



Pergamon

Child Abuse & Neglect 30 (2006) 409–424

Child Abuse  
& Neglect

## Who disrupts from placement in foster and kinship care?☆

Patricia Chamberlain<sup>a,\*</sup>, Joe M. Price<sup>b</sup>, John B. Reid<sup>a</sup>, John Landsverk<sup>b</sup>,  
Phillip A. Fisher<sup>a</sup>, Mike Stoolmiller<sup>a</sup>

<sup>a</sup> Oregon Social Learning Center and Center for Research to Practice, Eugene, OR, USA

<sup>b</sup> Child and Adolescent Services Research Center and San Diego State University, San Diego, CA, USA

Received 1 September 2004; received in revised form 8 November 2005; accepted 26 November 2005

---

### Abstract

**Objective:** To identify reliable, inexpensive predictors of foster care placement disruption that could be used to assess risk of placement failure.

**Methods:** Using the Parent Daily Report Checklist (PDR), foster or kinship parents of 246 children (5–12 years old) in California were interviewed three times about whether or not their foster child engaged in any of the 30 problem behaviors during the previous 24 h. PDR was conducted during telephone contacts (5–10 min each) that occurred from 1 to 3 days apart at baseline. Disruptions were tracked for the subsequent 12 months. Other potential predictors of disruption were examined, including the child's age, gender, and ethnicity, the foster parent's ethnicity, the number of other children in the foster home, and the type of placement (kin or non-kin).

**Results:** Foster/kin parents reported an average of 5.77 child problems per day on the PDR checklist. The number of problem behaviors was linearly related to the child's risk of placement disruption during the subsequent year. The threshold for the number of problem behaviors per day that foster and kinship parents tolerated without increased risk of placement disruption for these latency-aged children was 6 or fewer. Children in non-kin placements were more likely to disrupt than those in kinship placements. There was a trend for increased risk of disruption as the number of children in the home increased.

**Conclusions:** The PDR Checklist may be useful in predicting which placements are at most risk of future disruption, allowing for targeted services and supports.

© 2006 Elsevier Ltd. All rights reserved.

*Keywords:* Foster care; Kinship care; Disruption; Behavior problems

---

☆ Support for this research was provided by Grants from NIMH, U.S. PHS (MH60195), from NIMH and ORMH, U.S. PHS (MH46690), and from NIDA, U.S. PHS (DA17592).

\* Corresponding author address: 160 East 4th Avenue, Eugene, OR 97401-2426, USA.

## Introduction

Children in foster care are at high risk of behavioral and emotional problems (Garland et al., 2001; Landsverk, Garland, & Leslie, 2002; Pears & Fisher, 2004). These problems undoubtedly contribute to the challenges faced by foster parents and child welfare caseworkers in trying to provide foster children with nurturing and supportive home environments. Improving placement stability is a key component of adequate care that has received recent attention in *Federal Guidelines* (2001). **During any 12-month period, up to 50% of children in foster care disrupt from their placements and have to be moved to another home or to a more restrictive setting** (reviewed by Smith, Stormshak, Chamberlain, & Bridges Whaley, 2001). The aim of this study was to determine if it was possible to identify reliable, inexpensive predictors of placement disruption from foster and kinship care in an ethnically diverse sample of elementary school-aged children. Identification of such predictors could be helpful in focusing limited resources on the children at highest risk of disruption.

Disruption from foster or kinship placement is highly undesirable for a number of reasons. Foster placement disruptions are associated with an increased likelihood of failed permanent placements (i.e., reunifications and adoptions). For example, using administrative records for 6831 children discharged from foster care in California, Courtney (1995) found that greater instability in a child's placements was positively associated with risk of reentry into foster care. Similarly, Wells and Guo (1999) examined records for 2616 children in foster care in Ohio and noted a positive association between the number of transitions during the first period in foster care and the likelihood of foster care reentry. Farmer (1996) reviewed records for 321 children in foster care in the United Kingdom and reported that first attempts at reunification were significantly more successful than subsequent attempts.

In addition to the increased risk of permanent placement failures, foster care disruptions carry with them financial costs for the child welfare system (CWS). We found no published analyses of the financial costs associated with foster placement disruptions. However, in a series of focus group sessions with caseworker supervisors and child welfare agency line staff in San Diego County, CA, USA, it was estimated that each placement disruption required an average of over 25 h of casework and support staff time to remediate the problem (including time spent in identifying and placing a child in a new setting, court reports, staff meetings related to placement decisions, and paperwork documenting need and processes; Price, 2005).

Significant emotional costs are associated with placement changes for both foster children and foster parents (Fanshel, Finch, & Grundy, 1990; van der Kolk, 1987). Newton, Litrownik, and Landsverk (2000) found that changes in foster placements were associated with increases in both externalizing and internalizing child behavior problems. In their study of over 400 children who had entered care at an average age of 6.6 years ( $SD = 3.9$  years), externalizing problems was the strongest predictor of placement change. Importantly, children who initially scored within the normal range on the Child Behavior Checklist (CBCL) were particularly vulnerable to the negative effects of placement disruptions. That is, placement changes for these children were followed by increases in both internalizing and externalizing scale scores on the CBCL 18 months later, strongly suggesting that placement changes contribute to the onset and development of child emotional and behavioral difficulties in the CWS. Ryan and Testa (2005) found that placement instability increased the risk for delinquency in males over and above being involved in the CWS and being placed in substitute care.

Despite the fact that placement disruptions in the CWS are clearly harmful, there has been relatively little recent research aimed at identifying predictors of disruption (James, 2004). Three exceptions are

as follows: (a) Farmer, Lipscome, and Moyers (2005) found that stressful events experienced by foster parents in the 6 months prior to placement, the presence of child conduct problems, and inaccessibility to caseworkers related to higher disruption rates for adolescents; (b) Sinclair and Wilson (2003) found that child characteristics, such as attractiveness and wanting to be fostered, and foster parent characteristics, such as warmth and child-centeredness related to low disruption rates; and (c) James (2004) found that boys, older youth, and those with externalizing and internalizing behavior problems were at an increased risk of disruption.

Externalizing behavior has been shown in other work to relate to disruptions for teenagers (Sallnas, Vinnerljung, & Weestermark, 2004). Being placed in kinship care has been found to decrease the risk of disruption (James, 2004). Other research has found discrepancies in the definition of what constitutes a disruption, making it difficult to conduct systematic research on the occurrence and prevention of this problem (Smith et al., 2001).

We used a brief telephone interview (Parent Daily Report Checklist; PDR) with foster parents to measure the occurrence of child behavioral problems in the home during the 24-h period immediately preceding the call. The PDR Checklist takes 5–10 min to complete and is typically repeated on three to five separate occasions to get a stable estimate of a child's problem behavior as experienced by the caregiver. The PDR was originally developed as an observation-based outcome measure that could be administered to parents in their homes to help verify behavioral observations by trained coders and to increase the accuracy with which low base rate events could be counted (Chamberlain, 1990). The purpose of the PDR is to obtain reliable measures of the child's problem behaviors that minimize the biases associated with retrospective reports that attempt to summarize information over longer periods of time (Tourangeau, 2000). The PDR data provide the opportunity to examine typical levels of parent-reported child problems, how much variation in those levels is observed within a given sample, and whether such variation is a meaningful predictor of future outcomes.

In the current study, the PDR was used to predict placement disruption in a 12-month timeframe for a sample of children (ages 5–12 years) in foster care in San Diego County. In addition to the PDR, we evaluated the utility of several other potential predictors of placement disruption that could be obtained easily and inexpensively (child's age, child's gender, child's ethnicity, number of other children in the home, foster parent's ethnicity, and placement type, i.e., kin or non-kin).

## Methods

### *Participants*

Participants were 246 children (ages 5–12 years) in foster care, including 131 boys and 115 girls, placed in non-kinship foster ( $n = 158$ ) or kinship ( $n = 88$ ) care who participated in a foster care "as usual" control condition in a larger study. That study tested the effectiveness of an intervention aimed at strengthening the parenting skills of foster and kinship parents in state foster homes in San Diego, CA, USA. All children in San Diego County between the ages of 5 and 12 years who were placed in a new foster home, and their foster care providers (kin and non-kin), were recruited for participation. This included children who were entering the foster care system for the first time and those who had multiple previous placements and were being moved from one foster home to another. Excluded were children and foster homes that were intended to be short-term placements (3 months or less).

This study was conducted in compliance with two Institutional Review Boards, one from the Oregon Social Learning Center and one from San Diego State University. Prior to participation, foster and kinship parents were given a verbal description of the study, a detailed written description of the project that included the phone numbers and addresses of the approving IRBs, and a *Participant's Bill of Rights*; and they signed an IRB-approved consent form. In collaboration with the San Diego Department of Health and Human Services, researchers developed a recruitment tracking data program to provide information on the status and whereabouts of potential participants. Each week the research recruitment coordinator reviewed data from the social service agency to identify eligible children and foster families. Eligibility requirements were as follows: (a) the child had been in either a kin or non-kin foster care placement for a minimum of 30 days; (b) the child was between the ages of 5 and 12; and (c) the child was not considered “medically fragile.”

Foster parents were first contacted by telephone and given a brief overview of the study. If they expressed interest in participating, a member of the research team conducted a home interview during which the foster parents were given a detailed description of the project and consent forms. Of the eligible homes assigned to the control condition, 66% agreed to participate. Reasons given for declining included: too busy/too much work (50% of declining families), too many children/not interested (43%), family health problems (2%), and concerns about participating in research (5%). Participants were interviewed at 3 intervals (baseline, and 6 and 12 months post baseline) and were paid \$25, \$35, and \$45 for their participation. Table 1 presents demographic information on the 246 participating children and their foster parents. Based on data about the characteristics of US children in foster care from the Federal Department of Health and Human Services for September 2002, children in the current sample appeared to be similar (AFCARS Report; U.S. Department of Health and Human Services, 2002). Consistent with the national population, this sample had relatively equal numbers of males and females, had twice as many children placed with non-kin caregivers as with kin caregivers, and was ethnically diverse, with roughly one third of the sample being Caucasian. The age range of the current sample represents the age range of one quarter of the children in foster care in the US.

### *Measures*

The Parent Daily Report Checklist (Chamberlain & Reid, 1987, in Appendix A) is a 30-item measure of child behavior problems delivered by telephone to parents on a series of consecutive or closely spaced days (from 1 to 3 days apart). During each call, a trained interviewer asked the foster/kinship parent “Thinking about (child’s name), during the past 24 h, did any of the following behaviors occur?” Parents were asked to recall only the past 24 h and to respond “yes” or “no” (i.e., the behavior happened at least once or the behavior did not occur). The PDR measure was designed to avoid the need for aggregate recall over a number of days or for estimates of the frequency with which specific behaviors occurred. Prior research has shown that the reporter’s current emotional state is likely to lead to biased estimates of such reports (Bower, 1981), and that reporters tend to give more weight to recent and peak levels of experiences, rather than giving equal weight to each instance (Stone, Broderick, Kaell, DelesPaul, & Porter, 2000). The structure of the PDR (i.e., repeated administrations where parents are focused on recalling only the past 24 h) is intended to reduce systematic and random sources of measurement error in order to increase the validity and reliability of parent’s reports of the occurrence of a child’s problem behaviors.

Table 1  
Demographic information for foster/kin parents and child at baseline

Demographic information collected at baseline	Foster/kin parent	Child
Mean age at baseline	48.1	8.7
Age range	19–81	5–12
Relationship to foster parent		
Non-kinship		64%
Kinship		36%
Gender		
Female	95%	53%
Male	5%	47%
Race		
Caucasian	36%	25%
African American	23%	19%
Hispanic/Latino/a	33%	31%
Asian, native Hawaiian, and other Pacific islander	2%	<1%
Native American	1%	1%
Caucasian & Hispanic/Latino/a	1%	6%
Caucasian and African American	1%	4%
African American and Hispanic/Latino/a	<1%	5%
Other multiracial	2%	9%
Languages spoken		
Only English	65%	75%
Only Spanish	6%	2%
Both English and Spanish	29%	24%
Employment		
Currently employed (not including foster parenting)	53%	
Mean number of hours works per week (includes unemployed foster parents)	18.8	
Education level		
High school/GED or less	39%	
Some college	46%	
Vocational/technical degree	1%	
Bachelor's degree	9%	
Graduate degree	5%	
Household income		
Less than 35,000	35%	
35,000–64,999	29%	
65,000–94,999	17%	
Over 95,000	6%	
Refused/don't know	13%	
Average total number of children in the home	3.4 (2.0)	

In previous studies, the PDR has been used as a measure of treatment outcome for families referred because of child conduct problems (e.g., [McClowry, Snow, & Tamis-LeMonda, 2005](#)), for children and adolescents returning to community placements who were leaving a psychiatric hospital ([Chamberlain & Reid, 1991](#)), and for youth in regular foster care who were placed with foster parents receiving behavioral

parent management training (Chamberlain, Moreland, & Reid, 1992). The concurrent validity of the PDR has been demonstrated in association with a number of measures of child and family functioning, including live observations of family interactions coded in the home (Forgatch & Toobert, 1979; Patterson, 1976), and parents' global ratings of child behavior (i.e., the Becker Adjective Checklist; Becker, Madsen, Arnold, & Thomas, 1967). The stability and inter-rater reliability of the PDR has been examined in previous studies and found to be adequate (Chamberlain & Reid, 1991; Weinrott, Bauske, & Patterson, 1979).

In the current study, three PDR calls were administered at baseline on three consecutive or closely spaced days. The baseline PDR calls occurred after children were placed in a new home and lived there long enough to be eligible for the study (i.e., at least 90 days; 68% were assessed within 6 months, 76% within 8 months). The score for each child was the average number of behaviors reported per day (out of the possible 30) divided by the number of calls (3). The average inter-call correlation between the 3 baseline PDR calls was .64. The internal consistency of the measure was strong (Cronbach's alpha = .84). About 12% of the cases scored the scale minimum of 0 for an individual call, but only 2% of the cases scored 0 for all three calls (a mild floor effect).

#### *Definition of a foster placement disruption*

In this study, foster placement disruption was defined as any exit from the foster or kinship placement home that was made for a negative reason. Foster parents were telephoned at 4 and 12 months post-baseline to determine if the child remained in their home or had moved. Research assessors coded the timing and the reasons for negative exits, which included foster parent requests that a child be moved due to behavior problems, caseworker or foster parent judgments that the child needed a more intensive or restrictive level of care, child runaways, or caseworker determination that the child was too difficult for the foster/kin family to manage.

#### *Data analysis*

We used the Cox hazard regression model to examine the effects of potential predictors of placement disruption on the length of time to placement disruption. The Cox model is a standard approach to studying determinants of the length of time it takes for an event of interest to occur (in this case, placement disruption). A common example of the Cox application is a medical trial involving a proposed new treatment for a deadly disease. The event of interest in that example would be death, with the new treatment being evaluated for its impact on lowering the hazard rate of death or, conversely, for extending the survival time. In this study, the rate of placement disruption was the "hazard rate." This was the average rate that controlled the time it takes for an event to happen. The study population was assumed to be characterized by an average hazard rate, and subjects differed (up or down) from the average hazard rate due to individual differences in the predictor values examined.

As in standard regression analyses, we plotted residuals from the Cox hazard regression to check underlying assumptions and assess the adequacy of the model (see Therneau & Grambsch, 2000, for more about the appropriateness of using the Cox model). In addition, we used a receiver (or relative) operating characteristics curve (ROC) to assess the accuracy of the PDR data to predict disruptions. The ROC was developed in the context of signal detection theory and has been used to evaluate the ability of prediction instruments in diverse areas such as medical imaging, weather forecasting, and psychiatry



(Hsiao, Bartko, & Potter, 1989; Swets, 1988). The ROC curve is a plot of the “hit rate” or the true positive rate (or sensitivity) as a function of the “false alarm” rate (or 1 minus the specificity at a given cutoff score). The most common index for describing the ROC curve is the area under the curve (AUC). An AUC under .50 indicates that the classification is close to the chance level, whereas an AUC of 1.0 indicates a perfect prediction (Barr, 1997).

Finally, we used a multivariate analysis strategy because it was expected that child behavior problems at baseline could be correlated with a number of other child attributes that might plausibly be related to placement disruption. The multivariate analysis was necessary to eliminate the confounding and obtain a better estimate of the unique impact of behavior problems.

## Results

The mean number of problem behaviors reported on the PDR was 5.77 (4.06). Table 2 shows the Cox hazard regression results for the PDR and for each of the other potential predictors. The baseline PDR score and placement in a non-kin home had significant predictive linear effects. Baseline PDR increased the hazard of disruption by 17% for every child problem behavior reported. In addition, placement in a non-kin foster home increased the risk of placement disruption by a factor of just over 3. In other words, children in non-kinship placements were about three times more likely to experience a placement disruption during the study than children in kin placements. In contrast, child gender, child and foster parent ethnicity, child age at baseline, and total number of children in the foster home were not linearly related to the risk of placement disruption. Other characteristics such as child gender, ethnicity, and age at baseline were not related to whether the child was placed in a non-kinship or kinship home.

We observed a threshold effect for the PDR such that a flat trend line occurred up to about 6 child problem behaviors (notably, this was close to the mean number of problem behaviors in this sample of 5–12 year olds). Above 6 behaviors, there was a linear increase in the observed data. This pattern, with low disruption rates below 6 behaviors followed by gradual and steady increases in disruptions from 6

Table 2

Cox Hazard regression results [estimates[ $B$ ], exponentiated estimates ( $\exp[B]$ ), standard errors ( $SE$ ),  $z$  and  $p$  values for estimates] and Tests of Proportional Hazards [linear correlation of effect size with follow-up time ( $\rho$ ),  $\chi^2$  significance test of  $\rho$  ( $\text{chisq}$ ) and  $p$  value for  $\chi^2$  ( $p$   $\text{chisq}$ )] for Placement Disruption Model

Predictor	$B$	$\exp[B]$	$SE$	$z$	$p$	$\rho$	$\text{chisq}$	$p$ $\text{chisq}$
Baseline PDR	.15	1.17	.04	3.64	.00	-.28	2.64	.10
Total kids in home	.04	1.04	.09	.45	.66	.23	1.48	.22
Baseline age	-.10	.91	.08	-1.20	.23	.30	2.11	.15
Non-kin care	1.16	3.18	.49	2.36	.02	-.23	1.50	.22
Gender (male)	.04	1.04	.37	.12	.91	-.14	.56	.45
Foster parent White vs. Black	.29	1.34	.40	.73	.46	-.03	.03	.86
Foster parent White vs. Hispanic	-.39	.67	.41	-.96	.34	.16	.79	.37
Foster parent White vs. Other	-.46	.63	1.02	-.45	.65	.09	.26	.61
Child White vs. Black	.22	1.24	.40	.55	.58	-.04	.06	.81
Child White vs. Hispanic	-.70	.50	.43	-1.62	.11	.04	.05	.82
Child White vs. other	.36	1.43	.49	.73	.46	.18	.96	.33

Note. PDR is Parent Daily Report.

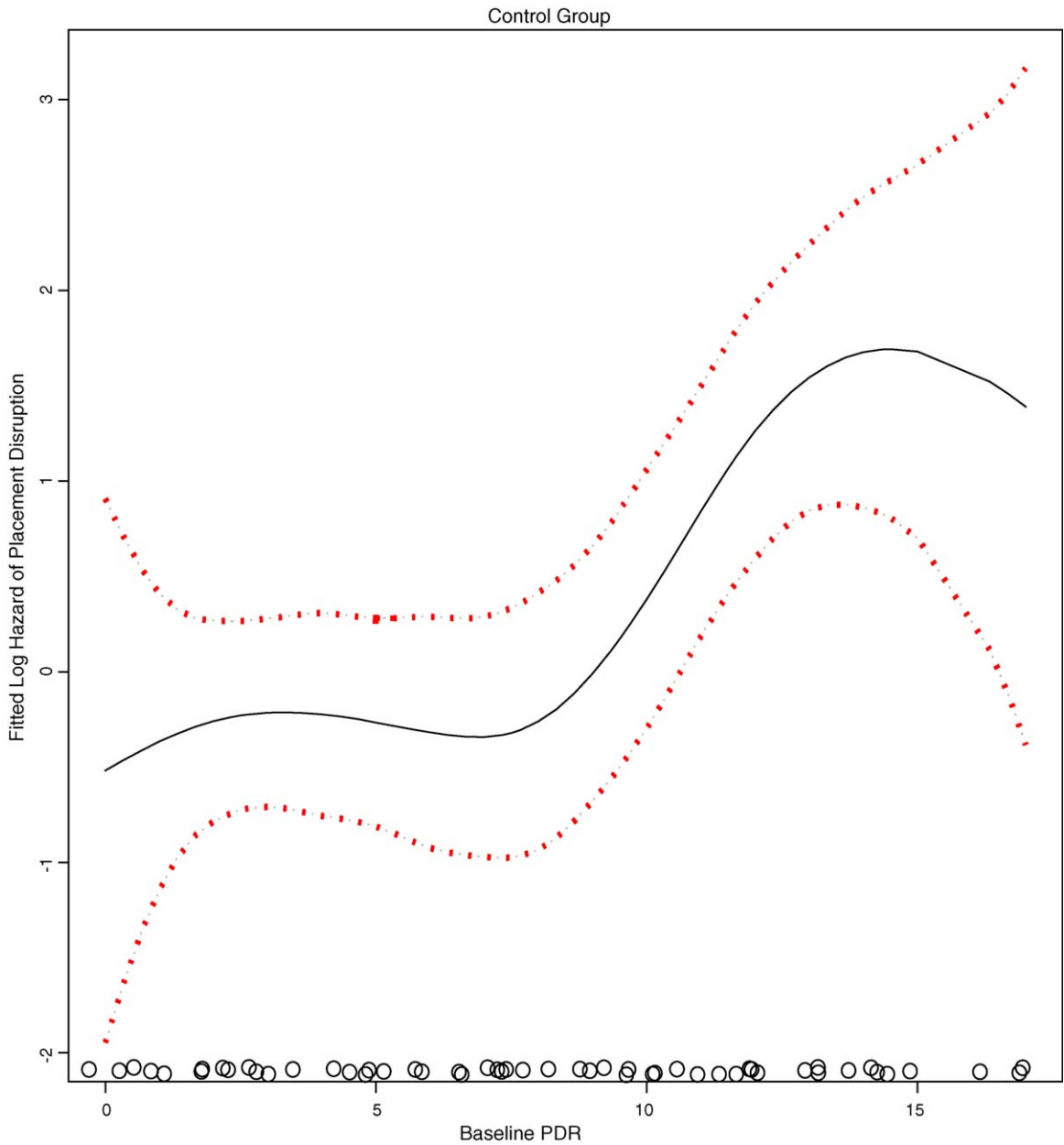


Figure 1. Fitted smooth spline plot of the effect of baseline PDR on log hazard of placement disruption. Small circles at the bottom of the plot indicate the distribution of the actual PDR values. Dashed lines indicate 95% pointwise confidence intervals.



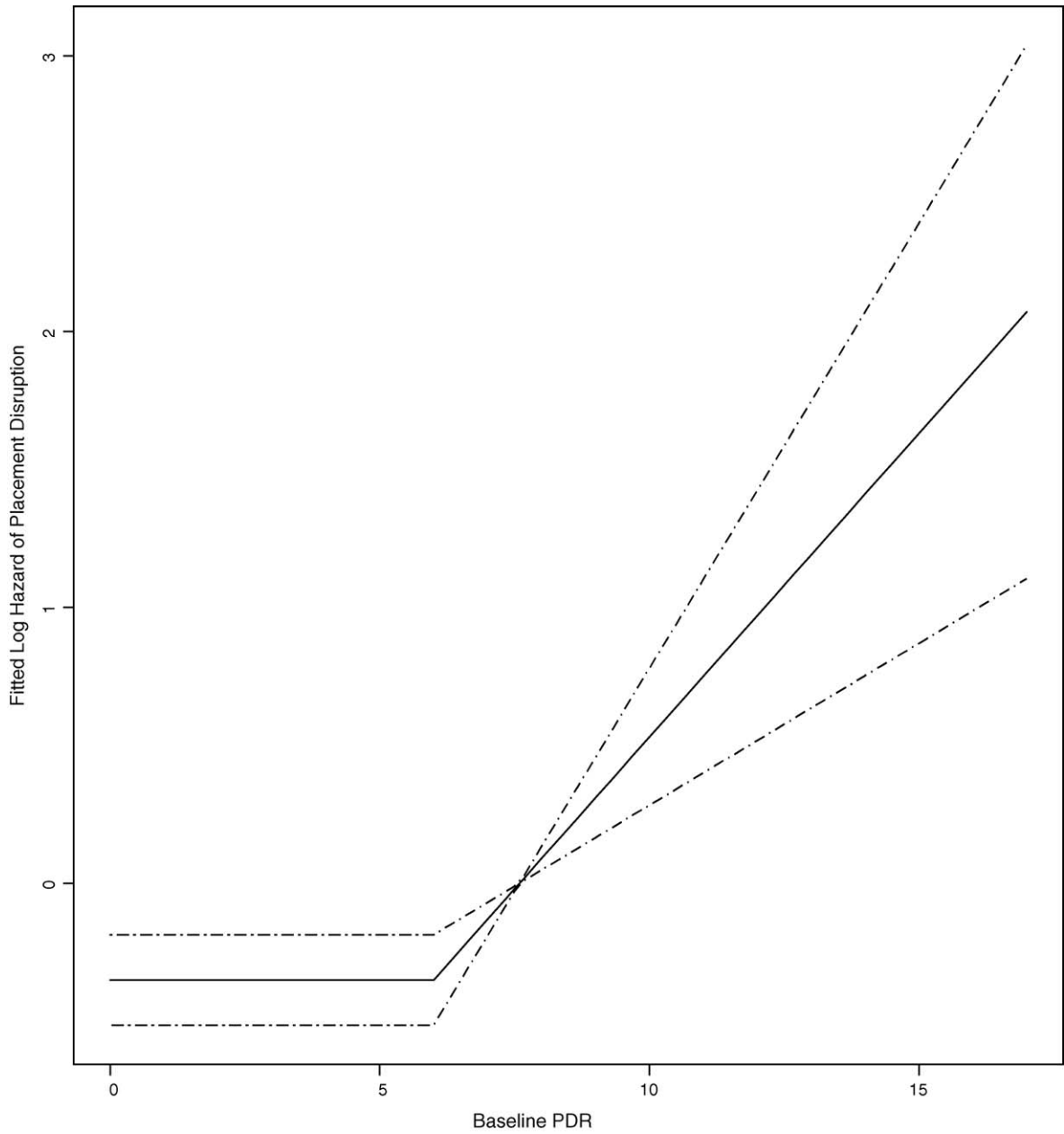


Figure 2. Fitted piecewise linear plot of the effect of baseline PDR on log hazard of placement disruption. Dashed lines indicate 95% pointwise confidence intervals.

to 14 behaviors, is shown in Figure 1. To understand better the potential implications of these data, a piecewise linear effect model was fitted where the effect on disruption was constrained to be zero for PDR scores in the 0–6 range, and the slope was allowed to increase linearly for greater than 6 behaviors. This model is shown in Figure 2.

The risk of disruption for children with a baseline average of 6 or fewer PDR behaviors was 8.2%. In the piecewise model, the slope for more than 6 behaviors was significant ( $B = .22$ ,  $\exp[B] = 1.25$ ,  $z = 4.20$ ,  $p < .001$ ) indicating that the risk of placement disruption increased 25% for each additional behavior over 6.

The results of the ROC analysis showed that the AUC was  $.66 \pm .05$ ,  $p = .004$ . A cutoff of 6 problem behaviors resulted in a 56.7% hit rate (sensitivity = .567) and a 38.4% false alarm rate (1-specificity = .384). This indicates that using the PDR to predict disruptions for this sample, and more specifically using a cutoff of 6 problem behaviors, produced a statistically reliable result.

A multivariate analysis was run that incorporated the piecewise linear effects model for the PDR in addition to the other predictors. The effects of baseline piecewise PDR and non-kin placement were both significant predictors ( $\exp[B] = 1.20$  and  $2.80$ ;  $p = .0001$  and  $.04$ , respectively), while child gender, ethnicity, baseline age, number of children in the home, and foster parent ethnicity were not significant predictors of placement disruption.

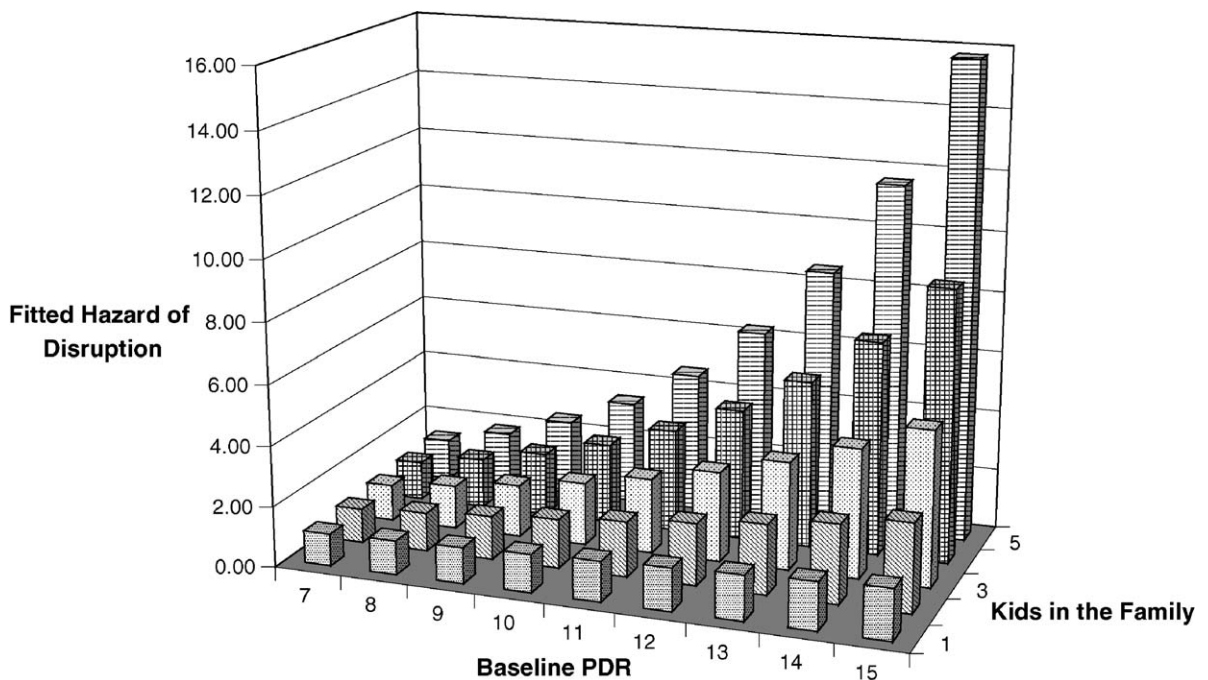


Figure 3. The hazard of disruption by the number of PDR behaviors over 6 and by the number of children in the home. The percentage increase in the probability of disruption equals the number on the vertical axis minus  $1 \times 100$  (e.g., if the number on the vertical axis is 2, the PDR score is 8, and there are two children in the home, the probability of disruption is twice as high [plus 100%] as for a child with 6 or fewer PDR behaviors).

Finally, because other work has shown that as the number of children in a placement increases the number of problem behaviors for each child tends to increase (Moore, Osgood, Larzelere, & Chamberlain, 1994), a model was tested that included an interaction of the PDR scores with the number of children in the home. It was expected that the risk of disruption for a child with 6 or more PDR behaviors would increase faster if there were more other children in the home than if there were fewer. There was a nonsignificant trend at  $p = .08$  for the interaction term. Even though the interaction term was not statistically significant, the following additional information is included because of its potential practical importance to practitioners and to encourage other researchers to conduct independent replications examining the relationship between the rate of child problems and the density of children placed per home.

In this sample, for each additional PDR behavior observed above 6, the risk of disruption increased by 6%, 12%, 20%, 28%, and 36% when there were, respectively, 1, 2, 3 (the median in this sample), 4, and 5 children in the foster home. For example, a child with a baseline PDR score of 7 in a foster home with 4 other children has about 1.3 times the risk of placement disruption as a child with a PDR score of 7 with no other children in the foster home. A child with a baseline PDR score of 15 in a foster home with 4 other children has about 9.5 times the risk of placement disruption as a child with a PDR score of 15 with no other children in the foster home. In Figure 3, the vertical axis shows the multiplicative increase in the rate of disruption for a given PDR score and the number of children in the family compared to what the rate of disruption would be for a PDR score of 6 or less. In this study, non-kin foster homes had significantly more children placed in them than kin homes (3.58 vs. 3.15;  $t = 2.57$ ,  $p = .01$ ,  $df = 546$ ) possibly accounting for some of the variance in the effect observed for the lower disruption rates in the kinship homes.

## Discussion

PDR scores at baseline were predictive of placement disruptions during the subsequent 12-month period. Children with PDR scores at or below the sample mean of 6 problem behaviors per day were at low risk of subsequent disruption.

In placements where 7 or more problem behaviors occurred per day, each behavior over 6 increased the odds of disruption by an additional 25% per additional behavior. In addition, there was a trend for the number of other children in the foster home to increase even further the likelihood that higher scores on the PDR would result in placement disruptions.

Data from this study suggest that there is a threshold for the rate of children's problem behaviors that most parents appeared to tolerate well. The level of children's problem behaviors that defines the threshold could be expected to vary as a function of a child's age and developmental stage with higher rates for preschoolers and lower rates for adolescents. For the latency-aged children in this study, once the threshold of 6 problem behaviors was exceeded, placement disruptions began to accrue. If the threshold finding is replicated, it could represent a practical, relatively expedient method for estimating the resiliency of the foster home environment. Further research examining how the rates of problem behaviors for all children placed in the home (and biological children who are present) influence thresholds might strengthen the predictive utility of the PDR. Research focused on increasing the understanding of threshold effects could allow for a more targeted use of resources to prevent disruption for children at the greatest risk.

This study focused on a limited data set that included only basic demographic information on the child and foster parent, and foster parents' reports of child problems. It did not include in-depth (and potentially costly) data that could be obtained from system files, such as the foster parent's experience, the extended family's functioning, parental visitation, type(s) of maltreatment, or other factors that might have related to the foster parent's reports and/or levels of the child's behavioral problems. In addition, the foster parent's reports of the child's problem behavior were used to predict placement disruptions, which were probably determined or influenced by the foster parent. Other limitations are that the follow-up period was restricted to one year and that participants included only latency-aged children. However, within these limits, from a practical standpoint, the PDR measure was shown here to be a powerful source of information about the short-term longevity of the placement.

This study has implications for child welfare policy and practice in three areas: (a) Interventions that focus on reducing behavioral problems and increasing foster/kin parenting skills could reduce placement disruptions; (b) limiting the number of children placed in each foster home, especially when one or more of those children have high behavior problem rates, could reduce placement disruptions, although this result was only a trend and needs to be replicated in other research; and (c) increasing efforts to identify, recruit, train, and support appropriate kinship placements could reduce disruptions.

Given the limitations on resources within the child welfare system, it may be difficult to implement policies that address these latter two points (limiting the number of foster children per home and increasing kinship foster caregivers). In contrast, many efficacious interventions aimed at reducing the rate of the child's problem behaviors and/or the caregiver's ability to cope with the child's problems already exist and could be employed to prevent placement disruptions and the cascade of negative events that accompany them. During the past 20 years, an increasing number of evidence-based interventions have been identified that improve outcomes for children with behavioral and emotional problems (Forgatch & DeGarmo, 1999; Kazdin & Wassell, 2000; McMahon & Forehand, 2003; Webster-Stratton, Reid, & Hammond, 2001). The majority of these have relied on parents playing a key role in implementing the interventions with their child. A number of studies have documented that compared to traditional therapy approaches where treatment was provided in the context of individual child therapy, teaching parents methods for systematically intervening with their children had more powerful and longer lasting effects (Graziano & Diament, 1992; Serketich & Dumas, 1996). In response to recent calls for the implementation of evidence-based interventions in routine community practice (U.S. Department of Health and Human Services, 2000a, 2000b), parent-mediated interventions, if widely disseminated with adequate fidelity, can potentially improve the quality of mental health care for children and families. To date, only a handful of these have focused on working directly with foster/kin parents (i.e., Chamberlain et al., 1992; Fisher, Gunnar, Chamberlain, & Reid, 2000; Price & Chamberlain, 2005; Smith et al., 2001) or biological parents (Chaffin, Bonner, & Hill, 2001) in child welfare systems. The type of prediction strategy examined in this study, in combination with the selective use of effective evidence-based interventions, could have a significant national impact.

## **Acknowledgements**

The authors wish to thank the San Diego County Department of Health and Human Services, Courtenay Paulic (OSLC), and Jan Price (CASRC) for their assistance with recruitment, data collection, and management.

## References

- Barr, W. (1997). Receiver operating characteristic curve analysis of Wechsler Memory Scale, revised scores in epilepsy surgery candidates. *Psychological Assessment, 9*, 171–176.
- Becker, W. C., Madsen, C. H., Arnold, C. R., & Thomas, D. R. (1967). The contingent use of teacher attention and praise in reducing classroom behavior problems. *Journal of Special Education, 1*, 287–307.
- Bower, G. H. (1981). Mood and memory. *American Psychologist, 36*, 129–148.
- Chaffin, M., Bonner, B. L., & Hill, R. F. (2001). Family preservation and family support programs: Child maltreatment outcomes across client risk levels and program types. *Child Abuse & Neglect, 25*(10), 1269–1289.
- Chamberlain, P. (1990). Comparative evaluation of specialized foster care for seriously delinquent youths: A first step. *Community Alternatives: International Journal of Family Care, 2*, 21–36.
- Chamberlain, P., Moreland, S., & Reid, K. (1992). Enhanced services and stipends for foster parents: Effects on retention rates and outcomes for children. *Child Welfare, 5*, 387–401.
- Chamberlain, P., & Reid, J. B. (1987). Parent observation and report of child symptoms. *Behavioral Assessment, 9*, 97–109.
- Chamberlain, P., & Reid, J. B. (1991). Using a specialized foster care community treatment model for children and adolescents leaving the state mental hospital. *Journal of Community Psychology, 19*, 266–276.
- Courtney, M. E. (1995). Reentry to foster care of children returned to their families. *Social Service Review, 69*, 226–241.
- Fanshel, D., Finch, S., & Grundy, J. (1990). *Foster children in a life course perspective*. New York: Columbia University Press.
- Farmer, E. (1996). Family reunification with high-risk children: Lessons from research. *Children & Youth Services Review, 18*, 403–424.
- Farmer, E., Lipscome, J., & Moyers, S. (2005). Foster carer strain and its impact on parenting and placement outcomes for adolescents. *British Journal of Social Work, 35*, 237–253.
- Federal Guidelines. (2001). *Child and family service reviews, administered by the Children's Bureau. Administration for Children and Families*. Washington, DC: U.S. Department of Human Services.
- Fisher, P. A., Gunnar, M. R., Chamberlain, P., & Reid, J. B. (2000). Preventive intervention for maltreated preschool children: Impact on children's behavior, neuroendocrine activity, and foster parent functioning. *Journal of the American Academy of Child and Adolescent Psychiatry, 39*, 1356–1364.
- Forgatch, M. S., & DeGarmo, D. S. (1999). Parenting through change: An effective prevention program for single mothers. *Journal of Consulting and Clinical Psychology, 67*, 711–724.
- Forgatch, M. S., & Toobert, D. J. (1979). A cost-effective parent training program for use with normal preschool children. *Journal of Pediatric Psychology, 4*, 129–145.
- Garland, A. F., Hough, R. L., McCabe, K. M., Yeh, M., Wood, P. A., & Aarons, G. A. (2001). Prevalence of psychiatric disorders in youths across five sectors of care. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*, 409–418.
- Graziano, A. M., & Diamant, D. M. (1992). Parent behavioral training: An examination of the paradigm. *Behavior Modification, 16*, 3–38.
- Hsaio, J. K., Barto, J. J., & Potter, W. Z. (1989). Diagnosing diagnoses: Receiver operating characteristic methods and psychiatry. *Archives of General Psychiatry, 46*, 664–667.
- James, S. (2004). Why do foster placements disrupt? An investigation of reasons for placement change in foster care. *Social Service Review, 78*, 601–627.
- Kazdin, A. E., & Wassell, G. (2000). Therapeutic changes in children, parents, and families resulting from treatment of children with conduct problems. *Journal of the American Academy of Child and Adolescent Psychiatry, 39*, 414–420.
- Landsverk, J., Garland, A. F., & Leslie, L. K. (2002). Mental health services for children reported to child protective services. In J. E. B. Myers & L. Berliner (Eds.), *The APSAC handbook on child maltreatment* (2nd ed., pp. 487–507). Thousand Oaks, CA: Sage Publications.
- McClowry, S. G., Snow, D. L., & Tamis-LeMonda, C. S. (2005). An evaluation of the effects of INSIGHTS on the behavior of inner city primary school children. *Journal of Primary Prevention, 26*(6), 567–584.
- McMahon, R. J., & Forehand, R. L. (2003). *Helping the noncompliant child: Family-based treatment for oppositional behavior* (2nd ed.). New York, NY: Guilford Press.
- Moore, K. J., Osgood, W. D., Larzelere, R. E., & Chamberlain, P. (1994). Use of pooled time series in the study of naturally occurring clinical events and problem behavior in a foster care setting. *Journal of Consulting and Clinical Psychology, 2*(4), 718–728.

- Newton, R. R., Litrownik, A. J., & Landsverk, J. (2000). Children and youth in foster care: Disentangling the relationship between problem behaviors and number of placements. *Child Abuse & Neglect*, 24(10), 1363–1374.
- Patterson, G. R. (1976). Interventions for boys with conduct problems: Multiple settings, treatments, and criteria. In C. M. Franks & G. T. Wilson (Eds.), *Annual review of behavior therapy: Theory and practice*. New York: Brunner/Mazel.
- Pears, K., & Fisher, P. A. (2004). *Developmental, cognitive, and neuropsychological functioning in preschool-aged foster children: Associations with prior maltreatment and placement history*. Manuscript submitted for publication.
- Price, J. (2005). *The economic impact of placement disruption in San Diego County*. Manuscript in preparation.
- Price, J., & Chamberlain, P. (2005). *A parent-mediated intervention for elementary-aged children in foster care: Child problem behavior changes and placement outcomes*. Manuscript in preparation.
- Ryan, J. P., & Testa, M. F. (2005). Child maltreatment and juvenile delinquency: Investigating the role of placement instability. *Children and Youth Services Review*, 27, 227–249.
- Sallnas, M., Vinnerljung, B., & Weestermark, P. K. (2004). Breakdown of teenage placements in Swedish foster and residential care. *Child and Family Social Work*, 9, 141–152.
- Serketich, W. J., & Dumas, J. E. (1996). The effectiveness of behavioral parent training to modify antisocial behavior in children: A meta-analysis. *Behavior Therapy*, 27, 171–186.
- Sinclair, I., & Wilson, K. (2003). Matches and mismatches: The contribution of carers and children to the success of foster placements. *British Journal of Social Work*, 33, 871–884.
- Smith, D. K., Stormshak, E., Chamberlain, P., & Bridges Whaley, R. (2001). Placement disruptions in treatment foster care. *Journal of Emotional and Behavioral Disorders*, 9, 200–205.
- Stone, A. A., Broderick, J. E., Kaell, A. T., DelesPaul, P. A. E. G., & Porter, L. E. (2000). Does the peak-end phenomenon observed in laboratory pain studies apply to real-world pain in rheumatoid arthritis? *Journal of Pain*, 1, 212–217.
- Swets, J. A. (1988). Measuring the accuracy of diagnostic systems. *Science*, 240, 1285–1293.
- Therneau, T. M., & Grambsch, P. M. (2000). *Modeling survival data: Extending the Cox model*. New York: Springer.
- Tourangeau, R. (2000). Remembering what happened: Memory errors and survey reports. In A. A. Stone & J. S. Turkkan (Eds.), *The science of self-report: Implications for research and practice* (pp. 29–47). Mahwah, NJ: Lawrence Erlbaum Associates.
- U.S. Department of Health and Human Services. (2000a). Children and mental health. In *Mental health: A report of the Surgeon General* (DHHS publication No. DSL 2000-0134-P; pp. 123–220). Washington, DC: U.S. Government Printing Office.
- U.S. Department of Health and Human Services. (2000b). Prevention of violence. In *Mental health: A report of the Surgeon General* (DHHS publication No. DSL 2000-0134-P). Washington, DC: U.S. Government Printing Office.
- U.S. Department of Health and Human Services. (2002). *The AFCARS Report*. Washington, DC: Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau ([www.acf.hhs.gov/programs/cb](http://www.acf.hhs.gov/programs/cb)).
- van der Kolk, B. A. (1987). The separation cry and the trauma response: Developmental issues in the psychobiology of attachment and separation. In B. A. van der Kolk (Ed.), *Psychological trauma* (pp. 31–62). Washington, DC: American Psychological Association.
- Webster-Stratton, C., Reid, M. J., & Hammond, M. (2001). Preventing conduct problems, promoting social competence. A parent and teacher training partnership in Head Start. *Journal of Clinical Child Psychology*, 30, 283–302.
- Weinrott, M. R., Bauske, B., & Patterson, G. R. (1979). Systematic replication of a social learning approach. In P. O. Sjöden, S. Bates, & W. S. Dockens III (Eds.), *Trends in behavior therapy* (pp. 331–352). New York: Academic Press.
- Wells, K., & Guo, S. (1999). Reunification and reentry of foster children. *Children & Youth Services Review*, 21(4), 273–294.

## Résumé

**Objectif :** Identifier des facteurs fiables et peu chers qui pourraient prédire la perturbation dans les placements en foyer d'accueil et ainsi servir à évaluer le risque que le placement échoue.

**Méthode :** Au moyen du Parent Daily Report Checklist, les parents nourriciers (ayant un lien de parenté ou non) de 246 enfants âgés de 5 à 12 ans en Californie ont été interviewés trois fois à savoir si leur enfant avait manifesté l'un ou plusieurs parmi 30 problèmes de comportement dans les 24 heures précédentes.

L'interview a eu lieu au cours de conversations téléphoniques de 5 à 10 min chacune, à intervalles de 1 à 3 jours. Les perturbations ont été documentées durant les 12 mois qui ont suivi. On a noté d'autres facteurs pouvant possiblement influencer les perturbations, y compris l'âge de l'enfant, le sexe, son ethnie et celle des parents, le nombre d'enfants dans le foyer d'accueil et le type de placement (parenté ou non).

**Résultats :** Les parents nourriciers ont rapporté en moyenne 5.77 problèmes de comportement par jour. Le nombre de comportements s'associe directement aux incidents de perturbations durant le placement dans l'année qui suivit. Le seuil de tolérance aux problèmes de comportement, après quoi le risque de perturbations accélérât, était de 6 incidents ou moins. Les enfants placés dans des foyers sans lien de parenté étaient plus aptes à la perturbation. On a détecté une tendance à savoir que, plus il y a d'enfants dans le foyer, plus les perturbations augmentent.

**Conclusions :** L'instrument Parent Daily Report Checklist pourrait servir à prédire quels placements sont les plus à risque de perturbations futures, nonobstant les services et les appuis disponibles.

## **Resumen**

**Objetivo:** Identificar predictores fiables y sencillos de alteraciones en el acogimiento familiar que pudieran ser utilizados para evaluar el riesgo de fracaso del acogimiento.

**Métodos:** Utilizando el Inventario de Notificaciones Parentales Diarias (PDR) se entrevistó tres veces a padres de acogida (ajena y extensa) de 246 niños (5 a 12 años) de California acerca de si el niño había tenido alguno de una serie de 30 problemas de conducta durante las 24 horas previas. El PDR se aplicó durante contactos telefónicos (5–10 minutos cada uno) llevados a cabo durante tres días consecutivos. Las alteraciones en el acogimiento fueron estudiadas a lo largo de los 12 meses posteriores. Se examinaron otros predictores potenciales de las alteraciones del acogimiento, incluyendo la edad del niño, el género, la etnia del niño y de los padres de acogida, el número de niños no acogidos presentes en el hogar y el tipo de acogimiento (ajena o extensa).

**Resultados :** Los padres de acogida notificaron una media de 5.77 problemas de conducta por día en el PDR. El número de problemas de conducta estaba linealmente relacionado con el riesgo de alteraciones en el acogimiento durante el año posterior. El umbral para el número de problemas de conducta por día que los padres acogedores toleraron sin aumentar el riesgo de alteración del acogimiento en estos niños era de 6 o más. Los niños acogidos en familia ajena tenían más posibilidades de alteración en el acogimiento que los niños acogidos en familia extensa. Se observó una tendencia a que aumente el riesgo de alteración del acogimiento a medida que hay un mayor número de niños en el hogar.

**Conclusiones:** El PDR puede ser útil para predecir qué acogimientos están en un mayor riesgo de fracaso en el futuro, de manera que se les puedan proporcionar apoyos y recursos.



