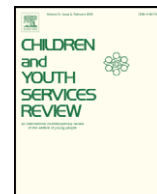




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# Effects of Multidimensional Treatment Foster Care for Preschoolers (MTFC-P) on reducing permanent placement failures among children with placement instability<sup>☆</sup>

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## ABSTRACT

The aims of the present study were to examine the effects of a therapeutic intervention for foster preschoolers with histories of placement instability on permanency outcomes and to determine whether the intervention's effectiveness on these outcomes varied based on prior maltreatment experiences. Permanency outcomes for 52 children who had experienced 4 or more placements prior to study entry ( $n=29$  intervention condition;  $n=23$  regular foster care condition) were examined through 24 months post-study entry. The results indicated no group differences in permanency attempt rates but more than double the rate of successful permanency attempts for the intervention condition. The findings indicated that systematic interventions have the potential to impact permanency outcomes among children with prior instability.

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## 1. Introduction

Foster children's high risk for poor developmental, psychosocial, and mental health outcomes has been documented in numerous studies and epidemiological surveys (Crozier & Barth, 2005; Landsverk, Garland, & Leslie, 2002; Stahmer et al., 2005; Wall & Kohl, 2007). Experiences in the family of origin that result in children being placed in foster care, including neglect and various forms of abuse, are commonly cited as playing a part in these poor outcomes (Pears & Fisher, 2005a,b). However, foster care experiences can also account for some of the observed difficulties among foster children. Though foster care can provide a stable, nurturing environment that can help to remediate the effects of early maltreatment, it can also have unintended negative consequences. This can be especially pronounced when children experience multiple foster placements or permanent placement failures (Barth, Weigensberg, Fisher, Fetrow, & Green, 2008; Miller, Fisher, Fetrow, & Jordan, 2006). In such circumstances, children must adapt repeatedly to different patterns of care while coping with the loss of prior primary caregivers. Rubin, O'Reilly, Luan, and Localio (2007) found that child welfare system children who experienced multiple placement changes, compared to children who did not experience such instability, had up to 63% higher

risk for behavior problems. Moreover, emerging evidence has suggested that unstable placement experiences negatively impact the development of neurobiological substrates such as emotion regulation and self-control (Fisher, Gunnar, Dozier, Bruce, & Pears, 2006; Lewis, Dozier, Ackerman, & Sepulveda-Kozakowski, 2007).

These issues have direct relevance for child welfare programming and policy, suggesting that children who have experienced multiple placements might need higher levels of services than other foster children. Studies have shown that, as the number of placement changes increases, there is a decreased likelihood of children achieving placement permanency (reunification, adoption, or stable long-term foster care). For instance, in Fisher, Burraston, and Pears' (2005) examination of permanent placement outcomes for foster preschoolers, there was a very strong positive association between the number of prior placements and the likelihood of permanent placement failure. Similarly, using a national database of over 700 children in the child welfare system, Rubin et al. (2007) found that children who entered a stable placement within 45 days of study entry were significantly less likely to experience multiple moves.

The association of placement instability with compromised permanency and psychosocial outcomes supports an argument for interventions in this area. From an early intervention perspective, the sooner that children are identified to have placement instability (and are provided with a means to interrupt the cycle), the better are the chances of improving outcomes. Fortunately, there is evidence to suggest that children who experience multiple placement changes represent only a subset of the overall foster care population. For example, in a study of over 500 children in the English foster care system (no data from the U.S. were available), Sinclair, Wilson, and Gibbs (2004) found that approximately 75% of the children had three

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or fewer placements and that only 16% of the children had five or more placements. Further supporting an argument for early intervention, these percentages varied depending on the age of the child: Older children were more likely to have experienced more placements. Overall, these studies have indicated that many foster children, identified at least in terms of the criterion of placement failures, are adequately served by the existing foster care system. Conversely, by intervening early with children who appear to be moving towards serial placement failures, it might be possible to greatly impact negative outcomes. In short, interventions to reduce placement failures in foster children at high risk for instability might prove to be an economical and important approach to reducing significant risks in the foster care population.

In the present study, we had three goals. The first goal was to characterize foster preschoolers with placement instability in terms of prior maltreatment. High rates of maltreatment might have been expected in these children, given that they had struggled to achieve stable placements; however, because these children entered care at a younger age, they might have been less likely to experience multiple episodes of maltreatment. In light of the limited research with this subgroup of the foster care population, this goal was aimed at describing this population segment to facilitate the development of effective services to promote placement stability and permanency.

The second goal was to examine whether MTFC-P, a family-based therapeutic intervention for foster preschoolers, reduced permanent placement failures in children with prior placement instability. MTFC-P has been found to impact foster parent self-reported stress levels associated with managing children's problem behavior (Fisher & Stoolmiller, 2008). In addition, Fisher and Kim (2007) reported positive outcomes on children's attachment-related behaviors. In particular, during times of distress, children who received the MTFC-P intervention showed increased levels of secure behavior over time and decreased levels of resistant and avoidant behaviors, whereas children in regular foster care showed opposite trends. Given the positive impact on multiple domains of functioning obtained with the MTFC-P program, we were interested in whether the program reduced the likelihood of permanent placement failures among preschool-aged foster children who had already experienced extensive placement instability.

The third goal was to investigate whether particular maltreatment experiences in the family of origin were associated with differential effectiveness of MTFC-P on placement permanency. If the intervention proved effective at increasing permanency among children with prior placement failures, perhaps it would be equally effective regardless of the maltreatment history of the children. Alternatively, perhaps children with certain maltreatment experiences would be more likely to respond to the intervention than others. In a prior meta-analysis of 21 intervention studies targeting child maltreatment, Skowron and Reinemann (2005) found no differential effects of interventions based on type of maltreatment but noted that there was a lack of high-quality data to assess maltreatment in these studies. They called for more systematic efforts to measure maltreatment and specifically endorsed the coding system employed for the present study in future research.

## 2. Method

### 2.1. Participants

Data for the present study came from a subset of children in a randomized clinical trial to evaluate the MTFC-P program. The sample for the larger study consisted of 117 3- to 5-year-old foster children entering new foster placements and 60 nonmaltreated community children from low-income families. (For obvious reasons, the community children were excluded from the present study). The foster care sample included children new to foster care, children reentering

care, and children moving between foster placements. To be eligible for the study, the placement at study entry had to be expected to last for 3 or more months. The recruitment phase lasted 3.5 years. Eligible foster children were randomly assigned to the MTFC-P experimental condition ( $n=57$ ) or to the regular foster care (RFC) comparison condition ( $n=60$ ). Once randomization was completed, a staff member contacted each child's caseworker (i.e., the legal guardian while the child is in care) and requested consent for the child to participate in the project. A staff member then contacted the foster parent(s) for recruitment purposes. To be successfully recruited, the caseworker and the foster family had to consent to participation. The children were assessed over a 2-year period. On average, the foster children had spent approximately 171 days in foster care prior to study entry. There was no group difference between the MTFC-P and RFC groups in mean time spent in foster care at the baseline assessment.

We operationalized the concept of prior placement instability in the present study as a child having experienced four or more placements prior to study entry. This produced a sample of 52 children (27 boys and 25 girls; 23 RFC and 29 MTFC-P) for the present study. On average across the two study conditions, the children had experienced approximately six transitions ( $M=5.79$ ,  $SD=1.66$ ), and 12 children (23%) had experienced seven or more transitions prior to entering the study. Mean numbers of prior placement transitions were significantly higher for the MTFC-P children ( $M=6.21$ ,  $SD=1.59$ ) than for the RFC children ( $M=5.26$ ,  $SD=1.63$ ),  $t=-2.11$ ,  $df=50$ ,  $p=.04$ . The implications of this initial group difference are addressed in the Discussion section. Prior to study entry, the mean duration for each placement was 137.97 days ( $SD=93.93$ ), and there was no significant difference in average placement duration between groups. Age at first placement ranged from birth to 5 years with a mean of 2.42 years ( $SD=1.32$ ). There was no significant difference in age at first placement between groups. The children were predominantly European Americans (90.4%), which was representative of the geographical region in which the study was conducted. There was no significant group difference in terms of child ethnicity.

### 2.2. Intervention and comparison conditions

The MTFC-P intervention addresses key developmental and social-emotional needs for foster preschoolers. The intervention is delivered via a team approach to the children, foster parents, and permanent placement resources (birthparent and adoptive relative/nonrelative). Before receiving a foster child, each foster parent completes 12 h of intensive training. After placement, the foster parents work with a foster parent consultant and receive support and supervision through daily telephone contacts, weekly foster parent support group meetings, and 24-hour on-call staff. The foster parent consultant works with the foster parent to maintain a positive, responsive, and consistent environment through the use of concrete encouragement for positive behavior and clear limit setting for problem behavior. The children also receive services from a behavior specialist working in preschool/daycare and home-based settings. Additionally, the children attend weekly socialization playgroup sessions. The program staff is largely composed of clinicians with bachelor's and master's degrees, with a licensed psychologist as the clinical supervisor. Group supervision occurs weekly, with consultation provided as needed.

Whenever possible, a family therapist works with birth parents or adoptive parents to familiarize them with the parenting skills used by the foster parents in the program. This helps to facilitate consistency between settings. Children typically receive services for 9–12 months, including the period of transition to a permanent placement (or, if the child is remaining in long-term foster care, until his/her behavior has stabilized and the risk of placement disruption appears to have been mitigated). Treatment fidelity for all MTFC-P components is monitored via progress notes and checklists completed by the clinical staff. There were no adverse events from participation in the intervention.

See Fisher, Ellis, and Chamberlain (1999) and Fisher et al. (2005) for more information on MTFC-P.

The RFC families received routine services, which commonly involve individual psychotherapy, developmental screening, and referrals for services for the children and social service support, substance abuse treatment, mental health treatment, and parent training (not through our center) for the birth families and adoptive families.

### 2.3. Measures

The children's placement experiences and maltreatment histories were coded from official case records obtained from the county branch of the Oregon Department of Human Services Child Welfare Division and were updated every 6 months. A representative of the child welfare agency prepared the case records, removing all identifying information.

#### 2.3.1. Permanent placement outcomes

The case records listed beginning and ending dates for each placement change, including a code for the type of placement (e.g., emergency shelter or return to biological parent). The present study used placement data from the first out-of-home placement (typically prior to study) through 24 months post-study entry. We included three types of placements in our definition of permanency: reunification with biological parent, relative adoption, and nonrelative adoption. (Although "permanent foster care" and "long-term foster care" are sometimes included in definitions of permanency for the present study, these designations do not exist in the state where the study occurred.)

We measured three aspects of permanency. First, we examined the proportion of children in each foster care condition for whom a permanent placement was attempted during the 24 months following study entry (referred to as *permanency attempts*). It is important to note that, for the MTFC-P condition, permanent placement decisions were made by the child welfare caseworkers based on issues largely outside the scope of the intervention. For example, for cases in which reunification was the goal, these decisions were based on a safety model that was being implemented statewide in the child welfare system. Within this model, the primary consideration was whether the birth parent was able to provide a home environment free from physical or psychological harm to the child. Thus, factors taken into consideration included whether the parent had successfully completed drug abuse and/or domestic violence treatment, whether the home environment was free from risks, and whether the parent was able to provide minimally adequate care. For cases in which adoption was the goal, the process involved a combination of legal system activity and identification of an appropriate adoptive family. Given the limited extent to which the intervention was designed to address issues related to the decision to attempt permanency, we expected limited intervention effects on this measure. However, inasmuch as the parent training provided to birth parents and the behavioral interventions provided to the MTFC-P children might have facilitated caseworkers' decisions about permanency, it was important to test for potential intervention effects on this measure.

Second, we examined the proportion of successful first permanent placement attempts following study entry (referred to as *successful permanency attempts*) for each group. For this measure, the numerator was the number of permanent placements after which there was no subsequent placement change, and the denominator was the total number of permanency attempts. That is, children who were characterized as having successful permanency attempts had no subsequent placement changes during the first 24 months of the study period. Given that the MTFC-P intervention addresses elements of child behavior and parenting that might lead to a child reentering care, we expected the greatest intervention effects on this variable.

Third, we examined the overall rate of successful permanency (referred to as *overall permanency*) for each group. For this measure, the numerator was also the number of first permanent placements after which there was no subsequent placement change, but the denominator was the total number of cases in each group. Thus, this measure included children for whom there were and there were not permanency attempts. This helped to rule out the possibility that the intervention was only successful in increasing permanency because fewer children experienced permanency attempts.

For all three measures of permanency, we combined the three types of permanent placements into a single category for the initial analyses. We then conducted separate analyses for reunifications with biological parents and adoptions to examine if differential intervention effects were observed based on permanent placement type. Although it would have been of further interest to examine relative and nonrelative adoptions separately, there were too few participants in these two categories to conduct separate analyses.

#### 2.3.2. Maltreatment history

Each child's maltreatment history was coded from case records that were obtained with consent from the caseworkers and the local child welfare agency. A representative of the child welfare agency prepared the case records, removing all identifying information. The case records consisted of caseworker narratives of each referral to the child welfare system and the resulting investigation and findings. The narratives contained information about the specific types of maltreatment that were reported and investigated (if there was a subsequent investigation) for each referral. Each incident of maltreatment was then classified according to type and coded for severity using the Maltreatment Classification System (MCS; Barnett, Manly, & Cicchetti, 1993). The MCS allows for the coding of different types of maltreatment: physical abuse, sexual abuse, failure to provide (i.e., failure to provide adequate food, clothing, shelter, medical care, or a safe living environment for the child; referred to as *physical neglect*), lack of supervision (i.e., failure to provide age-appropriate supervision for the child; referred to as *supervisory neglect*), emotional maltreatment (i.e., rejection, abandonment, or allowing the child to be witness to traumatic events such as domestic violence or a parent's suicide attempt), educational maltreatment (i.e., failure to send the child to school), and moral/legal maltreatment (i.e., using the child for illegal purposes such as to help in shoplifting). Severity ratings were also obtained for each maltreatment type. Severity is coded on a scale from 1 (*less serious maltreatment*) to 5 (*severe or potentially life-threatening maltreatment*). With regard to physical abuse, for instance, a score of 1 would indicate that minor marks had been left on the child's body (but not neck or head), whereas a score of 5 would indicate that the caregiver had inflicted an injury on the child that required hospitalization and/or was permanently disabling or disfiguring. Children who do not experience a particular type of maltreatment for a given instance receive a score of 0 for that maltreatment category. For each incident of maltreatment, the relationship of the perpetrators (up to three) to the child was coded. To qualify as an incident, an event had to fit the MCS definitions of maltreatment and had to be reported by a reliable (i.e., mandatory) reporter or to be founded by the child protective services caseworker.

The case records were coded by two coders trained in the use of the system by one of the MCS authors (J. T. Manly). During data collection, 20% of the case records were double-coded for the purposes of computing inter-rater agreement. Agreement was high for the identification of incidents (80%) for the severity of each type of abuse. The average kappa was .72 across all of the categories: physical abuse  $\kappa = .82$ , sexual abuse  $\kappa = .67$ , failure to provide  $\kappa = .65$ , lack of supervision  $\kappa = .65$ , and emotional maltreatment  $\kappa = .79$ . Coders signed agreements of confidentiality and completed extensive training on confidentiality.

**Table 1**  
Descriptive statistics of maltreatment history (N = 52).

Maltreatment type	Incidence		Maltreatment severity	
	%	n	M	SD
Physical abuse	30.8	16	0.70	1.18
Sexual abuse	23.1	12	0.60	1.22
Physical neglect	88.5	46	1.98	1.04
Supervisory neglect	94.2	49	3.07	0.98
Emotional maltreatment	84.6	44	2.48	1.42

Our preliminary analyses indicated that the base rates for educational maltreatment and moral/legal maltreatment were extremely low. Thus, these two categories were dropped from further score calculation and analyses. To obtain total mean severity scores for each category of maltreatment, all of the severity scores within each type of maltreatment across incidents were averaged. This resulted in five mean severity scores: physical abuse, sexual abuse, physical neglect, supervisory neglect, and emotional maltreatment.

Ten sibling pairs were included in the sample for the present study, including 7 pairs in the MTFC-P group and 3 pairs in the RFC group. To determine if the sibling pairs influenced the results, we included only the sibling who was younger in the preliminary analyses. The findings were very similar to the results obtained when all siblings were included. Thus, we present results from analyses using all siblings below.

### 3. Results

#### 3.1. Maltreatment history

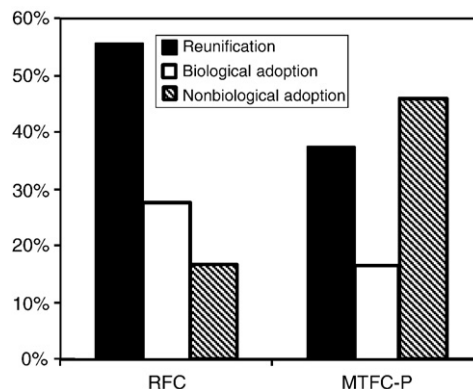
The first goal of this study was to examine the maltreatment experiences of the children who had four or more placement transitions prior to study entry. On average, the children had experienced about eight incidents of maltreatment ( $M = 7.65$ ,  $SD = 4.19$ ; range = 1–20). As is indicated in Table 1, physical abuse was reported for about one third of the sample, and sexual abuse was reported for about one fourth of the sample. The majority of the sample experienced moderately severe physical neglect, supervisory neglect, or emotional maltreatment. On average, each child experienced maltreatment from about three different perpetrators ( $M = 2.61$ ,  $SD = .99$ ). The experience of multiple types of abuse was common, with each child having experienced about three types of maltreatment on average ( $M = 3.21$ ,  $SD = .94$ ).

#### 3.2. Group differences in permanency outcomes

As is described in the Method section, we examined differences between the MTFC-P condition and the RFC condition on three aspects of permanency: permanency attempts, successful permanency attempts, and overall permanency. For each of these measures, we examined outcomes on a combination of all three types of permanent placements and then examined reunification and adoption placements separately.

##### 3.2.1. Permanency attempts

Of the 52 children across the two conditions, 42 children (80.8%) had at least one permanency attempt during the first 24 months of the study: 18 of 23 RFC children (78.3%) and 24 of 29 MTFC-P children (82.8%). The group difference for permanency attempts was not statistically significant,  $\chi^2 = .17$ ,  $df = 1$ ,  $p > .05$ . No permanent placement attempt was made for 10 children during the first 24 months of the study (5 from each group). We further examined the permanency attempts by type of permanent placement (see Fig. 1). In the RFC condition, the following permanency attempts were made: 3 (16.7%)



**Fig. 1.** Permanency attempts by group and by type during the first 24 months of the study.

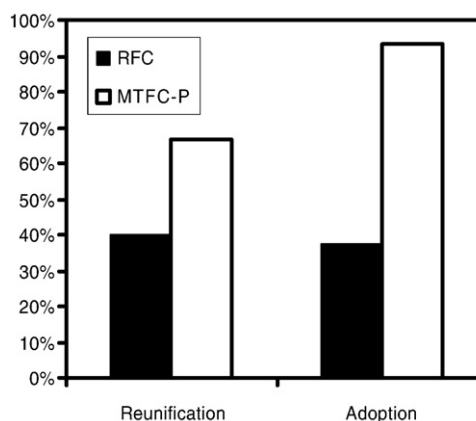
adoptions by nonrelatives, 5 (27.8%) adoptions by relatives, and 10 (55.6%) reunifications with biological parent(s). In the MTFC-P condition, the following permanency attempts were made: 11 (45.8%) adoptions by nonrelatives, 4 (16.7%) adoptions by relatives, and 9 (37.5%) reunifications with biological parent(s). There was no group difference in the permanency attempts by type,  $\chi^2 = 3.96$ ,  $df = 2$ ,  $p > .05$ .

##### 3.2.2. Successful permanency attempts

Of those who had any attempts for a permanent placement ( $n = 42$ ), 27 children had a successful permanent placement: 7 of 18 (38.9%) RFC children and 20 of 24 (83.3%) MTFC-P children. A chi-square analysis confirmed a significant group difference,  $\chi^2 = 8.85$ ,  $df = 1$ ,  $p < .01$ . The types of permanent placements for each group are shown in Fig. 2: 10 children (4 RFC and 6 MTFC-P) successfully reunited with their biological parent(s) within the first 24 months of the study, and the remaining 17 children were adopted. The group difference in the successful permanency attempts by the type of placement was not significant,  $\chi^2 = 1.64$ ,  $df = 1$ ,  $p > .05$ , despite the vast differences in the absolute success rates (40% RFC vs. 66.7% MTFC-P for reunification and 37.5% RFC vs. 93.3% MTFC-P for adoption). This lack of significance might have been due to the limited power. To further understand the group difference, we conducted a nonparametric chi-square test for each type separately. The group difference for reunification with biological parents was not significant, but the group difference for adoption was significant,  $\chi^2 = 7.12$ ,  $df = 1$ ,  $p < .01$ .

##### 3.2.3. Overall permanency

Overall, 7 of 23 (30.4%) RFC children and 20 of 29 (69.0%) MTFC-P children experienced successful permanency attempts during the first



**Fig. 2.** Proportion of successful permanency attempts, by group and by type.

24 months of the study, and the group difference was significant,  $\chi^2 = 7.63$ ,  $df = 1$ ,  $p < .01$ .

### 3.3. Association between maltreatment history and successful permanent placement

The third goal of the study was to investigate whether particular maltreatment experiences prior to entering foster care were associated with placement permanency after controlling for the treatment effect. A logistic regression analysis was conducted using successful permanent placement status as the outcome and maltreatment variables (i.e., mean severities of each maltreatment type and the total number of maltreatment incidence) as the predictors. The overall model was not significant,  $\chi^2 = 13.97$ ,  $df = 7$ ,  $p > .05$ . Group condition was the only significant predictor in the logistic regression,  $b = 2.28$ ,  $p < .01$ , suggesting that none of the maltreatment variables predicted successful permanency during the first 24 months of the study. Because none of the maltreatment variables were significant, we did not test interaction terms between each maltreatment variable and the group condition. This finding suggests that the MTFC-P intervention effects on permanency are not affected by particular maltreatment experiences prior to entering foster care.

## 4. Discussion

In this study, we focused on foster preschoolers with histories of placement instability in the context of a randomized trial to evaluate the MTFC-P intervention. Examining the maltreatment histories of these children revealed numerous past incidents of prior maltreatment, with on average close to 8 incidents being reported in the child welfare case records. However, the variation within the sample on this variable was also noteworthy. Some children had experienced 1 maltreatment incident, whereas other children had experienced as many as 20. Consistent with previous reports of maltreatment, physical and supervisory neglect were the most common maltreatment types, occurring in 89% and 94% of the sample, respectively. Emotional maltreatment occurred in approximately 85% of the sample. In contrast, sexual abuse and physical abuse were considerably less common, occurring in 23% and 30% of the sample, respectively. Having multiple perpetrators was common, and many children experienced more than one maltreatment type.

These results highlight the pervasiveness of certain experiences (multiple episodes of maltreatment and high frequencies of neglect and emotional maltreatment) and the heterogeneity of experience among foster preschoolers. Interestingly, these descriptive data do not appear to differ greatly from reports from the general foster care population (Finkelhor, Ormrod, Turner, & Hamby, 2005) or from the larger foster care sample from which the participants for the current study were drawn (see Pears, Kim, & Fisher, *in press*). In short, foster preschoolers with placement instability do not seem to be distinguished by histories of more severe or complex maltreatment than other foster children.

Although maltreatment history did not appear to be associated with placement instability, it is possible that other child-specific variables were involved. Some types of behavior problems (e.g., aggression) might increase the risk of foster placement failures and might increase the likelihood of reentry into care among children who have exited the child welfare system. In addition, many variables extraneous to children might be associated with instability. Such variables could include biological family issues (e.g., parental substance abuse) and systems issues (e.g., caseworker administrative decisions unrelated to the child). Notably, James, Landsverk, and Slymen (2004) indicated that over 70% of decisions to move a child from a foster placement were unrelated to the child. Additional research is needed to better explicate the causes and correlates of

placement instability and to include these variables in a coherent conceptual model.

Beyond a need to better understand the variables associated with placement instability, there is a need to develop approaches for mitigating the risk that children who have experienced such instability will have difficulties in achieving permanency. As is noted previously, placement instability is associated with decreased rates of permanency, increased rates of problem behavior, and difficulties with self-regulation. The results of the present study suggest that the MTFC-P intervention helps to solve this problem. Of particular note is the fact that the MTFC-P group had more than twice the rate of successful permanency attempts. Moreover, the measure of overall permanency, which included children for whom permanency was and was not attempted, also revealed significantly higher rate of successful permanency attempts in the MTFC-P group. This is important because it rules out the possibility that significant intervention effects in this domain were simply an artifact of higher base rates of permanency attempts. In sum, the intervention appeared to greatly reduce the risk of failed permanent placements among a group known to be at risk for such failure.

It is important to point out that there was no significant group difference in the rate of permanency attempts. Overall rates were close to or above 80%. As is discussed above, it is not entirely surprising that an intervention effect was not observed on this variable, as the intervention does not target a number of variables central to permanent placement decisions. However, this result might be due to a ceiling effect (high rates of permanency attempts in both groups) caused in part by federal mandates (e.g., the Adoption and Safe Families Act of 1997 [PL-105–89]) to establish a permanency plan within 12 months of placement in out-of-home care. Of course, permanency attempts that end in failure, which were frequently observed in the RFC group, might have similar or worse effects on the child than simply keeping the child in foster care. Thus, the high rate of permanency attempts combined with the high rate of successful permanency attempts observed in the MTFC-P group is a desirable outcome.

It is important to note that a significantly higher number of children in the MTFC-P group were successfully adopted during the first 24 months of the study period. This finding suggests that the intervention was especially effective at increasing permanency by adoption. (Although separate analyses were not conducted due to limited power, 10 of the 14 MTFC-P children placed in adoptive homes were adopted by nonrelatives.) Perhaps this highlights the importance of providing intensive training, support, and supervision to adoptive parents, thus giving them the resources to become permanent placements for the children. Successful reunification rates were also higher for the MTFC-P group, but the difference was not significant. This might be reflective of the small sample size for the present study. However, inasmuch as the MTFC-P group's successful reunification rates were considerably lower than its successful adoption rates, it might also reflect a need for additional services during and after the reunification process to support biological parents.

The effects of the MTFC-P intervention on permanency among children with prior instability are especially noteworthy because, compared to the RFC children, the MTFC-P children had experienced significantly more placement transitions at entry into the study. Based on past research (Fisher et al., 2005; Rubin et al., 2007), higher initial rates of instability could be expected to increase the risk for continued instability. In contrast, the MTFC-P intervention appeared to mitigate this risk, producing higher rates of successful permanency attempts (both collectively and across placement types). This cannot be accounted for by regression to the mean because our analyses were based on absolute measures of permanency following study entry.

Interestingly, maltreatment experiences in the family of origin were not associated with successful permanency attempts. However,

given the small sample size in the present study, this might have resulted from limited power to detect a significant finding. Therefore, the effects of maltreatment history on placement permanency warrant further research. Future efforts should focus on whether certain maltreatment experiences have direct effects on permanency attempts or whether such experiences interact with the intervention to influence permanency attempts.

#### 4.1. Policy recommendations

The results from this study have a number of implications for policy. Prior research has documented the negative effects of placement instability on psychosocial and neurocognitive outcomes. Early identification of children with profiles of instability and referral to interventions such as MTFC-P that improve permanency are likely to produce improved long-term outcomes and could ultimately reduce service costs. It is important to recognize that not all foster children experience placement instability. Less than half of the foster children in the randomized trial from which participants in this study were drawn met the criteria for placement instability: four or more prior placements. Thus, although programs like MTFC-P require funds and resources over and above what are typically allocated for foster children, these services need not be offered to all foster children. Selective referral based on characteristics such as placement instability might prove to be a cost-effective approach to the prevention of a number of problematic outcomes. We are conducting economic analyses in this area, and this should lead to the specification of which children might ultimately save the system money by being referred to interventions such as MTFC-P.

#### 4.2. Limitations and conclusion

There were two limitations of the present study. The first limitation was the small sample size. Although the overall sample of foster children from which the participants for the present study were drawn was fairly large ( $N=117$ ), only 52 children had histories of placement instability. A larger sample would have provided enhanced power and might have allowed us to more adequately examine the differential effectiveness of the intervention based on maltreatment experiences. Given the large effect sizes that were observed, this issue is somewhat less problematic when examining overall intervention effects on permanency. Because these were proportion scores, our results could not have been influenced by outliers, which can be the case when considering mean differences. Thus, the effects of the intervention on improving permanency among children with prior placement instability appear to be robust.

The second limitation was the longitudinal timeframe over which permanency outcomes were examined. At the time of writing, data collection on the sample was complete through 24 months post-study entry. This is not an insignificant amount of time, especially given the young age of the sample and their consequent vulnerability to the effects of placement transitions; nevertheless, it will be important to continue tracking permanency attempts and their success/failure. Areas of interest will include whether the higher rates of successful permanency attempts among MTFC-P children are maintained, whether particular placement types are more likely to fail over time in either study group, and how many of the children in each group who experienced failed permanency attempts during the study period ultimately achieve permanency. Data continue to be gathered on the sample, so such analyses will be possible.

Overall, the results from this study provide evidence that foster preschoolers with prior placement instability appear to have similar

maltreatment histories to most other foster children, with particularly high rates of neglect and emotional abuse and multiple forms of maltreatment. Permanency attempt rates appear to be high in this age group, but many children in regular foster care experience placement failures, resulting in reentry into care. In contrast, the MTFC-P intervention appears to be an efficacious approach to improving permanency, especially in regard to adoptions. There do not appear to be differential effects of the intervention on permanency based on the severity of maltreatment. In sum, MTFC-P might be an important component in improving permanency outcomes for foster preschoolers.

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