



## Introduction

- Prior research has consistently found a relationship between childhood abuse and dissociation.
- There are few studies of preschool children and dissociative disorders, despite reports of early onset and diagnoses at this age (Macfie, Cicchetti, and Toth, 2001).
- Children who experience dissociative behaviors as a result of maltreatment may be at risk for academic, social, and psychological problems (Putnam, 1997). Thus, it may be especially important to study this age group so as to prevent cascading developmental problems.
- Researchers have been recently been interested in assessing dissociation using the Child Behavior Checklist (CBCL), as it is a widely used behavior rating scale. This would enable further studies of dissociation in children.
- The current study examines dissociation in preschool-age foster children with a history of abuse and neglect, as well as dissociation in nonmaltreated children. We were also interested in whether there were differences in dissociation levels between maltreatment subtypes (e.g., physical abuse, sexual abuse neglect).

## Method

### Participants

- 177 preschool children (age 3-5) and their caregivers, of which 111 were in the foster care group (FC group). Fifty-nine children with no history of maltreatment were in the community comparison group (CC group).
- FC group participants were also categorized by maltreatment subtype:
  1. high severity sexual abuse/high severity physical abuse (high PA/high SA), n=11
  2. high severity physical abuse (high PA), n=19
  3. high severity sexual abuse (high SA), n=13
  4. neglect (with some cases of low severity physical abuse or sexual abuse), n=68

### Measures

- Child Behavior Checklist (CBCL) - 113-item behavior rating scale for children aged 4-18 (Achenbach, 1991). Caregivers rate their child's behavior over the prior six-month period on a 3-point scale. In FC group, CBCL was filled out by foster parent. In CC group, CBCL was filled out by primary caregiver.
- We used three previously published CBCL subscales of dissociation; one subscale assessing both dissociation and PTSD symptomatology (see Table 1).
- **Subscale 1.** Malinosky-Rummel (Malinosky-Rummel & Hoier, 1991) developed a six item subscale for the CBCL assessing dissociative symptomatology. The author did so by choosing seven items that seemed to correspond with CDC items. An item analysis was run, and one item was dropped to improve the internal consistency of the scale (Malinosky-Rummel & Hoier, 1991).
- **Subscale 2.** Ogawa, Sroufe, Weinfeld, Carlson, and Egeland (1997) published a 12-item subscale of dissociation using the CBCL as well as the Teacher Report Form (TRF) of the CBCL. The authors chose items that corresponded to the CDC, excluding those items related to inappropriate sexual behavior so as to assess purely dissociation. In the present study, we used a 10-item version of the scale due to unavailability of TRF data.
- **Subscales 3 and 4.** Sim, Freidrich, Davies, Trentham, Lengua, and Pithers (2005) published a 7-item PTSD subscale, a 3-item Dissociation subscale, and a 16-item PTSD/Dissociation subscale. The subscales were created through a process involving item ratings by a panel of 16 clinical child psychology experts. Item inclusion for subscales occurred if at least two-thirds of experts rated the item as an indicator.
- A factor analysis was also performed on items from all subscales, from which two new CBCL subscales were created assessing Dissociative symptomatology and Post-Traumatic Arousal symptomatology (see Table 2).

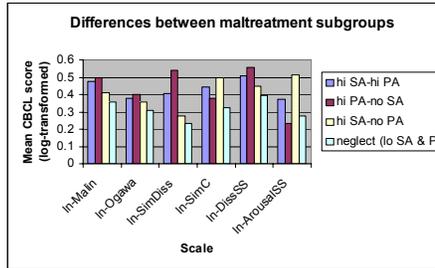
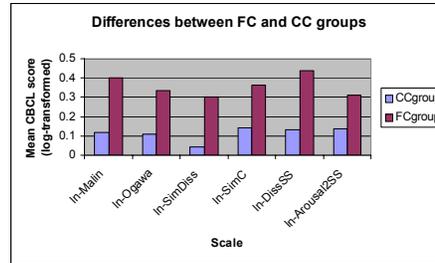


Table 1. Items from previously published subscales.	Table 2. Main components from DFA analysis of CBCL.
<p><b>Malinosky-Rummel and Hoier (1991)</b></p> <p>1. Acts too young for his/her age</p> <p>2. Behaves like opposite sex</p> <p>3. Can't concentrate, can't pay attention for long</p> <p>13. Confused/Seems to be in a fog</p> <p>17. Daydreams or gets lost in thoughts</p> <p>86. Stares blankly</p> <p>87. Sudden changes in mood or feelings</p> <p>Ogawa, Sroufe, Weinfeld, Carlson, &amp; Egeland (1997)</p> <p>1. Acts too young for his/her age</p> <p>2. Can't concentrate, can't pay attention for long</p> <p>13. Confused/Seems to be in a fog</p> <p>17. Daydreams or gets lost in thoughts</p> <p>46. Deliberately harms self or attempts suicide</p> <p>54. Gets hurt a lot, accident prone</p> <p>46. Hears sounds/voices that aren't there</p> <p>86. Stares blankly</p> <p>87. Sudden changes in mood or feelings</p> <p>91. Talks about killing self</p>	<p>Sim, Friedrich, Davies, Trentham, Lengua, &amp; Pithers (2005)</p> <p>PTSD</p> <p>9. Can't get mind off certain thoughts</p> <p>23. Fears certain animals, situations, places</p> <p>45. Nervous/highstrung/fense</p> <p>47. Nightmares</p> <p>95. Too fearful or anxious</p> <p>76. Sleeps less than other children</p> <p>100. Trouble sleeping</p> <p>Dissociation</p> <p>13. Confused/Seems to be in a fog</p> <p>17. Daydreams or gets lost in thoughts</p> <p>86. Stares blankly</p> <p>PTSD/Dissociation</p> <p>9. Can't get mind off certain thoughts</p> <p>23. Fears certain animals, situations, places</p> <p>45. Hears sounds/voices that aren't there</p> <p>47. Nightmares</p> <p>95. Too fearful or anxious</p> <p>66. Repeats certain acts over and over</p> <p>76. Sleeps less than other children</p> <p>86. Stares blankly</p> <p>84. Strange behavior</p> <p>87. Sudden changes in mood or feelings</p> <p>92. Talks or walks in sleep</p> <p>100. Trouble sleeping</p> <p>Post-Traumatic Arousal Component</p> <p>1. Acts too young for his/her age</p> <p>9. Can't concentrate, can't pay attention for long</p> <p>13. Confused/Seems to be in a fog</p> <p>17. Daydreams or gets lost in thoughts</p> <p>86. Stares blankly</p> <p>87. Sudden changes in mood or feelings</p> <p>46. Deliberately harms self or attempts suicide</p> <p>23. Fears certain animals, situations, places</p> <p>46. Hears sounds/voices that aren't there</p> <p>45. Nervous/highstrung/fense</p> <p>47. Nightmares</p> <p>86. Too fearful or anxious</p> <p>76. Sleeps less than other children</p> <p>84. Strange behavior</p> <p>92. Talks or walks in sleep</p> <p>100. Trouble sleeping</p>

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## Results

ANOVAs were conducted to compare the maltreated foster care group against the community comparison group. All of the subscales showed that the FC group had significantly higher levels of dissociation (and dissociation/PTSD) than the CC group.

Maltreatment subtypes were also compared using ANOVA with Welch approximation and Tukey's HSD. Of the four previously published subscales, only the two Sim et al. scales distinguished between maltreatment subgroups:

- Sim et al. Dissociation subscale: The high PA group (M=0.83, SD=0.66) had a significantly higher mean dissociation level than the neglect group (M=0.34, SD=0.49),  $p=0.0026$ .
- Sim et al. Combined PTSD/Dissociation subscale: The high SA group (M=0.70, SD=0.45) had a significantly higher mean dissociation level than the neglect group (M=0.48, SD=0.34),  $p=0.0354$ .

Analyses using the new subscales created from factor analysis:

- Dissociation subscale: no statistically significant difference between groups,  $F(3,107)=1.954$ ,  $p=0.125$ . However, post-hoc analyses suggest that the high PA group (M=0.83, SD=0.69) had a higher mean dissociation level than the neglect group (M=0.54, SD=0.43),  $p=0.116$ .
- Post-traumatic Arousal subscale: The high SA group (M=0.48, SD=0.30) had a significantly higher mean arousal level than the neglect group (M=0.36, SD=0.32),  $p=0.003$ . Additionally, the high SA group had a significantly higher mean arousal level than the high PA group (M=0.30, SD=0.27),  $p=0.003$ .

## Discussion

The results suggest that exposure to any type of maltreatment is associated with greater dissociation. There also appears to be a distinct difference between the experience of sexual abuse versus physical abuse. Preschool-age children who had been sexually abused displayed high levels of post-traumatic arousal symptoms, while children who had been physically abused tended to use dissociation as a primary coping mechanism.

The current study provides evidence that the experience of trauma is related to the development of dissociation and PTSD symptoms from an early age. While these symptoms initially develop to help the child cope with maltreatment, they have lasting detrimental consequences. Because the children in the current study were subsequently involved in an intervention program, future research will be important to determine what aspects of the program were clinically important. Understanding dissociative mechanisms and their impact on maltreated children can provide important information on how to minimize resulting academic, social, and psychological problems.

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