Trauma-Related Symptoms in Neglected Preschoolers and Affective Quality of Mother–Child Communication

Tristan Milot¹, Diane St-Laurent², Louise S. Éthier², and Marc A. Provost²

Abstract
This study (a) assessed whether child neglect is associated with posttraumatic stress disorder (PTSD) and dissociative symptoms in the preschool period and (b) examined the role of quality of mother–child affective communication in the development of trauma-related symptoms among neglected children. Participants were 33 neglected and 72 non-neglected preschoolers (mean age = 60 months). Neglected children were recruited from the Child Protection Agencies. Neglected and non-neglected children victims of other form of abuse were excluded from the study. Trauma symptoms were evaluated through mother and preschool teacher reports. Quality of mother–child affective communication was assessed in a lab visit during an unstructured task. According to teachers, neglected children displayed more PTSD and dissociative symptoms than non-neglected children. Quality of mother–child communication was lower in neglected dyads. Mother–child affective communication predicted teacher-reported child trauma symptomatology, over and above child neglect. Discussion focuses on the traumatic nature of child neglect and the underlying parent–child relational processes.

Keywords
behavioral observations, child PTSD/trauma, children in child welfare, family relationships, neglect

Introduction
For the past 15 years, several studies conducted within the fields of developmental psychopathology and traumatology have underlined the interest of the traumatic stress model as a useful conceptual framework to better understand psychosocial problems associated with maltreatment (Cook et al., 2005; De Bellis, 2005; Perry, 2008; van der Kolk, 2007). Accordingly, child maltreatment is a severe form of chronic relational trauma that has multiple consequences on almost every sphere of development. Several studies have observed that maltreated children present deficits at the behavioral level (Éthier, Lemelin, & Lacharité, 2004; Manly, Kim, Rogosh, & Cicchetti, 2001), in affect regulation (Cerezo-Jimenez & Frias, 1994; Toth, Manly, & Cicchetti, 1992), social development (Darwish, Esquivel, Houtz, & Alfonso, 2001; Shields & Cicchetti, 2001), cognitive functioning (Egeland, Strouf, & Erickson, 1983; Nolin & Éthier, 2007), and academic achievement (Eckenrode, Laird, & Doris, 1993).

The idea of considering child maltreatment as a very traumatic experience finds support in several studies reporting high prevalence of posttraumatic stress disorder (PTSD) in physically abused children (Dubner & Motta, 1999; Famularo, Kinscherff, & Fenton, 1992) and in sexually abused children (Kendall-Tackett, Williams, & Finkelhor, 1993; Mcleer, Deblinger, Henry, & Orvaschel, 1994). Studies conducted in adulthood also suggest that PTSD related to childhood experiences of abuse and neglect persists over time with a majority of PTSD-diagnosed adults retrospectively reporting having been maltreated in childhood (Mclean & Gallop, 2003; Rowan, Foy, Rodriguez, & Ryan, 1994; Spitzer et al., 2001). Furthermore, other studies have demonstrated that PTSD may be a mechanism relating childhood experiences of maltreatment with later psychosocial maladjustment, such as non-suicidal self-injury (Shenk, Noll, & Casparly, 2010), adolescent dating violence (Wolfe, Wekerle, Scott, Straatman, & Grasley, 2004), and eating disorders in adulthood (Holzer, Uppala, Wonderlich, Crosby, & Simonich, 2008).

Surprisingly, although several studies have shown the usefulness of the traumatic stress paradigm to better understand the consequences of sexual and physical abuse, only a handful of studies have examined the relation between child neglect...
and PTSD symptoms (De Bellis, 2005). Yet, child neglect is the most prevalent type of child maltreatment with 61% of victims in the United States being neglected (U.S. Department of Health and Human Services, 2004). In addition, despite the fact that child maltreatment is generally accompanied with extreme dysfunctions in the parent–child relationship system, little is known regarding the role of parent–child interactions in the development of trauma-related symptoms among maltreated children. Two main objectives were pursued in the current study. The first was to examine whether child neglect is associated with children’s manifestations of trauma-related symptoms during the preschool period. The second was to evaluate the role of the quality of mother–child affective communication in the development of trauma-related symptoms among neglected children. From a developmental perspective, it is of particular interest to better document the associations between neglect, mother–child affective communication, and PTSD symptoms in early childhood to guide the development of intervention strategies aimed at improving neglected children’s psychosocial adaptation.

**Child Neglect and Trauma-Related Symptoms**

Among the few studies that have examined links between child neglect and PTSD, most have evaluated PTSD symptoms in adolescence or in adulthood. In a study assessing the relation between subtypes of child maltreatment and severity of PTSD symptoms among adolescents inpatients, Sullivan, Fehon, Andres-Hyman, Lipschitz, and Grilo (2006) found a relation between PTSD symptoms and both physical and emotional neglect. However, when other subtypes of maltreatment were controlled for, relations between emotional and physical neglect and PTSD symptoms were no longer significant, with only emotional abuse significantly predicting trauma symptomatology. Two other studies, one using a prospective design (Widom, 1999) and the other using a retrospective one (Grassi-Oliveira & Stein, 2008), report that childhood experiences of neglect are associated with PTSD symptoms in adulthood. There is also evidence that neglect is related with dissociative symptoms, another related feature of trauma symptomatology, with neglected children showing more dissociative symptoms than non-maltreated children in both childhood and adolescence (Éthier & Milot, 2009; Hornstein & Putnam, 1992; Hulette, Fisher, Kim, Ganger, & Landsverk, 2008; Macfie, Cicchetti, & Toth, 2001; Sanders & Gielas, 1991). To our knowledge, there is only one published study that examined the association between child neglect and the presence of PTSD symptoms in childhood (Hulette et al., 2008). Using a PTSD scale (arousal/intrusion) derived from the Child Behavior Checklist 4–18, these authors assessed trauma-related symptoms in a sample of 4- to 11-year-old children who had been placed in foster care following maltreatment. Participants were divided into four groups: physical abuse, sexual abuse, neglect, and multiple forms of abuse. Results revealed no significant difference between the four groups on the PTSD scale, indicating that neglected children are not significantly different from physically or sexually abused children on PTSD symptoms. However, the absence of a control group did not allow for examination of differences between neglected children and non-maltreated children.

**The Traumatic Nature of Child Neglect**

The lack of empirically based studies addressing the specific relation between neglect and PTSD symptoms in childhood may be due to the belief that child neglect may not clearly qualify for Criterion A of the *Diagnostic and Statistical Manual of Mental Disorders* diagnosis (Fourth Edition, Text Revision; DSM-IV-TR American Psychiatric Association, 2000), which specifies that the person must have experienced, witnessed, or be confronted with an event that involved threat of death, serious injury, or physical integrity of self or others. Child neglect is generally defined by the failure to provide basic needed age-appropriate care to a child (e.g., lack of supervision and absence of a soothing caregiver; U.S. Department of Health and Human Services, 2004) and may constitute one of the greatest threats to the child’s well-being (Rutter & Sroufe, 2000). However, this definition does not necessarily imply that child neglect involves a threat to the physical integrity as it is generally recognized for sexual and physical abuse. Accordingly, one might argue that situations of child neglect do not meet the threshold associated with PTSD criteria. However, there is a growing agreement in the literature that threats to psychological integrity may also result in trauma symptomatology (Cook et al., 2005; De Bellis, 2005). Schuder and Lyons-Ruth (2004) suggested that the simple fact of being exposed to an unavailable caregiver would be experienced as very traumatic for a young child. Being left alone or not having access to an available parent would cause, particularly in a young child, a feeling of intense stress, fear of abandonment, and a feeling of helplessness. Consequently, it is not the nature of the stress per se that would be traumatic but how it is experienced by the child. Faced with the same stressful situation, some children may be overwhelmed by intense and prolonged feelings of fear or distress, whereas others may return to homeostasis after a certain while. In early childhood, these distinct ways of reacting to stressful events may mainly lie on the attachment figure’s capacity to comfort and reassure the child. In situations of child neglect, the lack of a comforting caregiver, as well as the dysfunctional nature of parent–child interactions, may be experienced by the child as extremely stressful and contribute to the development of trauma-related symptomatology (De Bellis, 2005). This assumption is in line with findings in the field of attachment research, which indicate that maternal disrupted communication, particularly withdrawal, is a strong predictor of attachment disorganization in the child, a maladaptive regulatory attachment pattern that shares phenomenological similarities with PTSD (Lyons-Ruth, Yellin, Melnick, & Atwood, 2005). According to Thompson, Laible, and Ontai (2003), the quality of affective communication is a core feature of mother–child relationship in the preschool years and it is strongly related to emotional regulation and construction of
self. Whereas openness, reciprocity, and smooth exchanges allow for development of effective emotional regulation strategies, maternal insensitivity to child’s emotional expression, lack of coordination, and closed communication may interfere with the normal process of mother–child emotional co-regulation, which is necessary to help the child cope with minor daily stressors as well as with more stressful experiences. In situations of child neglect, persistent maladaptive parent–child communicative patterns may leave the child with few opportunities to build representations of others as caring and worthy, express emotional needs, and use others to help him cope with stressful events. These interactional difficulties may increase the risk of developing trauma-related symptomatology, such as difficulty dealing with unbearable feelings, being in a pervasive state of hypervigilance, avoiding interpersonal situations that are perceived as threatening, and being disconnected from one’s own emotional experiences.

**Child Neglect and Quality of Mother–Child Affective Communication**

Child neglect is generally characterized by severe difficulties in the parent–child relationship (Crittenden, 1981). Edwards, Shipman, and Brown (2005) have observed that neglectful mothers are generally less interactive than non-neglectful mothers and they provide less support in response to their child’s emotional displays (Bousha & Twentyman, 1984; Burgess & Conger, 1978). They are also less accurate at labeling infant’s emotions (Hildyard & Wolfe, 2007) and act in a less developmentally appropriate manner than non-neglectful mothers (Fagan & Dore, 1993). During game play, neglectful mothers are more negative and controlling, show fewer play behaviors, and give fewer verbal and nonverbal cues (Aragona & Eyberg, 1981; Bousha & Twentyman, 1984). Moreover, other results suggest that neglectful mothers do not constitute a homogeneous group in their way of interacting with their children. In a study assessing parenting behavioral patterns among neglectful mothers, Wilson, Kuebli, and Hughes (2008) identified five distinct clusters based on caseworkers’ reports of maternal behaviors, with at least one cluster considered positive (“shows warmth when talking with child,” “enjoys children’s adventure,” and “plans realistically for herself and her children”). However, no comparison group was included in this study. Therefore, it is not possible to ascertain whether mothers in the positive cluster act in a similar way to that of non-neglectful mothers. Other observational studies failed to differentiate neglectful and non-neglectful mothers. Koenig, Cicchetti, and Rogosch (2000) did not find any difference during a cleanup task between neglectful, physically abusive, and non-maltreating mothers on measures of communication styles involving verbal and nonverbal control strategies and affective displays. In another study, neglectful mothers did not differ from control mothers in positive and negative behavior during a teaching task (Bennett, Sullivan, & Lewis, 2006). Taken together, the equivocal nature of these findings suggests that the relation between quality of mother–child relationship and child neglect remains unclear. Wilson, Rack, Shi, and Norris (2008) propose that the discrepancy among these divergent results may be due to differences in methodological design. In a meta-analysis addressing the nature and differences in parent–child relationship in maltreated samples, they found that neglectful mothers mostly differed from non-neglectful mothers on parenting behaviors when unstructured tasks were used (Wilson, Kuebli, & Hughes, 2005). Interestingly, this conclusion is consistent with findings from attachment studies, which show that mothers’ communicative style with their child is most apparent in the context of unstructured tasks. Madigan, Moran, and Pederson (2006) examined relations between child attachment and maternal disruptive communication behaviors in two situations: free play with toys and free play without toys. Results revealed that the highest level of disruptive communication was observed in mothers of children with disorganized attachment in the situation without toys. Similarly, Abrams, Rifkin, and Hesse (2006) found greater frequencies of maternal maladaptive parenting behavior (frightened and frightening behaviors) in a free-play session than in a structured task involving the participation of a stranger interacting with the dyad. Abrams et al. (2006) suggest that unstructured tasks may impose more stress on the parent than structured activities because it requires the parent to organize and structure the interaction without the support of external objects, goals, or rules. According to Madigan et al. (2006), unstructured tasks may represent a particularly challenging situation for vulnerable mothers because it increases “the likelihood of a collapse of their vulnerable behavioral and attentional strategies” (p. 302). This may be particularly true in the case of neglectful mothers who generally have a disengaged–withdrawn interactive style.

**Objectives of the Study**

Two research objectives were pursued in this study. The first was to assess whether child neglect is associated with PTSD symptoms in the preschool period. Because dissociation is a relevant feature of trauma-related symptomatology, a measure of dissociative symptoms was also included. The presence of PTSD and dissociative symptoms was assessed among a group of neglected and non-neglected preschoolers in two different contexts: in the home and in an extrafamilial environment (preschool centers). Although the validity of maltreating mothers’ reports has been questioned by some authors (Carr, Moretti, & Cue, 2005), mothers remain the people most likely to witness and be able to report the child’s manifestations of trauma symptoms in the context of the family. Moreover, children’s trauma symptoms related to neglect are probably more likely to be manifested in the home, considering that the situations of neglect that the child experiences generally occur in that environment. In this study, we also included preschool teachers’ reports of child trauma symptoms because they can provide valuable information on the child’s functioning and therefore they can help document a potential generalization of maltreated children’s manifestations of traumatic symptoms in an
extrafamilial context. Based on the literature addressing the issue of neglect and trauma symptomatology (De Bellis, 2005; Schuder & Lyons-Ruth, 2004; Widom, 1999), we hypothesized that child neglect would be associated with PTSD and dissociative symptoms.

The second research objective was to examine the role of quality of mother–child affective communication in the development of trauma-related symptoms among neglected children. To date, no study has specifically assessed the association between the quality of mother–child affective communication and the presence of trauma symptoms in neglected children. Based on past studies—from both maltreatment and attachment research—which have shown that unstructured contexts might be particularly well suited to the observation of dyadic parent–child communicative patterns (Abrams, Rifkin, & Hesse, 2006; Madigan et al., 2006; Wilson et al., 2008), we assessed quality of mother–child affective communication during an unstructured snack-time period. We hypothesized that child neglect would be related to a lower quality of mother–child affective communication. We also hypothesized that, as a relational process, the quality of mother–child communication would add unique contribution, over and above that of child neglect, to the prediction of child trauma-related symptoms.

Method

Participants

The initial sample was composed of 152 children: 107 non-maltreated children and 45 neglected children. The sample is from a Caucasian francophone population living in a vast region in the province of Québec, which includes both urban (medium size cities) and rural areas. For the purposes of this study, only children who were living with their mother and who also attended a preschool center or kindergarten were selected. Prior to participating, written informed consent was obtained from all mothers. Neglected children were recruited from the Child Protection Services (CPS) agencies in the Mauricie/Centre-du-Québec region and, at the time of the study, all were receiving services for child neglect. Based on the widely documented fact that the majority of neglecting families come from low socioeconomic background (e.g., Cicchetti & Valentino, 2006; Trocmé et al., 2005), non-maltreated children in this study were mostly recruited among socioeconomically disadvantaged families through divers sources: (a) official lists of families who receive social welfare; (b) preschool centers and schools; and (c) Community Health and Social Services (CHSS). In the province of Quebec, CHSS offer a wide variety of health and social services to the community, targeting primarily vulnerable and socioeconomically disadvantaged families. In the context of CHSS, if the presence of maltreatment is suspected, the family is then referred to CPS. For all the children in the non-maltreated group, mothers’ consent was obtained to establish through CPS records, if they were receiving or had ever received services from CPS agencies for child maltreatment. Nineteen children had already received such services, but all case files were closed at the time of the study. Based on previous studies that have shown that children with a closed CPS case file may differ both from children still followed by CPS agencies and from non-maltreated children (Ethier et al., 2004; Manly et al., 2001), these 19 children were removed from the sample. The decision to exclude these children was taken to optimize greater homogeneity in each group.

For children in the neglected group, information on subtypes of maltreatment experienced by the child was retrieved from CPS records (with mothers’ informed consent). Among these 45 children, 41 were neglected only, 1 was both neglected and physically abused, and 3 were both neglected and sexually abused. To assess the specific effect of child neglect on trauma symptomatology, the four neglected children victims of physical or sexual abuse were excluded from the study. In addition, considering that some neglected children might be victims of abuse undetected by CPS agencies, we asked mothers to complete the Parent–Child Conflict Tactic Scale (CTSPC; Straus, Hamby, Finkelhor, Moore, & Runyan, 1998), a questionnaire that evaluates strategies used by the adults of the household to solve conflicts with their children. The CTSPC includes items on the presence of severe physical assault (e.g., slapped him/her on the face or head or ears and hit him/her with a fist or kicked him/her hard) and sexual abuse (e.g., has your child been touched in a sexual way by an adult or older child and has he/she been forced to touch an adult or an older child in a sexual way). According to mothers’ CTSPC reports, four neglected children had a history of sexual abuse and four others had suffered physical abuse. In line with our research objective that focuses on the links between neglect and trauma symptoms, we excluded these eight children from the sample. In summary, a total of 12 neglected children (4 with CPS records of abuse and 8 with mother reports of abuse) were excluded from the study. The decision not to include these 12 children in one “abused and neglected” subgroup is based on the assumption that specific behaviors assessed by the CTSPC may not necessarily meet CPS criteria for sexual and physical abuse. Consequently, it is not possible to conclude with any kind of certainty that abuse situations identified through CPS or CTSPC reports are similar, therefore precluding combining them into one single group.

As was done for the neglected group, non-maltreating mothers were also asked to complete the CTSPC. Based on mothers’ answers to the CTSPC, 16 children were also removed from the non-neglected group because of the presence of physical or sexual abuse: 9 had been victims of severe physical assault, 6 had a history of sexual abuse, and 1 experienced both sexual abuse and severe physical assault. In summary, a total of 35 children were removed from the non-neglected group: 19 because of previous dealings with CPS (as mentioned above) and 16 because of mothers’ reports of child of physical or sexual abuse.

The final sample therefore consisted of 105 children (mean age: 60 months): 72 non-neglected children and 33 neglected children. Sociodemographic characteristics of the two groups are presented in Table 1. The two groups did not differ on...
Table 1. Sociodemographic Variables as a Function of Neglect Status

<table>
<thead>
<tr>
<th></th>
<th>Neglected Children (N = 33)</th>
<th>Non-Neglected Children (N = 72)</th>
<th>( \chi^2 ) (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>16</td>
<td>48</td>
<td>0.1</td>
</tr>
<tr>
<td>Single-mother families</td>
<td>18</td>
<td>55</td>
<td>0.8</td>
</tr>
<tr>
<td>Presence of sibling</td>
<td>27</td>
<td>81</td>
<td>2.9</td>
</tr>
<tr>
<td>Welfare</td>
<td>20</td>
<td>61</td>
<td>2.4</td>
</tr>
<tr>
<td>Annual family income (under 25,000 CND)</td>
<td>M SD</td>
<td>M SD</td>
<td>t (103)</td>
</tr>
<tr>
<td>Child's age (months)</td>
<td>61 (8.4)</td>
<td>60 (6.8)</td>
<td>0.83</td>
</tr>
<tr>
<td>Maternal education (years)</td>
<td>9.2 (2.4)</td>
<td>11.3 (2.4)</td>
<td>-4.27***</td>
</tr>
<tr>
<td>Maternal age at birth of first child</td>
<td>21.7 (4.7)</td>
<td>23.2 (5.0)</td>
<td>-1.42</td>
</tr>
</tbody>
</table>

Note. CND = Canadian dollars.
*** p < .001.

gender composition, child age, proportion of mothers on welfare, annual family income, proportion of single-mother families versus biparental families, proportion of children living with at least one sibling, and maternal age at birth of the first child. Mothers of neglected children, however, were significantly less educated than mothers of non-neglected children.

Procedure

Mother–child dyads were seen on two occasions, once at home and then in a filmed laboratory visit. Information on family sociodemographic characteristics, child trauma, and dissociative symptoms was collected during the home visit via questionnaires completed by the mother. Mother–child dyads participated in the lab visit within a month following the home visit (children’s mean age at the lab visit: 61 months [SD = 7 months]). This laboratory visit consisted of two parts. The first included different activities requiring mother and child jointly completing cognitive problem-solving tasks. These were followed by a 10-min snack-time period. During the snack-time period, no toys were provided. Mother and child received no special instructions and were left alone for the entire 10-min period. Thereafter, individual evaluation continued separately for both mother and child. During this period, the mother answered different questionnaires including the CTSPC. Meanwhile, the child completed different tests (on cognitive and emotional functioning) with a research assistant. Within a 6-month period following the lab visit, the child’s preschool teacher completed questionnaires (to be returned by mail) on his or her perception of the child’s PTSD and dissociative symptoms (children’s mean age at time of teacher assessment: 64 months [SD = 9 months]). Teachers were not informed by the research team about the maltreatment status of children (maltreated or non-maltreated). In addition, it is not a usual practice for CPS to inform teachers about a child’s referral, particularly when the child is still living with his or her family (which was the case for the children participating in this study). Therefore, most teachers, if not all, were unaware of children’s maltreatment status.

Measures

Parent-Child Conflict Tactics Scale. The CTSPC (Straus et al., 1998) is a questionnaire that measures the strategies of conflict resolution used by the adults in the home during a conflict with the child. The mother must respond to each statement and indicate how often the resolution strategy has been used during the past year choosing between the following responses: 1 (never), 2 (1 time), 3 (2 times), 4 (3 to 5 times), 5 (6 to 10 times), 6 (11 to 20 times), 7 (more than 20 times), or 8 (Not in the past year, but it did happen before that). The CTSPC includes the following scales: positive resolution, psychological aggression, corporal punishment, severe physical assault, and sexual abuse. In this study, we used the CTSPC to identify children who had been victims of at least one episode of severe physical violence or sexual abuse. As suggested by Straus et al. (1998), dichotomous scores (did abuse ever occur vs. did not ever occur) were computed for both severe physical assault and sexual abuse. Studies have demonstrated that the CTSPC is a useful instrument to identify the presence of maltreatment in the general population (Straus et al., 1998).

Trauma Symptom Checklist for Young Children (TSCYC). The TSCYC (Briere, 2001) is a 90-item questionnaire that measures the presence in young children of trauma symptoms related to experiences of abuse and trauma. In this study, we used the 27 items that make up the scales associated with the 3 main manifestations of PTSD: reexperiencing, avoidance, and hyper arousal (Diagnostic and Statistical Manual of Mental Disorders [Fourth Edition, Text Revision; DSM-IV-TR]; American Psychiatric Association, 2000). The TSCYC also yields a global score of trauma symptoms composed of the total sum of scales for reexperiencing, avoidance, and hyper arousal. In the current study, only the global score of PTSD symptoms was retained for analyses. This questionnaire was completed both by the mother and by the child’s preschool teacher who were asked to respond to each statement on a scale of 1–4, where 1 corresponds to never and 4 to always. The score obtained for the global scale was converted into a standardized score (T-scores) based on the child’s age and sex. The TSCYC possesses excellent psychometric qualities (Briere et al., 2001; Gilbert, 2004). For the current study, the internal consistency indices (Cronbach’s alpha) for the global scale were .85 and .87 for mother and preschool teacher versions, respectively.

Child Dissociative Checklist (CDC). The CDC (Putnam, Helmers, & Trickett, 1993) is a 20-item questionnaire that measures the presence of dissociative symptoms in children. Mothers and preschool teachers responded to each statement on a scale of 0–2, where 0 corresponds to never, 1 to sometimes, and 2 to often. Examples of items include “Child goes in a daze.
or trance-like state at times or often appears spaced-out;” “Child is unusually forgetful or confused about things that he or she should know.” Items are summed to obtain a total score of dissociation. The CDC validity and reliability have been established and it is considered as a valuable screening tool for the detection of pathological dissociation (Putnam & Peterson, 1994). In the current study, internal consistency for mother and preschool teacher versions were .77 and .81, respectively.

**Mother–child affective communication.** The quality of mother–child affective communication was coded from the videotaped 10-min snack-time interaction using the mother–child communication coding system developed by Moss, Rousseau, Parent, St-Laurent, and Saintonge (1998). This coding system includes 8 subscales and an overall rating scale, all ranging from 1 to 7, with higher scores considered as more optimal and scores 1 to 3 representing a dysfunctional communicative pattern. The scales capture the following aspects of mother–child affective communication: Coordination (from interaction that flows smoothly toward mutually defined goals to little or unproductive interaction); Communication (from clear verbal and nonverbal exchanges to inconsistent, incongruent patterns); Partner roles (from appropriate mother–child role assumption to pattern of role-reversal); Emotional expression (from balanced and shared expression of both positive and negative affective states to restricted or exaggerated expression); Responsivity/sensitivity (from attunement between mother and child to intrusive or ignoring response styles); Tension/relaxation (from calm, comfortable interaction to tense, anxious climate); Mood (from generally positive to negative); Pleasure (from sustained warmth and obvious pleasure to displeasure); and Overall (from high-quality affective communication [i.e., responsive, harmonious] to poor quality [i.e., indifferent or conflictual]). Dyads rated highly on the overall score are continually responsive to each other and demonstrate an authentic interest in their relationship, whereas those rated poorly are inaccessible or indifferent to each other or function in the context of discord or conflict. Coding of the 105 dyads was divided between two trained observers who were blind to any information regarding the families and research hypotheses. Each observer coded approximately half of the sample, with 20% of the sample (21 dyads) being coded by both observers for interrater reliability purposes. Intraclass correlations calculated on these 21 dyads was .87 for the overall scale and ranged from .78 to .89 for subscales. Due to (a) the high correlations between each subscale (ranging from .80 to .92) and (b) the very high correlations between the overall scale and each of the eight subscales (ranging from .89 to .94), the overall scale was retained for analyses. The validity of this coding system has been demonstrated in studies that have shown that mother–child relationship during the snack-time was linked to child attachment classification and behavior problems (Moss, Cyr, Bureau, Tarabulsy, & Dubois-Comtois, 2005; Moss et al., 1998; Moss & St-Laurent, 2001).

**Results**

**Preliminary Analyses**

Preliminary analyses were first performed to examine relations between sociodemographic and study variables to identify covariates to be included as control variables in further analyses. Zero-order correlations among sociodemographic variables and study variables are presented in Table 2. Results revealed that sex of the child was significantly correlated with teacher reports of dissociative symptoms, with boys displaying more dissociation than girls according to teachers. Age of mother at birth of first child was also linked with mother’s report of child’s PTSD symptoms, showing that mothers who had a child early in life reported more PTSD symptoms in their child. Finally, higher maternal education was related to greater quality of mother–child affective communication. On the basis of these results, covariates were included in subsequent analyses as follows: (a) age of mother at birth of first child was included in analyses performed on mothers’ reports of child’s PTSD symptoms; (b) child’s sex was included in analyses involving teachers’ reports of child dissociative symptoms; and (c) maternal education was included in analyses pertaining to the quality of mother–child affective communication.

### Table 2. Correlations Among Sociodemographic and Study Variables

<table>
<thead>
<tr>
<th>Child’s gender</th>
<th>Mother Reports of Child Dissociation</th>
<th>.15</th>
<th>-.09</th>
<th>-.03</th>
<th>-.20*</th>
<th>.07</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child’s age</td>
<td>Mother Reports of Child Dissociation</td>
<td>-.15</td>
<td>.04</td>
<td>.16</td>
<td>.13</td>
<td>.05</td>
</tr>
<tr>
<td>Mother’s age</td>
<td>Teacher Reports of Child PTSD</td>
<td>-.20*</td>
<td>-.15</td>
<td>.06</td>
<td>.08</td>
<td>.15</td>
</tr>
<tr>
<td>Single-mother</td>
<td>Teacher Reports of Child Dissociation</td>
<td>-.03</td>
<td>-.11</td>
<td>-.17</td>
<td>-.02</td>
<td>.02</td>
</tr>
<tr>
<td>Welfare</td>
<td>Maternal education</td>
<td>.06</td>
<td>-.07</td>
<td>.09</td>
<td>.10</td>
<td>-.15</td>
</tr>
<tr>
<td>Family income</td>
<td>Siblings</td>
<td>.08</td>
<td>.03</td>
<td>.04</td>
<td>-.04</td>
<td>.11</td>
</tr>
<tr>
<td>Siblings</td>
<td>Mother–Child Affective Communication</td>
<td>.18</td>
<td>.03</td>
<td>.08</td>
<td>-.07</td>
<td>-.15</td>
</tr>
</tbody>
</table>

Note. PTSD = posttraumatic stress disorder. Sex of the child: 0 = boys, 1 = girls; Single-mother families: 0 = Biparental, 1 = Monoparental; Welfare: 0 = No, 1 = Yes; Family income: 0 = under 25,000 CAD, 1 = 25,000 CAD or more; Siblings, 0 = No, 1 = Yes.

* p < .05.  
*** p < .001.
Table 3. Child Trauma-Related Symptoms and Mother–Child Communication as a Function of Neglect Status

<table>
<thead>
<tr>
<th></th>
<th>Neglected Children (n = 33)</th>
<th>Non-Neglected Children (n = 72)</th>
<th>F (df)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mother reports of child PTSD</strong>&lt;sup&gt;a&lt;/sup&gt;</td>
<td>55.5 (12.7)</td>
<td>53.6 (10.2)</td>
<td>0.6 (1,102)</td>
</tr>
<tr>
<td><strong>Mother reports of child dissociation</strong></td>
<td>4.3 (3.9)</td>
<td>4 (3.3)</td>
<td>0.7 (1,103)</td>
</tr>
<tr>
<td><strong>Teacher reports of child PTSD</strong></td>
<td>58.6 (14.5)</td>
<td>47.8 (9.9)</td>
<td>19.4 (1,103)**&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Teacher reports of child dissociation</strong>&lt;sup&gt;b&lt;/sup&gt;</td>
<td>3.9 (3.3)</td>
<td>1.9 (3.3)</td>
<td>8.4 (1,102)**&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Mother–child communication</strong>&lt;sup&gt;c&lt;/sup&gt;</td>
<td>3.1 (1.3)</td>
<td>4.1 (1.1)</td>
<td>14.7 (1,102)**&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

Note. PTSD = posttraumatic stress disorder.

<sup>a</sup> Means are adjusted for mother’s age at birth of first child, which was included as a covariate in the analysis.

<sup>b</sup> Means are adjusted for child’s gender that was included as a covariate in the analysis.

<sup>c</sup> Means are adjusted for maternal education that was included as a covariate in the analysis.

**<sup>p < .01</sup>.

***<sup>p < .001</sup>.

Between-Groups Differences on Child’s Trauma Symptoms and Quality of Mother–Child Affective Communication

Analyses of variance were performed to examine whether the neglected and the non-neglected groups differed on (a) child’s trauma-related symptoms and (b) quality of mother–child affective communication. Analyses were performed separately on mothers’ and teachers’ reports of child’s PTSD and dissociative symptoms, controlling for relevant sociodemographic variables. Results of these analyses are presented in Table 3. The two groups did not differ on mothers’ reports of child trauma symptomatology. However, significant differences emerged on teachers’ reports, with neglected children showing more PTSD and dissociative symptoms than non-neglected children. In addition, the two groups differed significantly on mother–child communication, with dyads in the neglected group displaying a poorer quality of affective communication than dyads in the non-neglected group.

Contribution of the Quality of Mother–Child Affective Communication to Child’s Trauma-Related Symptoms

Hierarchical regressions were performed to examine the specific contribution, over and above neglect, of the quality of mother–child affective communication to child’s trauma-related symptoms. Analyses were performed separately on mothers’ and teachers’ reports of child PTSD and dissociative symptoms. Neglect status and relevant control variables were entered first in the regressions, followed by quality of mother–child affective communication.

Regressions conducted on mothers’ reports of child’s PTSD and dissociative symptoms revealed no significant relations for child neglect or affective quality of mother–child communication. However, a different pattern of results emerged in hierarchical regressions conducted on teachers’ reports of child’s PTSD and dissociative symptoms. Results of regressions on teachers’ reports are presented in Table 4. The analysis on teacher-reported child’s PTSD symptoms indicated that, after having controlled for the significant contribution of child neglect, quality of mother–child affective communication significantly improved prediction, with lower quality of dyadic communication associated with more PTSD symptoms in the child. Similar results were obtained with teachers’ reports of child’s dissociative symptoms. After having entered child’s sex and child neglect, which were both significant predictors, the inclusion of mother–child affective communication in the model added significantly to the prediction, with lower dyadic communication quality associated with more dissociative symptoms in the child.

Discussion

This study is the first to examine relations between child neglect, trauma-related symptoms, and quality of mother–child affective communication. Several methodological strengths of this study merit mention. Assessment of child’s trauma symptoms was done using two distinct observers: the mother and the child’s preschool teacher. In addition, evaluation of the affective quality of mother–child communication relied on systematic observations of dyadic interactional patterns during a snack-time period. Finally, because child neglect is often associated with other types of maltreatment, special efforts were made to exclude from the sample children who were also victims of physical or sexual abuse, thus allowing for testing the unique contribution of child neglect on the development of trauma-related symptoms.

The hypothesis that child neglect is associated with trauma-related symptoms was supported by preschool teachers’ reports of trauma symptoms, with preschool teachers reporting more PTSD symptoms in the neglected group than in the non-maltreated one. To our knowledge, these results constitute the first empirical evidence that neglected preschoolers have more PTSD symptoms than non-neglected/non-maltreated preschoolers. Preschool teachers also reported more dissociative symptoms in neglected children as reported in previous studies (Éthier & Milot, 2009; Macfie et al., 2001). This study provides further evidence that the lack of an emotionally available caregiver and parental failure to attend to the child’s basic needs may constitute an interactional context sufficiently stressful...
to potentially lead to the development of trauma symptoms in the child (Schuder & Lyons-Ruth, 2004). These findings therefore lend additional support to the assumption that threats to a young child’s psychological integrity may result in trauma symptomatology. This assumption is also congruent with the results of Hulette and colleagues, which revealed no difference in level of PTSD symptomatology between sexually abused, physically abused, and neglected children (Hulette et al., 2008).

Our findings are also in line with the idea put forth by De Bellis (2005) of considering child neglect from a developmental trauma perspective. Within this perspective, child neglect is viewed as a major life stressor and a potentially traumatic situation that may strongly impair child development and functioning. Indeed, early chronic relational traumas, such as child abuse and neglect, may have deleterious consequences on the neurophysiological systems involved in stress management and risk seriously affecting the development of the child’s psychological functioning (De Bellis, 2001, 2005). The heuristic value of a traumatic stress model has already been shown in several studies, which underline the mediating role of PTSD symptoms in the relation between child maltreatment and psychosocial maladjustment (Holzer et al., 2008; Wolfe et al., 2004). A next step for future research would be to address how trauma-related symptoms may be related to specific outcomes associated with child neglect.

In our study, using an unstructured snack-time period—a common family activity—as an observational situation provided a relevant ecological context in which to evaluate affective communication of parent–child dyads from neglectful families. The hypothesis that quality of mother–child affective communication would be lower in the neglected group was supported, with partners in neglectful dyads being more indifferent, less accessible, and/or more conflictual with each other, as compared with non-neglectful dyads. This finding supports the idea that child neglect is not only a matter of not providing basic needs and effective supervision but is also indicative of maladaptive mother–child communicative patterns. Moreover, our results suggest that mother–child communication may constitute a relational process in the development of trauma-related symptoms in neglected preschoolers. Indeed, analyses showed that quality of mother–child affective communication predicted teachers’ reports of both child PTSD and dissociative symptoms, over and above the contribution of child neglect. These results are in line with other findings in the field of attachment theory, which have shown an association between infant attachment disorganization—an affective relational construct involving both mother and child—and dissociative symptoms in adolescence (Carlson, 1998). From an attachment theory perspective, the possibility for a child to express and share feelings of distress with a comforting caregiver is an important step toward the development of emotional and behavioral self-regulation and also an efficient strategy to regain some affective security. During the preschool period, partly due to the child’s growing language and perspective taking skills, the development of emotional and behavioral self-regulation becomes one of the most salient developmental challenges that preschoolers face (Cummings, Davies, & Campbell, 2000). However, in the context of neglect, the maladaptive nature of mother–child communication may create a double prejudice, for it leaves the child with little possibility of attaining affective security, because the sources of stress and comfort often reside within the same person. According to Cyr, Euser, Bakermans-Kranenburg, and van IJzendoorn (2010), the parents’ lack of interaction with the child could lead to a chronic hyperaroused attachment system, the child having no or few other possibilities to turn to for comfort. Left to his or her own resources, and faced with particularly stressful situations, it would be difficult for a neglected child to develop emotional and behavioral self-regulatory abilities. Lack of adequate self-regulation strategies may lead to the development of trauma-related symptoms. Whereas threatening situations involving physical and sexual abuse are considered important causes of PTSD symptoms in abused children, the traumatic nature of situations of child neglect more likely takes the form of parental withdrawing behaviors and psychological unavailability. An interesting research path to pursue in future studies would be to...
examine how more specific dimensions of mother–child affective communication such as maternal hostile (e.g., intrusiveness and aggressiveness) or helpless behaviors (e.g., withdrawal) might be differentially related to PTSD symptoms in abused and neglected children. Within the field of attachment research, recently developed measures of disrupted mother–child affective communication such as the Atypical Maternal Behavior Instrument for Assessment and Classification (AMBIANCE; Lyons-Ruth et al., 2005) might be particularly useful to further explore the relational mechanisms underlying the development of trauma-related symptoms in maltreated children.

Although preschool teachers reported greater trauma symptomatology in the group of neglected children, there was no significant difference between the two groups on mother’s reports of child trauma symptoms. These results may be particularly puzzling because children’s display of trauma symptoms may be more likely to occur in the home where neglect takes place. The discrepancies between mothers’ and teachers’ reports may reflect a lack of validity of data collected from neglectful mothers. A core feature of child neglect is the lack of awareness of neglectful parents toward their children’s needs. Neglectful mothers are generally less interactive, more withdrawn, and less accurate at labeling children’s emotions (Bousha & Twentyman, 1984; Burgess & Conger, 1978; Hildyard & Wolfe, 2007). Therefore, it is possible that they are less attentive and skillful at perceiving their children’s behavioral and emotional manifestations of inner thoughts and feelings. Consequently, they may underestimate and underreport their child’s psychological difficulties. The validity of maltreating mothers’ reports has also been questioned by other researchers who reported a particularly high rate of social desirability in these samples (Carr et al., 2005). In addition, past studies that have compared mothers’ and teachers’ reports of child psychosocial functioning have shown that mothers generally report higher levels of behavioral symptoms than do teachers and other professionals (see Grietens et al., 2004). In line with this general pattern, in our study, mothers in the non-neglectful group reported slightly more PTSD symptoms in their children than did teachers. However, mothers of neglected children in our study reported slightly lower levels of child PTSD symptoms than did teachers, which is contrary to the pattern of results usually observed in past studies conducted with non-maltreating mothers. It is also noteworthy that mother-reported child’s trauma symptoms were not related to the quality of mother–child affective communication. Again, this raises the question of the validity of neglectful mothers’ reports of their child’s behaviors and feelings.

Limits of the Study

A few limitations of this study should be noted. One limitation concerns the use of a cross-sectional design in assessing child neglect, trauma-related symptoms, and mother–child communication. The fact that all measures were collected within a relatively short period of time precludes any conclusions regarding the direction of effects. In future studies, the use of a longitudinal design that would include measurements at different time points could allow for the examination of mother–child affective communication as a potential mediating variable between experiences of neglect and the development of trauma symptomatology. Another limitation concerns the lack of information about the experiences of neglect that children were exposed to, such as duration, age of onset, chronicity, and severity of these experiences. The consequences of child abuse and neglect on development may vary according to the characteristics of maltreatment (Manly et al., 2001). In a study assessing the effects of childhood neglect on adolescents’ psychological functioning, Éthier and Milot (2009) observed that adolescents who had been neglected before the age of 6 showed more dissociative symptoms than those who had been neglected only during the school-age period. It is also possible that the role of mother–child communication in the development of trauma symptomatology depends on such factors as age of onset and chronicity of child neglect. An additional limitation pertains to the use of questionnaires to assess trauma symptoms in children. Although the TSCYC and the CDC have good psychometric properties, they rely primarily on the evaluator’s knowledge of the child and ability to detect traumatic behavioral manifestations. The use of a well-validated clinical interview could constitute a more sensitive measure for evaluating trauma symptoms in children.

Clinical Implications

Results of this study are particularly relevant for clinical practice. To promote better psychosocial adaptation among neglected children, it might be useful to consider child neglect from a trauma perspective. Social workers, therapists, and physicians who intervene with these families should be aware that psychosocial difficulties often seen in neglected children may be exacerbated by a very stressful family context. Our results indicate that quality of mother–child affective communication may play an important role in the development of trauma-related symptoms in neglected children. Consequently, intervention strategies should target mother–child interactional patterns as a way to both improve the quality of dyadic affective communication and provide the child with access to a supportive caregiver who can offer adequate emotional regulation to the child in the face of stressful events. In the past decade, several attachment-based interventions aimed at improving the quality of parent–child interactions have been developed (for a review, see two recent meta-analyses by Bakermans-Kranenburg, van IJzendoorn, & Juffer, 2003, 2005). In these interventions, quality of parent–child interactional patterns and parental sensitivity to the child’s emotional needs and signals are recognized as key process variables in promoting healthy psychosocial development among normal and at-risk infants, toddlers, and preschoolers. Many of these programs are primarily focused on reinforcing parental sensitive behavior and adequate interactional dyadic patterns through the use of
video feedback (e.g., Bakermans-Kranenburg, Juffer, & van IJzendoorn, 1998; Dozier et al., 2006; Moran, Pederson, & Krupka, 2005). They specifically target parent’s understanding of the child’s emotions, behaviors, and signals, and focus the parent on detecting and responding appropriately to child emotional signals. Using a randomized control trial, a recent study evaluated the efficiency of a short-term attachment-based intervention using video feedback in a sample of maltreated children aged 1 to 6 years and their mothers (Moss et al., IN PRESS). This intervention focuses equally on parent–child verbal and nonverbal affective exchanges. Results revealed that the intervention was efficient in improving both the quality of mother–child interactions and the child’s psychosocial functioning. These attachment-based interventions, which directly target parent–child interactional patterns, might prove particularly useful for improving mother–child affective communication in neglectful dyads and preventing the development of trauma-related symptoms in these children.

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