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# Child Abuse & Neglect



## Brief Communication

# Dissociation in middle childhood among foster children with early maltreatment experiences<sup>☆</sup>

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## Introduction

Dissociation, defined as “a disruption in the usually integrated functions of consciousness, memory, identity, or perception of the environment” (American Psychiatric Association, 2000), has been hypothesized to develop in response to caregiver maltreatment and betrayal (e.g., Briere & Runtz, 1988; Chu & Dill, 1990; Freyd, 1994; Hornstein & Putnam, 1992; Liotti, 1999; Putnam, 1993; Sanders & Giolas, 1991; Terr, 1991). Further, researchers have recently identified a link between maltreatment and the experience of high dissociation in early childhood (Becker-Blease, Freyd, & Pears, 2004; Hulette, Fisher, Kim, Ganger, & Landsverk, 2008; Hulette, Freyd, et al., 2008; Macfie, Cicchetti, & Toth, 2001a; Macfie, Cicchetti, & Toth, 2001b; Ogawa, Sroufe, Weinfeld, Carlson, & Egeland, 1997). Macfie et al. (2001a) found a significant increase in dissociation in preschool-aged children over a 1-year period, suggesting that early maltreatment has long-term effects on dissociation. They also found that severity and chronicity of maltreatment were associated with dissociation and that physical abuse was associated with dissociation in the clinical range (Macfie et al., 2001b). Hulette, Freyd, et al. (2008) examined dissociation with the children in the current sample when they were preschool aged. In addition to the finding that maltreated preschool-aged foster children had significantly higher mean levels of dissociation than nonmaltreated children, they found the highest levels of dissociation in children who had experienced moderate–high physical abuse with emotional maltreatment and neglect. In another sample of preschool-aged children, Hulette, Fisher, et al. (2008) found that children who had experienced multiple forms of maltreatment (i.e., neglect, and physical, sexual, and emotional abuse) showed the highest dissociation.

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Although many of the studies cited above involved foster children, the effects of specific foster care experiences on dissociation have not been well studied. Increased placement transitions appear to contribute to increased risk for externalizing and internalizing behavior problems (Newton, Litrownik, & Landsverk, 2000). Dissociation could be a way for foster children to cope with the distress of experiencing multiple moves and having to form so many new relationships. New placements and caregivers are likely to provoke anxiety and hyperarousal; dissociation might be a useful strategy to escape uncomfortable emotions and to help develop and maintain a bond with caregivers that supports the child.

High female-to-male ratios for dissociative disorders have been reported in adult samples (American Psychiatric Association, 2000; Putnam, 1997). Putnam, Hornstein, and Peterson (1996) found an increase in the percentage of females with dissociative disorders with successive childhood age groups. This gender effect, combined with Macfie et al.'s (2001b) finding that dissociation may increase over time in preschool-aged maltreated children, suggests that girls with histories of early maltreatment may show higher levels of dissociation by middle childhood.

In the current study, we examined dissociation in a sample of foster children who had been maltreated in early childhood. We hypothesized that these children would have higher levels of dissociation compared to their nonmaltreated peers and that dissociation would increase with more placement transitions. Based on prior research, we also hypothesized that girls, children who had experienced all of the major categories of abuse, and children who had experienced primarily physical abuse would exhibit the highest levels of dissociation.

## Method

The participants in the current study, transitions to middle childhood (Transitions), included 118 children (57 girls; age in years:  $M=9.34$ ,  $SD=1.02$ , range = 7.29–12.29) and their caregivers, who were originally part of the Multidimensional Treatment Foster Care-Preschool (MTFC-P) randomized clinical trial (see Fisher, Burraston, & Pears, 2005 for a complete description of sample recruitment). Children entered the MTFC-P study between the ages of 3 and 5 years, and assessments for that study were conducted at 3-month intervals for 2 years. Data collection for the Transitions study began an average of 2.5 years after completion of the MTFC-P study, with a minimum of 8 months and a maximum of 5.42 years between the 2 projects. Transitions study data were collected at 6-month intervals over a period of 1 year and a half. One data point assessing dissociation was collected from each family during 1 of these intervals.

The current sample of children from the Transitions study (treatment foster care  $n=37$ ; regular foster care  $n=30$ ; community comparison  $n=51$ ) represents a subset of the 177 children in the MTFC-P trial, with the decrease in sample size due to attrition over time. Attrition was significantly higher for the foster children than the community comparison children but did not significantly differ between the foster care subgroups. Because there was not a treatment effect on dissociation at the time of the current assessment, the 2 foster care groups were combined for this study, resulting in 67 children in the foster care (FC) group and 51 children in the age-matched, low-income, nonmaltreated community comparison (CC) group. The ethnicity breakdown was as follows: 82% European American, 2.5% African American, 6% Native American, 1% Asian/Pacific Islander, 2.5% mixed race, and 6% Latino/Hispanic. There were no differences between groups in terms of ethnicity.

We assessed total number of placement transitions from the time of first removal from the home ( $M=4.19$ ,  $SD=3.83$ , range = 2–20). Placement transitions were assessed when children entered a new foster home, relative home, adoptive home, or residential facility or were reunified with biological parents. At the time of the current study, the placement types were as follows: 52.2% in adoptive homes, 23.9% returned to biological parent, 16.4% in foster placements, 6% with a biological relative, and 1.5% in a residential treatment facility.

We assessed maltreatment experiences (i.e., founded instances and allegations made by a reliable reporter) by examining child protective services case files that had been previously coded using the Maltreatment Classification System (Barnett, Manly, & Cicchetti, 1993). For a complete description of the coding for this sample, refer to Pears, Kim, and Fisher (2008). In the current study, we used maltreatment subgroups that were established in Pears et al.'s latent profile analyses. By incorporating multiple dimensions of maltreatment simultaneously, ecologically valid maltreatment groups were distinguished. The four maltreatment profiles are as follows: supervisory neglect/emotional maltreatment (*moderate-high neglect*), including moderate-to-high supervisory neglect and emotional maltreatment, low physical neglect, and almost no physical or sexual abuse; physical abuse/neglect/emotional maltreatment (*moderate-high PA*), including moderate-to-high physical abuse, neglect, and emotional maltreatment but low sexual abuse; sexual abuse/emotional maltreatment/neglect (*high SA*), including high sexual abuse and emotional maltreatment, moderate neglect, and almost no physical abuse; and sexual abuse/physical abuse/emotional maltreatment/neglect (*moderate-high all types*), including moderate-to-high levels of all maltreatment types.

To measure dissociation, we administered the Child Dissociative Checklist (CDC; Version 3.0), a 20-item measure on which caregivers rate child symptoms over the prior 12 months on a 3-point scale (Putnam, Helmers, & Trickett, 1993). A score of 12 or above suggests that further screening is needed to determine the presence of clinically significant dissociation. The CDC has been shown to have good consistency, reliability, and discriminant validity between pathological and nonpathological

**Table 1**  
Child Dissociative Checklist (CDC) scores for foster children by gender and maltreatment classification.

	<i>M</i>	<i>SD</i>	<i>n</i>
Gender			
Male	6.51	7.54	35
Female	8.28	6.75	32
Maltreatment profile			
Moderate–high all types	12.50	7.41	10
Moderate–high PA	9.60	7.82	15
High SA	3.50	4.32	6
Moderate–high neglect	5.64	6.37	36

Note: CDC total scores ranged 0–29 ( $M=7.36$ ,  $SD=7.18$ ).

dissociation (see Putnam, 1997). Internal consistency for the CDC items in the current study was excellent (Cronbach's  $\alpha=0.91$ ).

## Results

In the FC group, 20.9% of the children scored 12 or higher on the CDC (compared to 2% in the CC group). Chi-square analysis using Fisher's exact test showed a significant difference in categorically high dissociation between groups,  $\chi^2(1)=9.357$ ,  $p=0.002$ , suggesting that foster children are more likely to be pathologically dissociative than their nonmaltreated peers. An ANOVA using log-transformed CDC scores showed that the FC children had significantly higher dissociation ( $M=1.78$ ,  $SD=0.86$ ) than the CC children ( $M=0.63$ ,  $SD=0.73$ ),  $F(1, 116)=58.379$ ,  $p<0.001$ ,  $\eta^2=0.335$ .

Regression analysis was used to determine the predictors of dissociation in the FC group. The mean levels of dissociation for the categorical variables included in the regression model are shown in Table 1. The regression model, with gender, number of placement transitions, and the three maltreatment history contrasts, showed a good fit,  $F(5, 61)=6.574$ ,  $p<0.001$ , adjusted  $R^2=0.297$ . Gender was a significant predictor of dissociation,  $\beta=.235$ ,  $t(61)=2.099$ ,  $p=0.04$ , suggesting that girls show a higher level of dissociation than boys. Number of placement transitions was also a significant predictor of dissociation,  $\beta=.298$ ,  $t(61)=2.801$ ,  $p=0.007$ , suggesting that increased placement transitions is associated with increased dissociation.

Regarding the maltreatment profiles, Helmert contrasts showed that the moderate–high all types group showed significantly greater dissociation than the moderate–high PA, high SA, and moderate–high neglect groups combined,  $t(61)=2.837$ ,  $p=0.006$ . The moderate–high PA group showed significantly greater dissociation than the high SA and moderate–high neglect groups combined,  $t(61)=2.99$ ,  $p=0.004$ . Dissociation did not significantly differ between the high SA and moderate–high neglect groups,  $t(61)=-1.379$ ,  $p=0.17$ .

## Discussion

In this study, we examined dissociation in school-aged foster children who had been maltreated in early childhood. The finding that foster children continue to be highly dissociative years after maltreatment experiences supports previous research findings. Our maltreatment subtype comparisons revealed that the children in the moderate–high all types and moderate–high PA maltreatment profiles had significantly higher mean levels of dissociation than the other groups combined. When this same sample was assessed at baseline (preschool age) using a dissociation subscale of the Child Behavior Checklist (Achenbach, 1991) established by Sim et al. (2005), the children in the moderate–high PA group had the highest mean levels of dissociation but did not significantly differ from the children in the moderate–high all types group (Hulette, Freyd, et al., 2008). Across the studies of preschool-aged foster children that we reviewed (Hulette, Fisher, et al., 2008; Hulette, Freyd, et al., 2008; Macfie et al., 2001a, 2001b), the highest levels of dissociation were found among children who had experienced all types of maltreatment or who had experienced physical abuse. Our results are thus consistent with prior research findings with children who were maltreated before ages 3–5 years. It is troubling that these children exhibit increased dissociation into middle childhood.

It is noteworthy that the high SA group was not significantly different from the moderate–high neglect group. This finding may have resulted from the small sample size or from an underestimation of sexual abuse in our sample. Alternatively, owing to their early placement in foster care, perhaps the children who primarily experienced sexual abuse did not develop more serious pathological dissociation. It is possible that the discovery of sexual abuse leads to more rapid child removal than physical abuse; thus, these children might not have experienced the chronic exposure that could result in more persistent dissociative tendencies.

Our analyses also indicated that gender and number of placement transitions were significant predictors of dissociation. In middle childhood, girls who had early maltreatment experiences tended to have higher dissociation scores than boys. This is consistent with prior research findings that girls might be more prone to dissociation. In addition, a positive relationship was observed between increased placement transitions and increased dissociation. Perhaps the stress associated with placement transitions (each of which might serve as a traumatic reminder of the initial reason for placement in foster care) is resolved through dissociative mechanisms. The rejection by multiple foster caregivers might also constitute a series of betrayals

similar to the one they experienced in their home of origin. Dissociation might therefore develop as a result of the foster care experience.

### Limitations and future directions

There were several limitations in the present study. First, the small sample sizes of the maltreatment groups limit the interpretation of dissociative levels by profile. Second, we used only caregiver reports to assess dissociation. The foster caregivers might have completed the CDC differently than the biological parents in the CC group, especially for children who resided in the foster home for less than 1 year. Third, our reliance on child protective services case files to code maltreatment type might have led to underestimates of maltreatment instances (Everson et al., 2008), despite our inclusion of allegations by reliable reporters in addition to founded allegations.

Additional research could clarify the relationship between early childhood maltreatment and dissociation. For example, we would like to understand whether increased placement transitions cause dissociation, whether dissociative children are at increased risk for placement transitions, or whether there are bidirectional effects. We would also like to understand whether dissociation in these children changes over time and, if so, what factors contribute to such change.

### Summary

The findings from the current study suggest that the experiences of early maltreatment and foster care are related to later dissociative symptoms in school-aged children, and that girls are more susceptible to dissociative symptoms. It is important for practitioners to consider these factors to prevent pathological problems that could negatively impact other areas of such children's lives.

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