Abstract
Because childhood maltreatment is a risk factor for the development of borderline personality disorder (BPD), it is important to know more about maltreatment in children at high risk for developing the disorder themselves in early adulthood. Offspring of women with BPD comprise such a risk group. The present research examined the experience of maltreatment in a low-SES sample of preschool-aged children whose mothers have BPD, $n = 15$, and normative comparisons, $n = 13$. Children of mothers with BPD were significantly more likely to have experienced maltreatment, specifically neglect, and greater severity and chronicity of maltreatment than were comparisons. There were no significant differences in the experience of physical abuse or sexual abuse. Results are discussed in terms of possible precursors to the development of BPD in this high-risk sample.

Introduction

- **Borderline Personality Disorder (BPD)** Symptoms of BPD include: suicide attempts, self-harm (e.g., cutting), impulsivity (e.g., drug/alcohol abuse), inappropriate angry outbursts, identity confusion, volatile emotions and stormy relationships.

- The combination of angry, self-destructive, care-seekers is extremely difficult for health care providers.

- BPD affects 3% of women. 8-10% of both men and women with BPD commit suicide.

- Because treatment for BPD is challenging, developmentally appropriate preventative interventions would be important (Cicchetti & Hinshaw, 2003).

*Developmental Psychopathology*
- From a developmental psychopathology perspective (Sroufe & Rutter, 1984) in order to design preventive interventions for BPD, more needs to be known about the etiology of BPD in a high-risk group. One such high-risk group is the children of BPD mothers.

- The current research thus examines one possible precursor to BPD, childhood maltreatment, in a high-risk group: children age 4-6 whose mothers have the disorder.

*Maltreatment in the Etiology of BPD*
- The intergenerational transmission of maltreatment is approximately 33%: One third of maltreated children grow up to go on to maltreat their own children (Egeland, Jacobovitz, & Sroufe, 1988).

- Retrospective studies of women with BPD report experience of childhood maltreatment (Herman, Perry, & van der Kolk, 1989; Zanarini, Frankenburg, Reich, Marino, Lewis, Williams, & Khera, 2000). It is therefore important to know what proportion of mothers
with BPD go on to maltreat their own children, increasing the risk of their developing BPD themselves when they grow up.

- Prospective rather than retrospective studies are needed, however, to demonstrate etiological effects of maltreatment on the development on BPD.

- Previous research on children of BPD mothers within a wide age span-- from preschool to the late teen years-- suggested that these children had not experienced more trauma (defined to include maltreatment) than had comparisons (Weiss, Zelkowitz, Feldman, Vogel, Heyman, & Paris, 1996). However, the definition of trauma was very broad and the comparison group was also very high risk: comprising children of mothers with other personality disorders, making the detection of significant differences unlikely.

**Gaps in Research**
- To date there has been no research on maltreatment per se in offspring of mothers with BPD. This is an important omission because of the salience of maltreatment in the etiology of BPD.
- Such research needs to comprise children in the same developmental period in order to assess the effect on child development.

**Current Study**
- The current study assesses maltreatment (sexual abuse, physical abuse, and neglect), severity, and chronicity of maltreatment in offspring, age 4-6, of mothers with BPD in comparison with children of mothers without BPD.

**Hypotheses**
- Compared with normative comparisons, children of mothers with BPD would experience:
  1. more maltreatment overall.
  2. more of each subtype of maltreatment: sexual abuse, physical abuse, and neglect.
  3. greater severity and chronicity in their experience of maltreatment

**Method**

**Participants**
- \( N = 28 \) mothers with children ages 4-6 years old
- \( n = 15 \) mothers with BPD and \( n = 13 \) mothers without BPD and their respective preschool age children.
- Mothers with BPD were recruited from local outpatient clinics and referred by their therapists.
- Comparison mothers were recruited from Boys and Girls clubs, posters placed in the community, and local schools.
- Groups were matched on socioeconomic status (low), age, race, and other demographic characteristics (see table 1).
Table 1. Characteristics of the sample.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total Sample</th>
<th>BPD</th>
<th>Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$N = 28$</td>
<td>$n = 15$</td>
<td>$n = 13$</td>
</tr>
<tr>
<td>Household Yearly Income</td>
<td>$31,567 (24,552)$</td>
<td>$35,096 (24,499)$</td>
<td>$27,495 (24,950)$</td>
</tr>
<tr>
<td>Child’s Age</td>
<td>$5.37 (0.74)$</td>
<td>$5.38 (0.78)$</td>
<td>$5.37 (0.73)$</td>
</tr>
<tr>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Mother Completed High School</td>
<td>93</td>
<td>93</td>
<td>92</td>
</tr>
<tr>
<td>Mother Single</td>
<td>32</td>
<td>33</td>
<td>31</td>
</tr>
<tr>
<td>Child Gender (girls)</td>
<td>54</td>
<td>53</td>
<td>54</td>
</tr>
<tr>
<td>Child Minority</td>
<td>14</td>
<td>13</td>
<td>15</td>
</tr>
</tbody>
</table>

*No group differences were significant.

Procedures & Measures

BPD diagnosis

- SCID-II Interview (First, Gibbon, Spitzer, Williams & Benjamin, 1997). This structured interview was conducted after initial participant screening and was used to determine BPD status of the mother.

Maltreatment Information

- Maltreatment Interview (Ciccheiti, Toth & Manly, 2002). This interview was conducted to establish the presence of maltreatment of the child as reported by the mother.

- Department of Children’s Services (DCS) Maltreatment Records. With the mother’s written consent, DCS provided information regarding whether an investigation was opened for each child. If there was an investigation conducted, DCS provided details of the case, specifically the date the case was opened, the type of maltreatment, the perpetrator, and whether it was founded or not.

- Maltreatment Coding System (Cicchetti et al, 2002). This system was used to categorize maltreatment into subtypes, assess severity, and the developmental period that the maltreatment occurred.

  - The maltreatment event was defined as physical abuse, sexual abuse, and/or neglect.
    - Physical abuse is any physical action toward the child (ex: hitting, cutting, throwing)
    - Sexual abuse is physical action toward the child of a sexual nature (ex: molestation, groping, vaginal or anal penetration)
    - Neglect is the absence of appropriate care and/or supervision (ex: leaving child unsupervised or with an inappropriate supervisor, leaving child in unsafe environment, not providing adequate nourishment, keeping child out of school)
If maltreatment is found, it was assessed for severity using a 1 - 3 rating scale.

- Low rating (1): minor maltreatment events (ex: minor bruising, small scratches and abrasions, inappropriate display of genitals, leaving child with inappropriate supervisor).
- Medium rating (2): moderate maltreatment events (ex: cuts requiring minor stitches, large bruising, molestation and groping, child left unattended for short period of time).
- High rating (3): severe maltreatment events (ex: hospitalization, broken bones, sexual penetration, child left unattended in dangerous environment).

If maltreatment found, it was assessed for developmental period

- Infant: ages 0 - 2 years
- Toddler: 2 - 3 years
- Preschooler: 3 - 6 years

Chronicity was assessed by counting the number of developmental periods that maltreatment occurred by subtype

Interrater reliability was assessed on 20% of the total sample. For the categorical variables, kappas were conducted. For the continuous variables, interclass correlations were conducted.

- Maltreatment overall $k = 1.00$, physical abuse $k = 0.80$, sexual abuse $k = 1.00$, and neglect $k = 1.00$.
- Severity of physical abuse $R_i = 0.94$, severity of sexual abuse $R_i = 1.00$, and severity of neglect $R_i = 1.00$.
- Chronicity of physical abuse $R_i = 0.93$, chronicity of sexual abuse $R_i = 1.00$, and chronicity of neglect $R_i = 1.00$.

Results

- **Hypothesis (1).**
  - As hypothesized, children whose mothers had BPD experienced more maltreatment than did comparisons, $\chi^2 (1, N = 28) = 4.18, p < .05$

- **Hypothesis (2).**
  - As hypothesized, children whose mothers had BPD experienced significantly more neglect than comparisons, $\chi^2 (1, N = 28) = 7.48, p < .01$
  - However, there were no significant differences for physical abuse, $\chi^2 (1, N = 28) = 0.36, p > .10$, or for sexual abuse, $\chi^2 (1, N = 28) = 1.87, p > 0.10$.

- **Hypothesis (3).**
  - As hypothesized, children whose mothers had BPD experienced significantly more severe maltreatment events than comparisons $t (26, N = 28) = 2.49, p < 0.05$.
  - As hypothesized, children whose mothers have BPD experienced maltreatment events over a longer period of time (e.g., higher chronicity) $t (26, N = 28) = 2.11, p < 0.05$. 
Table 2. **Effect of maternal BPD on the experience of maltreatment.**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total Sample N = 28</th>
<th>BPD n = 15</th>
<th>Comparison n = 13</th>
<th>( \chi^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Maltreatment</td>
<td>79</td>
<td>93</td>
<td>62</td>
<td>4.18*</td>
</tr>
<tr>
<td>Neglect</td>
<td>43</td>
<td>67</td>
<td>15</td>
<td>7.48**</td>
</tr>
<tr>
<td>Physical Abuse</td>
<td>29</td>
<td>33</td>
<td>23</td>
<td>0.36</td>
</tr>
<tr>
<td>Sexual Abuse</td>
<td>7</td>
<td>13</td>
<td>0</td>
<td>1.87</td>
</tr>
<tr>
<td>Severity</td>
<td>M (SD) 2.11 (1.23)</td>
<td>M (SD) 2.60 (0.83)</td>
<td>M (SD) 1.54 (1.39)</td>
<td>2.49*</td>
</tr>
<tr>
<td>Chronicity</td>
<td>M (SD) 1.54 (1.14)</td>
<td>M (SD) 1.93 (1.03)</td>
<td>M (SD) 1.08 (1.12)</td>
<td>2.11*</td>
</tr>
</tbody>
</table>

* significant \( p < 0.05 \)

**significant \( p < 0.01 \)

**Discussion**

**Current Findings and Implications**

- Children age 4-6 of mothers who had BPD were more likely to have been maltreated, particularly neglected, than were children of mothers who do not have the disorder.

- This significant finding for neglect suggests that symptoms of BPD may cause mothers to be both emotionally and physically unavailable to their offspring, which may have deleterious consequences for future development.

- There were no significant differences for sexual abuse, although all children who had experienced sexual abuse were within the BPD group. This may be due to the young age of the participants (i.e., sexual abuse is more likely to happen at a later developmental stage).

- There were no significant differences for physical abuse.

- The maltreatment that children of mothers with BPD experienced was found to be more severe and more chronic than comparisons. This may be due to BPD mother’s inability to cope with the demands of a child, which may cause the mother to be harsher and begin the maltreatment earlier than comparisons.

- The small sample size limited power to detect significant differences. However, results clearly suggest that children of mothers who have BPD are at risk themselves for experiencing maltreatment.

- Because maltreatment is implicated in the etiology of BPD the present research emphasizes the high level of risk of children of mothers with BPD. As these offspring develop they may, in addition, become more vulnerable to other subtypes of maltreatment.
References

* This research was supported by funding from the National Institute of Mental Health to Dr. Jenny Macfie [5R03MH077841-01].
† This poster was presented at the Society for Research in Child Development biannual conference in April 2007. If you would like additional information, please contact Jenny Macfie at macfie@utk.edu or visit our website at http://web.utk.edu/~macfie