22% white, 22% mixed ethnic 1% Asian American, and 1% Native American children.

Recruitment Methods

Recruitment was facilitated by data systems from the social service agency that were reviewed on a weekly basis to identify eligible children and foster families. The eligibility requirements were that (a) the child had been in either a kin or nonkin foster care placement for a minimum of 30 days, (b) the child was between the ages of 5 and 12 years, and (c) the child was not considered "medically fragile" (i.e., not severely physically or mentally handicapped). Exclusionary criteria were minimal because this study was designed to be an effectiveness trial designed to map onto "real-world" child welfare system conditions. Once deemed eligible, families were randomly assigned to either the intervention or to the control condition. Foster parents received a brief overview of the project by phone. Of those contacted, 62% agreed to participate and 38% declined. Reasons for declining included too busy, too much work, and/ or too many children, 50%; not interested 43%; family health problems, 2%; and concerns about participating in research, 5%. Foster parents received a home interview, a detailed project description, consent information, a *Participant's Bill of Rights,* and an IRB approved consent form. Those interested in participating verified their willingness to participate by signing consent forms. The investigation was conducted in compliance with the University Institutional Review Board (IRB), as verified through random site checks by the IRB administration. Participation in the KEEP intervention was voluntary. No solicitation or incentives were provided by the child welfare agency for families to participate in the study. See Chamberlain, Price, Landsverk, and Reid (in press) for further details on participant recruitment for this sample.

Intervention

Participants in the intervention group received 16 weeks of training, supervision, and support in behavior management methods. Intervention groups consisted of 3 to 10 foster parents and were conducted by a trained facilitator and co-facilitator team. Curriculum topics were designed to map onto protective and risk factors that were been found in previous studies to be developmentally relevant malleable targets for change (Eddy & Chamberlain, 2000). The primary focus was on increasing use of positive reinforcement, consistent use of non-harsh discipline methods, such as brief time-outs or privilege removal over short time spans (e.g., no playing video games for one hour, no bicycle riding until after dinner), and teaching parents the importance of close monitoring of the youngster's whereabouts and peer associations. In addition, strategies for avoiding power struggles, managing peer relationships, and improving success at school were also included. Sessions were structured so that the curriculum content

was integrated into group discussions and primary concepts were illustrated via role-plays and videotaped recordings. Home practice assignments were given that related to the topics covered during sessions in order to assist parents in implementing the behavioral procedures taught in the group meeting. If foster parents missed a parent-training session, the material was delivered during a home visit (20% of the sessions). Such home visits have been found to be an effective means of increasing the dosage of the intervention for families who miss interventions sessions (Reid & Eddy, 1997).

Parenting groups were conducted in community recreation centers or churches. Several strategies were used to maintain parent involvement, including (a) provision of childcare, using qualified and licensed individuals so that parents could bring younger children and know that they were being given adequate care, (b) credit was given for the yearly licensing requirement for foster care, (c) parents were reimbursed $15.00 per session for traveling expenses, and (d) refreshments were provided. Attendance rates were high: 81% completed 80% or more of the group sessions (12+), and 75% completed 90% or more of the group sessions (14+).

The intervention was implemented by paraprofessionals who had no prior experience with the MTFC behavior management model or with other parent-mediated interventions. Rather, experience with group settings, interpersonal skills, motivation and knowledge of children were given high priority in selecting interventionists. Interventionists were trained during a 5-day session and supervised weekly where videotapes of sessions were viewed and discussed.

Measures

Foster and kin parent-report of child demographic characteristics was assessed at study entry (baseline). Caregivers had known the target child for at least 30 days prior to the baseline assessment. Placement status was assessed at intervention termination, or earlier if the child had exited the current placement prior to the termination interview (2 -11 months; $M = 5$, $SD = 1$ month). For the present study, child exits were defined as those occurring within 200 days, or approximately 6.5 months, of the baseline assessment. The end of this period represents the end of the completion of the scheduled study termination assessments.

Placement status outcome—Foster parents were asked at the termination assessment if the child had remained in the home or had moved, and assessors coded the timing and reason for these exits. Foster parents were asked about placement outcomes because of their accessibility and the likelihood they would have direct knowledge of the nature of the placement exit. Because of the heavy workload of caseworkers, the child welfare agency preferred that we not rely on caseworkers for assessing outcomes. Administrative data, which relies on caseworker data entry, typically takes several months to update and become available from the child welfare agency. Thus, it was not practical to rely on this source of information in this study. Two types of exits were coded: positive and negative exits. Positive exits were defined as any exit from the foster or kinship placement home that was made for a positive reason, such as a reunion with biological parent or other relative or an adoption. Negative exits were defined by negative reasons for the child's exit from the home, such as being moved to another foster placement, a more restrictive environment such as a psychiatric care or juvenile detention center, or child runaways. Positive and negative exits were coded as either "yes" (happened) or "no" (did not happen) within the 200-day post-baseline follow-up period. See Table 2 for descriptives of positive and negative exits by group. Because of the exclusion of children likely to be in temporary shelters or emergency placements (in placement < 30 days) and to the limited period (6.5 months) for assessing placement changes, 70% or more of the sample did not experience a change in placement.

Predictor variables—The main predictors of child risk for placement disruption were (a) number of prior placements, which was assessed by child welfare case files of available life-time placements histories, and (b) group status (intervention or control), which was based on randomized group assignment within the study.

Control variables—Characteristics of the type of the relationship between parent and child and of the child that could influence placement status were examined as control variables. These variables were measured in the baseline parent interview and included kinship status (kin or non-kin foster parent), child age and gender, primary language spoken (English or Spanish), and number of days in the placement at baseline.

Results

Overview

In order to address the primary aims of this study we examined three questions. Does a foster child's number of prior placements impact his/her risk of making a positive or negative exit from the current placement? Does the foster parent training and support intervention increase the likelihood of either positive or negative placement changes? Does the foster parent training and support intervention moderate the effect of prior placements on child risk of positive or negative placement exits? These questions were addressed using a series of Cox hazard models in order to examine the effects of potential predictors on the length of time it takes for an event to occur. In this study, the rate of positive or negative exits by intervention termination was the hazard rate being estimated. The foster child sample was assumed to be characterized by an average hazard rate, and individual children to differ from the average based on their risk characteristics. Besides the main study predictor variables – prior placements and intervention group – several other relationship and child characteristics that could influence exit risk were included as control variables in hazard models. These variables were kinship status, age, gender, primary language, and number of days in the placement at the baseline assessment.

Question 1: Effect of Prior Placements on Exit Rates

The number of prior placements had no effect on the hazard function for positive exits; however, it did prove a significant predictor of hazard for negative exits such that each additional prior placement increased the hazard of disruption by 6%. Of the control variables, kinship status and days in the placement at baseline related significantly to both positive and negative exit hazard functions; children in kinship placements and those who had been in the placement longer were less likely to make either a positive or negative exit during the intervention period.

Question 2: Effect of Intervention Group on Exit Rates

Adding the intervention group variable to the positive exit hazard model resulted in a significant improvement in model fit, $\Delta \chi^2 (1) = 8.03$, $p = .005$. As shown in Table 3, being in the intervention group nearly doubled the likelihood that the child would achieve a positive exit by the end of the intervention period (see Figure 1a for control and intervention positive exit hazard functions). Adding the main effect of intervention group on negative exit hazard rates did not produce a significant change in model fit, $\Delta \chi^2 (1) = 1.12$, *ns*, suggesting similar overall rates of negative placement disruption for the two groups (see Figure 1b for control and intervention negative exit hazard functions).

Question 3: Effect of Intervention x Prior Placements on Exit Rates

In a third step of model testing, an Intervention Group x Prior Placements interaction effect was added; this step was nonsignificant for positive exit hazard, $\Delta \chi^2 (1) = .00$, *ns*, however,

it proved significant for negative exit hazard, $\Delta \chi^2 (1) = 3.95$, $p = .047$ (see Table 3 for the full negative exit model). Follow-up analyses to decompose the interaction effect indicated that while number of Prior Placements significantly predicted a higher negative exit hazard rate in the control group (a 15% increase in risk for each additional placement), the effect of Prior Placements was nonsignificant in the intervention group. In other words, the foster parent intervention mitigated the negative risk-enhancing effect of a history of multiple placements. Figure 2 shows the predicted probability of a negative exit during the intervention period as a function of Prior Placements for intervention and control children.

Discussion

Given the psychosocial and financial costs associated with negative disruptions in foster care placements, further delineation of the risk factors associated with such disruptions and identification of interventions effective in reducing these disruptions are imperatives for the child welfare system. The findings from the current investigation address these important issues in that the number of prior placements was found to be predictive of negative exits from the current placement, and the foster parent training and support intervention increased the chances of a positive change in placement and mitigated the negative risk-enhancing effect of a history of multiple placements.

The first question examined in this investigation addressed whether the number of prior placements a child experiences affected his or her risk of making a positive or negative exit from the current placement. The results indicated that although the number of prior placements was not predictive of positive exits, it did prove a significant predictor of negative exits, such that each additional prior placement increased the risk of disruption by 6%. Thus, a child's placement history increased his or her risk for having a negative change of placement. This finding is consistent with research indicating that placement instability is associated with risk for future placement disruptions (Newton et al., 2000) and risk for reentry into foster care for children who have been discharged (Courtney, 1995; Wells & Guo, 1999). One of the processes that may be contributing to this relation is the bidirectional relation between placement instability and child behavior problems. As noted earlier, there is an established link between externalizing behavior problems and placement disruptions (e.g., Chamberlain et al., 2006; Leathers, 2006; Newton et al., 2000). Not only have externalizing behavior problems been found to increase the probability of a placement disruption (Chamberlain et al., 2006; Leathers, 2006; Newton et al., 2000), but high levels of placement disruptions have also been found to contribute to an increase in behavior problems (Newton et al., 2000). The continuing cycle of the placement instability may be, in part, attributable to maintenance and exacerbation of child behavior problems.

The findings from the hazard analyses addressing the first question also revealed that children in kinship placements and those who had been in the placement longer were less likely to experience either a positive or a negative exit during the intervention period. Both of these findings are consistent with prior research. Chamberlain et al. (2006) found that children placed with relatives were less likely to change placements than children placed with non-relatives. There is also evidence that placement disruptions are most likely to occur early rather than later in a placement (e.g., Smith, Stormshack, Chamberlain, & Bridges, 2001). Thus, it appears that placement with a relative and finding a placement that is conducive to early placement stability may help to prevent later placement disruptions.

The second question examined in this investigation addressed whether the foster parent intervention influenced the likelihood of either positive or negative change in placement. The results of the hazard analyses indicated that participation in the foster parent training and support intervention was predictive of positive, but not negative changes of placement for the

full sample (including children with from 0 to 20 previous placements). More specifically, children in the KEEP intervention group were nearly twice as likely to experience a positive exit by the end of the intervention period as children in the control group. For the purposes of this investigation, positive exits were defined as any exit from the foster or kinship placement home that was made for a positive reason, such as a reunion with biological parent or other relative or an adoption. Thus, the children in the intervention group had a greater likelihood of transitioning into the types of placements deemed desirable by child welfare agencies, namely, returning to the child to his or her biological parents, placing him or her in the home of a relative, or finding a suitable family for adoption. Findings from a recent investigation by Chamberlain et al. (2007) may shed some light on one possible explanation for this pattern of findings. In this study, the effectiveness of the KEEP intervention in reducing child behavior problems was examined. The findings revealed significant reductions in the behavior problems of the children in the intervention, but not control group. These reductions were found to be associated with an increased use of behavior management strategies. Furthermore, the reductions in behavior problems were to levels (on average, less than six behaviors per day) that could be considered manageable by most foster and kin caregivers (see Chamberlain et al., 2006).

In the current study, it is possible that participation in the KEEP intervention increased foster parent competencies in managing child behavior problems leading to reductions in child behavior problems, which in turn contributed to the likelihood that children would transition back to their biological parents, move to the home of a relative, or be adopted. This interpretation is consistent with the findings revealed by Landsverk et al. (1996) whereby children with externalizing behavior problems were one half as likely to be reunified with their biological parents as children without externalizing behavior problems. These authors suggest that one explanation for their findings is that child behavioral functioning played an important role in the reunification decision. Caseworkers may have reasoned that the risks of a poor outcome for reunification are greater when parenting and family problems are combined with child behavior problems, and that the probability of a positive outcome is greater when child behavior problems are at a level that can be managed by parents. Similarly, child behavioral functioning may also play an important role in adoption decisions as well, with fewer child behavior problems being viewed by caseworkers as increasing the likelihood of a more successful adoption.

The final question to be examined was, "Does the intervention moderate the effect of Prior Placements on child risk of positive/negative exit?" Whereas the results of the earlier hazard analysis indicated that participation in the foster parent training and support intervention was not predictive of negative changes of placement, the results of the next hazard analyses revealed a significant interaction between intervention group status and the prior number of placements in predicting negative disruptions. Although the number of prior placements significantly predicted a greater likelihood of negative disruptions in the control group (a 15% increase in risk for each additional placement), the effect of prior placements was nonsignificant in the intervention group. That is, the KEEP foster parent intervention mitigated the disruption risk-enhancing effect of a history of multiple placements. Similarly, Fisher et al. (2005) found that an intervention for preschool-aged children in foster care moderated the effects of prior foster placements on permanent placements with biological parents, with children in the control group more likely to experience a failed permanent placement compared to children in the intervention group.

Given the relation between child behavior problems and placement disruptions, it is possible that the children in the current investigation with a higher number of prior placements entered foster care with elevated levels of externalizing behavior problems. Exposure to foster parents who received the KEEP foster parent training intervention may have decreased the rates of

behavior problems to a level manageable to most caregivers. This, in turn, may have led to a decreased risk for negative disruptions.

This pattern of findings is not surprising given the variability across subjects in prior placement histories, with some children being new to the foster care system and having no placement history and others having experienced multiple placements during their life course. Thus, it would be expected that the intervention would be most effective in decreasing negative outcomes (i.e., negative placements) among those with a greater number of prior placements. As Figure 1 indicates, participation in the KEEP intervention mitigated the disruption risk-enhancing effect of a history of multiple placements, especially for those with four ($n = 191$) or more prior placements. There was no observed effect for those with three ($n = 480$) or fewer prior placements. In contrast, for those in the control group, there was a steady increase in the probability for a negative exit associated with an increase in the prior number of placements. These findings are consistent with other studies of prevention-oriented interventions where the effects of the intervention are concentrated on those at greatest risk for negative outcomes (e.g., Fisher et al., 2005).

Study Limitations

One of the limitations of this study is that the findings focus on only the first six-and a-half months following the baseline assessment. Thus, it was not possible to determine long-term effects of the intervention on placement changes or on the continued length of stay in the current placement. However, the first several months in a new placement appear to be critical to determining the degree of success of a placement. For example, James (2004) found that placement changes due to behavioral issues are more likely to occur within the first 100 days of entering the foster care system. Second, the assessment of placement disruptions relied on a single source – substitute caregivers. It is possible that caregivers' recollections of the reasons for the placement changes may have differed somewhat from those of caseworkers. An avenue for future research would be to examine the degree of correspondence between caregiver and caseworker perceptions of the nature of placement changes.

Policy Implications

The results from this investigation have several implications for child welfare policy and practice. First, the results indicate that placement instability serves as an important risk factor for future placement disruptions and reinforces the importance of reducing placement disruptions for children who enter the foster care system. Along with elevated levels of child externalizing behavior problems, a history of placement instability could be used to identify children who are at risk for future placement disruptions and should be targeted for intervention.

Second, the findings from this investigation suggest that intervention approaches based on the parent management training model, which focus on increasing parenting competencies in managing difficult behavior problems, may be effective in reducing child behavior problems and improving caregivers' skills in coping with these problems and thereby reduce the likelihood of placement disruptions. The KEEP intervention model, which shares similarities with several evidence-based interventions aims at improving outcomes for children with behavioral and emotional problems (e.g., Fisher et al., 2005; Kazdin & Wassell, 2000), focuses on improving caregiver understanding and competencies in managing child behavior. Although most foster parent training protocols include some instruction in the management of difficult behaviors (see Grimm, 2003) this material typically represents only a small segment of the total curriculum, and these general training programs have been found to be ineffective in bringing about changes in child behavior problems (Puddy & Jackson, 2003). Consequently, foster and relative caregivers typically do not receive adequate information and instruction on behavior management techniques, let alone practice and feedback on their attempts to apply

this knowledge to their ongoing interactions with the children in their care. Thus, the integration of parent-mediated interventions into regular foster parent training or as supplemental training for those caring for a child with challenging behavior problems could help to provide at-risk children with stable and safe environments essential for normal development and functioning. Implementation of such interventions could help to improve the overall quality of mental health care for children and their families and potentially help reduce financial costs associated with placement disruptions.

Unfortunately, we did not have the resources to conduct a cost-benefit analysis of the KEEP intervention. However, the costs associated with implementing the KEEP intervention (e.g., 16 weeks of parenting training, $15.00 per person per week in travel costs, and childcare) within a child welfare system are likely to be offset by the costs associated with addressing the consequences of externalizing behavior problems for a large proportion of the children in foster care. This would likely include costs associated with multiple placement disruptions, increased use of mental health services (Rubin et al., 2007), and the possibility of placements in residential care, which can be several thousand dollars per child each month. Providing evidence-based training in parent management techniques for all foster and kin parents could prove be a cost-effective strategy for managing child behavior problems, reducing placement disruptions, and helping to maintain safe and stable placements for children in the care of child welfare agencies. This crucial issue needs to be addressed in future research.

References

Achenbach, TM. Manual for the child behavior checklist/4-18 and 1991 profile. Burlington, VT: University of Vermont Department of Psychiatry; 1991.

Chamberlain P, Leve LD, DeGarmo DS. Multidimensional treatment foster care for girls in the juvenile justice system: 2-year follow-up of a randomized clinical trial. Journal of Consulting and Clinical Psychology 2007;75:187–193. [PubMed: 17295579]

Chamberlain P, Moreland S, Reid K. Enhanced services and stipends for foster parents: Effects on retention rates and outcomes for children. Child Welfare 1992;71:387–401. [PubMed: 1521497]

Chamberlain P, Price JM, Reid JB, Landsverk J, Fisher PA, Stoolmiller M. Who disrupts from placement in foster and kinship care? Child Abuse and Neglect 2006;30:409–424. [PubMed: 16600372]

Chamberlain P, Price JM, Landsverk J, Reid JB. Cascadiing implementation of a foster and kinship parent intervention. Child Welfare. in press

Chamberlain P, Price JM, Leve L, Laurent H, Landsverk J, Reid JB. Prevention of Behavior Problems for Children in Foster Care: Outcomes and Mediation Effects. 2007Manuscript submitted for publication

Chamberlain P, Reid JB. Using a specialized foster care community treatment model for children and adolescents leaving the state mental hospital. Journal of Community Psychology 1991;19:266–276.

Chamberlain P, Reid JB. Differences in risk factors and adjustment for male and female delinquents in Treatment Foster Care. Journal of Child and Family Studies 1994;3(1):23–39.

Cicchetti, D.; Valentino, K. An ecological-transactional perspective on child maltreatment: Failure of the average expectable environment and its influence on child development. In: Cicchetti, D.; Cohen, D., editors. Developmental Psychopathology, Vol3: Risk, disorder, and adaptation. Hoboken, NJ: John Wiley & Sons; 2006. p. 129-201.

Courtney ME. Reentry to foster care of children returned to their families. Social Service Review 1995;69:226–241.

Eddy JM, Chamberlain P. Family management and deviant peer association as mediators of the impact of treatment condition on youth antisocial behavior. Journal of Consulting and Clinical Psychology 2000;68:857–63. [PubMed: 11068971]

Fisher PA, Burraston B, Pears K. The early intervention foster care program: Permanent placement outcomes from a randomized trial. Child Maltreatment 2005;10:61–71. [PubMed: 15611327]

Grimm B. Foster parent training: What the CFS reviews do and don't tell us. Youth Law News 2003 April-June;:3–29.

Harden BJ. Safety and stability for foster children: A developmental perspective. Future of Children 2004;14:31–47.

Haugaard, J.; Hazan, C. Foster parenting. In: Bornstein, MH., editor. Handbook of parenting: Vol 1: Children and parenting. 2. Mahwah, NJ: Lawrence Erlbaum Associates Publishers; 2002. p. 313-327.

Holland P, Gorey KM. Historical, Developmental, and Behavioral Factors Associated with Foster Care Challenges. Child and Adolescent Social Work Journal 2004;21:117–135.

James S. Why do foster care placements disrupt? An investigation of reasons for placement change in foster care. The Social Service Review 2004;78:601–626.

James S, Landsverk J, Slyman DJ. Placement movement in out-of-home care: patterns and predictors. Children and Youth Services Review 2004;26:185–206.

Kazdin AE, Wassell G. Therapeutic changes in children, parents, and families resulting from treatment of children with conduct problems. Journal of the American Academy of Child & Adolescent Psychiatry 2000;39:414–420. [PubMed: 10761342]

Keil V, Price JM. Externalizing behavior disorders in child welfare settings: Definition, prevalence, and implications of assessment and treatment. Children and Youth Services Review 2006;28:761–779.

Kufeldt, K.; Armstong, J.; Dorosh, M. In care, in contact?. In: Hudson, JU.; Balaway, B., editors. The state as parent. Dordrecht: Kluwer Academic Publishers; 1989. p. 355-368.

Landsverk J, Davis I, Ganger W, Newton R, Johnson I. Impact of child psychosocial functioning on reunification fro out-of-home care. Children and Youth Services Review 1996;18:363–382.

Landsverk, J.; Garland, A. Foster care and pathways to mental health services. In: Curtis, P.; Dale, G., editors. The foster care crisis: Translating research into practice and policy. Lincoln, NE: University of Nebraska Press; 1999. p. 193-210.

Lawder EA, Poulin JE, Andrews RG. A study of 185 foster children 5 years after placement. Child Welfare 1986;65:241–251. [PubMed: 3709279]

Leathers SJ. Placement disruption and negative placement outcomes among adolescents in long-term foster care: The role of behavior problems. Child Abuse & Neglect 2006;30:301–324.

Leve LD, Chamberlain P. Female juvenile offenders: Defining an early-onset pathway for delinquency. Journal of Child & Family Studies 2004;13:439–452.

National Survey of Child and Adolescent Well-Being Group. National survey of child and adolescent well-being (NSCAW One Year in Foster Care Wave 1 Data Analysis Report). Washington, DC: U.S Department of Health and Human Services, Administration for Children and Families; 2003.

National Survey of Child and Adolescent Well-being Research Group. National survey of child and adolescent well-being. Washington, DC: U.S Department of Health and Human Services, Administration for Children and Families; 2005.

Newton RR, Litrownik AJ, Landsverk JA. Children and youth in foster care: disentangling the relationship between problem behaviors and number of placements. Child Abuse and Neglect 2000;24:1363–1374. [PubMed: 11075702]

Pardeck JT. Multiple placement of children in foster family care: An empirical analysis. Social Work 1984;29:506–509.

Price JM. The economic impact of placement disruption in San Diego County. 2007Manuscript in preparation

Puddy RW, Jackson Y. The development of parenting skills in foster parent training. Children and Youth Services Review 2003;25:987–1013.

Reid, JB.; Eddy, JM. The prevention of antisocial behavior: Some considerations in the search for effective interventions. In: Stoff, DM.; Breiling, J.; Maser, JD., editors. Handbook of antisocial behavior. New York: John Wiley & Sons, Inc.; 1997. p. 343-356.

Rubin DM, Alessandrini EA, Feudner C, Mandell DS, Localio AR, Hadley T. Placement stability and mental health costs of children in foster care. Pediatrics 2004;113:1336–1341. [PubMed: 15121950]

Rubin DM, O'Reilly AL, Luan X, Localio AR. The impact of placement stability on behavioral well-being for children in foster care. Pediatrics 2007;119:336–344. [PubMed: 17272624]

Smith D, Stormshack E, Chamberlain P, Bridges WR. Placement disruption in treatment foster care. Journal of Emotional and Behavioral Disorders 2001;9:200–205.

Sroufe, AL.; Duggal, S.; Weinfield, N.; Carlson, E. Relationships, development, and psychopathology. In: Sameroff, AJ.; Lewis, M.; Miller, SM., editors. Handbook of Developmental Psychopathology. 2. New York: Kluwer Academic/Plenum Publishers; 2000. p. 75-92.

Stein E, Evans B, Mazumdar R, Rae-Grant N. Then mental health of children in foster care: A comparison with community and clinical samples. Canadian Journal of Psychiatry 1996;41:385–391.

Thompson, RA.; Flood, MF.; Goodvin, R. Social support and developmental psychopathology. In: Cicchetti, D.; Cohen, D., editors. Developmental Psychopathology, Vol 3: Risk, disorder, and adaptation. Hoboken, NJ: John Wiley & Sons; 2006. p. 1-37.

Trupin EW, Tarico VS, Low B, Jennelka R, McClellan J. Children on child protective service caseloads: Prevalence and nature of serious emotional disturbance. Child Abuse & Neglect 1993;17:345–355. [PubMed: 8330221]

U.S. Department of Health and Human Services. The AFCARS Report. Washington, DC: Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau; 2002. www.acf.hhs.gov/programs/cb

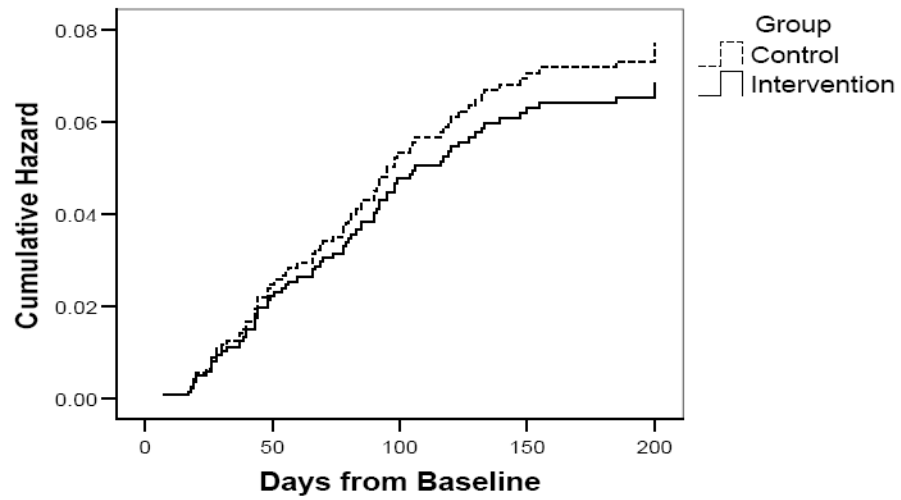Wells K, Guo S. Reunification and reentry of foster children. Children and Youth Services Review 1999;21:273–294.

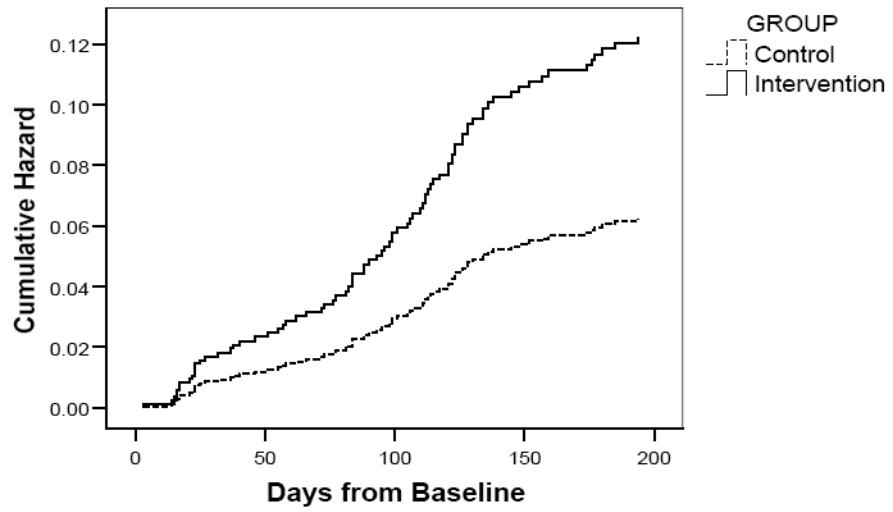**Figure 1.**
a. Positive exit hazard functions for control and intervention group foster children.
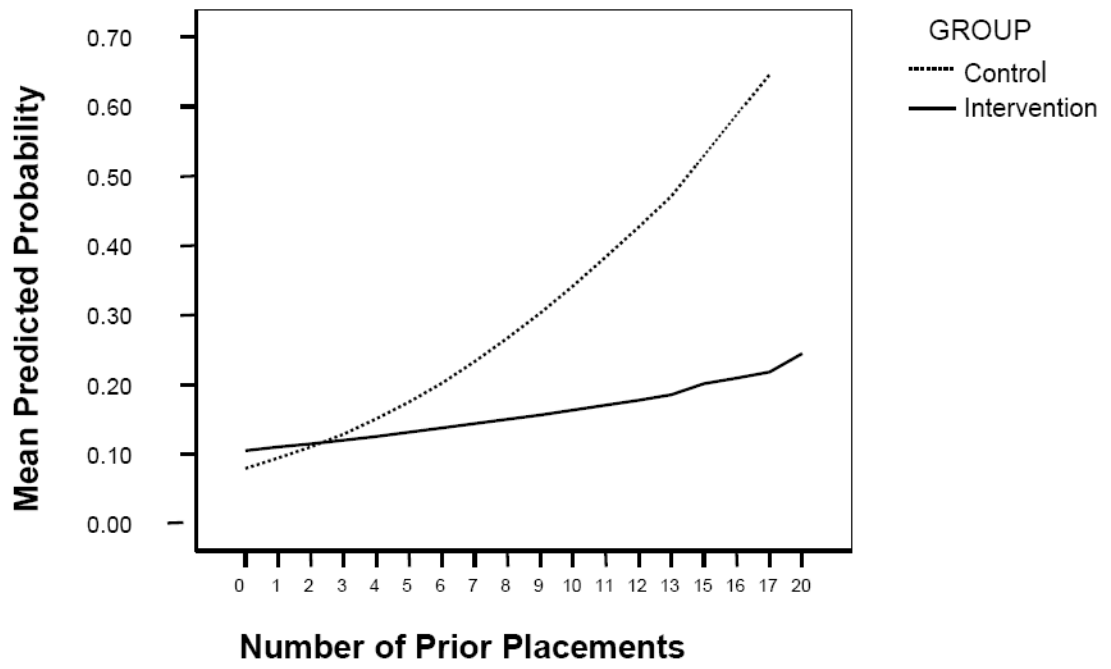*b.* Negative exit hazard functions for control and intervention group foster children.

Figure 2.
Predicted probability of negative exit by prior placements and intervention group.

Table 1

Demographic Information for Foster Parents and Children

	Foster Parent		Child	
	Intervention (*n* = 359)	Control (*n* = 341)	Intervention (*n* = 359)	Control (*n* = 341)
Age at Baseline	49.86	47.29	8.88	8.72
Kin	32%	36%		
Non-kin	68%	64%		
Gender				
Female	94%	93%	50%	54%
Male	6%	7%	50%	46%
Ethnicity				
African American	27%	24%	23%	19%
Asian/Pacific Islander	4%	2%	1%	1%
Caucasian	21%	34%	20%	25%
Latino	41%	33%	35%	30%
Native American	1%	1%	1%	1%
Multi-Ethnic	6%	6%	20%	24%
Primary Language				
English	55%	65%	66%	79% [*]
Spanish	45%	35%	34%	21%

[*]
p < .05

Table 2

Placement Status Descriptives for Control and Intervention Group Children

	Control	Intervention
Positive Exit	9.1%	17.4%
Negative Exit	14.3%	12.2%
No Change	76.6%	70.4%
No. of Prior Placements (*M, SD*)	3.1, 2.9	2.9, 2.9.

Table 3

Cox Hazard Regression Results for Positive and Negative Exit Models

Predictor	Positive Exits				Negative Exits			
	exp[B]	SE	Wald, df	p	exp[B]	SE	Wald, df	p
Kinship (kin vs. non-kin)	.60	.26	3.75, 1	.05	.31	.35	11.25, 1	.001
Child Age	.94	.05	1.53, 1	.22	.97	.05	.41, 1	.52
Child Gender (male vs. female)	.83	.23	.70, 1	.40	1.05	.23	.04, 1	.84
Primary Language (English vs. Spanish)	1.34	.23	1.59, 1	.21	1.26	.25	.86, 1	.35
Days in Placement at Baseline	.99	.001	10.17, 1	.001	.99	.001	10.81, 1	.001
No. of Prior Placements	.94	.05	1.89, 1	.17	1.07	.03	4.27, 1	.04
Intervention Group (intervention vs. control)	1.96	.24	7.52, 1	.006	.89	.24	.23, 1	.64
Group x Prior Placements					.88	.06	3.87, 1	.05

Note. Prior Placements and Group were centered to create the interaction term.