

BRIEF REPORT

Parenting Behaviors and Posttraumatic Symptoms in Relation to Children's Symptomatology Following a Traumatic Event

Kristin Valentino
University of Notre Dame

Steven Berkowitz
University of Pennsylvania

Carla Smith Stover
Yale Child Study Center

Child- and caregiver-report about parenting behaviors, and caregiver-report of their own symptoms were examined in relation to children's symptomatology following a potentially traumatic event (PTE) among 91 youth. Child-report of hostile and coercive parenting was a salient predictor of child posttraumatic stress disorder (PTSD), internalizing symptoms, and personal adjustment. Caregivers' own trauma symptoms predicted caregiver-report of child PTSD, internalizing and externalizing symptoms, but not child-reported child symptoms. Implications for assessment and intervention following exposure to a PTE are emphasized.

Exposure to trauma is a significant threat to children's physical and mental health (Boney-McCoy & Finkelhor, 1995; Campbell & Schwartz, 1996; Freeman, Mokros, & Poznanski, 1993). Following trauma exposure, caregivers play a critical role in influencing children's developmental trajectories. The current study aims to examine the extent to which parenting behaviors and current caregiver traumatic symptoms predict children's symptomatology following a potentially traumatic event (PTE).

The risk and resilience literature has identified parenting behaviors as a salient factor that affects children's developmental trajectories (Masten, 2001). Whereas supportive parenting is related to positive child outcomes, negative, hostile and coercive parenting is associated with increased risk for both internalizing and externalizing problems (Greenberg, 1999; Kim et al., 2003; Patterson, 1982). However, there is a gap in the literature regarding

the relation of parenting behaviors to the development of traumatic symptoms

Another important factor in understanding caregivers' influence on their children's symptoms may be their own symptoms following their children's exposure to a PTE. Several studies demonstrate that caregivers' own distress is independently associated with caregiver-report of child posttraumatic stress disorder (PTSD) severity (Kassam-Adams, Garcia-Espana, Miller, & Winston, 2006; Shemesh et al., 2005), and may be the single strongest predictor of parent-reported child PTSD symptoms (Daviss et al., 2000). Parental trauma symptomatology has been shown to be related to both parents underreporting (Ladakakos, 2000), and to overreporting child trauma symptoms (Kassam-Adams et al., 2006). Although it is clear caregivers' symptoms following their children's exposure to PTEs influences caregiver-reports of children's symptoms, further research is needed to clarify the nature of this relationship.

Based on the aforementioned literature, we hypothesized that (a) hostile and coercive parenting behaviors would be associated with more severe child symptoms and poorer child adjustment whereas supportive and engaged parenting behaviors would be associated with less child symptomatology and better adjustment following a PTE, and (b) caregiver posttraumatic symptoms would predict child symptoms such that higher caregiver symptomatology would be associated with greater child symptomatology based on both child- and caregiver-report.

Kristin Valentino, University of Notre Dame, Department of Psychology and Center for Children and Families; Steven Berkowitz, University of Pennsylvania, School of Medicine, Department of Psychiatry; Carla Smith Stover, Yale Child Study Center

This research was supported by funding from SAMHSA (U79 SM54318) and from NIDA (1K23DA023334-01A2). The authors would like to thank Gina Poole and Arthur Roy for their contributions to this project.

Correspondence concerning this article should be addressed to: Kristin Valentino, University of Notre Dame, 128 Haggard Hall, Notre Dame, IN 46556. E-mail: kristin.valentino@nd.edu

© 2010 International Society for Traumatic Stress Studies. Published online in Wiley InterScience (www.interscience.wiley.com). DOI: 10.1002/jts.20525

METHOD

Participants

Ninety-one youth aged 7–17 years who were exposed to a PTE and endorsed at least one symptom of posttraumatic stress disorder on the PTSD Checklist (Weathers, Litz, Herman, Huska, & Keane, 1993) within 30 days of the PTE were recruited into the Child and Family Traumatic Stress Intervention study at the Yale Child Study Center. Children were referred by police, the hospital sexual abuse program, or an emergency department to participate in a randomized trial of this early intervention developed to reduce posttraumatic symptoms following exposure to a PTE.

Data from baseline interviews for the longitudinal study were utilized. Baseline interviews occurred within 30 days of a child's exposure to a PTE. Separate interviews were conducted with each child and caregiver by trained research assistants.

Measures

The Parent Behavior Inventory Parent and Child Versions (Lovejoy, Weis, O'Hare, & Rubin, 1999) is a brief 20-item measure of parenting behavior that contains two independent scales, Supportive/Engaged and Hostile/Coercive. These scales have sufficient content validity, adequate internal consistency ($\alpha = .81$ and $.83$, respectively) and test-retest reliability (.69 and .74, respectively).

The UCLA Posttraumatic Stress Disorder Index- Parent and Child report versions (Pynoos, Rodriguez, & Sternberg, 2000) is an extensively used instrument that was used to assess posttraumatic symptomatology. The measure is among the most widely studied assessments of childhood PTSD and is correlated highly with a diagnosis of PTSD according to the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)*; American Psychiatric Association, 1994; Pynoos et al., 2000).

The Behavior Assessment System for Children, Second Edition-Self Report of Personality (Reynolds & Kamphaus, 2002) is a 139-item measure of the child's reported symptoms and behaviors in a wide variety of domains (e.g., hyperactivity, aggression, depression, adaptability, etc.). It generates *T*-scores for several scales including Internalizing and Personal Adjustment (i.e., self-reliance, self-esteem, interpersonal relationships, etc.), and has been standardized for children aged 8–18.

The Child Behavior Checklist Parent Report Form (Achenbach & Rescola, 2001) is a factor analytic-derived checklist of child behavior that is administered to parents or guardians (Achenbach & Rescola, 2001). The Child Behavior Checklist yields age- and gender-normed *T*-scores for children's internalizing, externalizing, and total behavior problems.

The PTSD Checklist-Civilian Version (Weathers et al., 1994) is a 17-item self-report questionnaire designed to assess the 17 PTSD

symptoms described in the *DSM-IV*. The total score on the PTSD Checklist was our index of PTSD symptomatology in caregivers. It has been cross-validated with the Clinician Administered PTSD Scale (Blake et al., 1995) and is considered to be a valid and reliable screening tool for PTSD (Blanchard, Jones-Alexander, Buckley, & Forneris, 1996).

RESULTS

The sample included 49 females and 42 males. The majority of caregivers were mothers (89%) with only 11 fathers (11%) participating. Youth ranged in age from 7 to 17 years ($M = 12.1$, $SD = 2.9$). The ethnic makeup of youth in the sample was 33.0% Caucasian, 37.4% African American, 18.7% Hispanic, 8.8% multiethnic or other. Youth were referred for the following traumatic events: 20.1% sexual abuse, 20.9% assault, 22.0% motor vehicle accident, 16.5% witnessing violence, 3.3% threatening (i.e., threats of physical violence during a robbery), 5.5% injury, and 4.4% animal bite. Respondent caregivers were not the perpetrators of the PTE that qualified the child for the study.

Means and standard deviations and minimum and maximum scores for child- and caregiver-report of child symptoms (UCLA PTSD Index Severity, Behavioral Assessment System for Children-2, and Child Behavior Checklist), parenting behaviors, and caregiver report of caregiver trauma symptoms (PTSD Checklist) are presented in Table 1.

Table 1. Means and Standard Deviations of Child- and Caregiver-Reported Symptoms

	<i>M</i>	<i>SD</i>
Child report		
PTSD-RI severity score	24.91	12.52
BASC-2 internalizing <i>T</i> -score	50.26	8.82
BASC-2 personal adjustment <i>T</i> -score	52.43	7.90
PBI hostile/coercive score	12.90	5.91
PBI supportive/engaged score	27.53	8.11
Caregiver report		
Child PTSD-RI severity score	20.30	11.43
Child CBCL internalizing <i>T</i> -score	59.30	9.17
Child CBCL externalizing <i>T</i> -score	59.90	10.11
PBI hostile/coercive score	12.41	5.74
PBI supportive/engaged score	33.02	6.02
PCL parent total score	36.28	14.94

Note. BASC = Behavior Assessment Scale for Children; CBCL = Child Behavior Checklist; PCL = PTSD Checklist; PBI = Parent Behavior Inventory; PTSD-RI = UCLA Posttraumatic Stress Disorder Index.

Table 2. Regressions of Age, Gender, Parenting Behaviors (PBI), and Parent PTSD Symptoms on Child-Reported Symptoms

	PTSD-RI severity		BASC-2 internalizing <i>T</i> -score		BASC-2 personal adjustment <i>T</i> -score	
	β	<i>r</i>	β	<i>r</i>	β	<i>r</i>
Age	.13	.11	-.14	-.01	.06	-.11
Gender	.13	.12	.004	.05	-.26	-.20**
PBI-hostile/coercive	.38	.35***	.50	.51***	.31	-.36***
PBI-supportive/engaged	.13	.04	-.19	-.22	.39	.36***
Parent PCL	.09	.09	.05	.002	-.15	-.07

Note. PBI = Parent Behavior Inventory; BASC-2 = Behavior Assessment System for Children 2nd Edition; PCL = PTSD Checklist; PTSD = Posttraumatic stress disorder; Overall R^2 for PTSD-RI = .18, $p < .001$; BASC-2 Internalizing = .30, $p < .001$; BASC-2 Personal Adjustment = .31, $p < .001$.
* $p < .05$ ** $p < .01$ *** $p < .001$.

Relation of Parenting Behavior and Caregiver Symptoms to Child-Reported Symptomatology

A series of simultaneous regression analyses were conducted upon child-reported PTSD severity and internalizing and personal adjustment scores (Table 2). For each analysis, child age and gender, child report of hostile/coercive and supportive/engaged parenting behaviors, and caregiver-report of caregiver symptoms (PTSD Checklist), were included.

Across all analyses child age and gender were not significant predictors of child symptoms. Hostile/coercive parenting behaviors accounted for a significant proportion of variance in predicting child-reported PTSD symptoms, internalizing symptoms, and personal adjustment. Supportive/engaged parenting was a significant predictor of personal adjustment only. Parent-reported

posttraumatic psychopathology was not a significant predictor of child-reported symptoms.

Relation of Parenting Behavior and Caregiver Symptoms to Caregiver-Reported Child Symptomatology

Parallel analyses were conducted upon parent-reported PTSD severity, and Child Behavior Checklist internalizing and externalizing *T*-scores using the same strategy described above (Table 3). Caregiver's perceptions of their own hostile and coercive parenting accounted for a significant proportion of variance in predicting child internalizing and externalizing symptoms, but not PTSD symptoms. Parent PTSD scores on the PTSD Checklist accounted for a significant proportion of variance in children's PTSD, internalizing, and externalizing *T*-scores.

Table 3. Regressions of Age, Gender, Parenting Behaviors (PBI) and Parent PTSD Symptoms on Caregiver-Reported Symptoms

	PTSD-RI severity		CBCL internalizing <i>T</i> -score		CBCL externalizing <i>T</i> -score	
	β	<i>r</i>	β	<i>r</i>	β	<i>r</i>
Age	.06	.09	-.01	.05	-.10	.003
Gender	-.16	-.16	.03	.03	.02	.02
PBI-hostile/coercive	.13	.21	.28	.34**	.15	.46***
PBI-supportive/engaged	-.06	-.04	-.07	-.09	-.17	-.18
PCL	.45	.47***	.35	.38***	.33	.37***

Note. PBI = Parent Behavior Inventory; PTSD = posttraumatic stress disorder; PCL = PTSD Checklist; PTSD-RI = UCLA PTSD Index; CBCL = Child Behavior Checklist; Overall R^2 for PTSD-RI = .27, $p < .001$; CBCL Internalizing = .23, $p < .001$; CBCL Externalizing = .34, $p < .001$.
** $p < .01$ *** $p < .001$.

Correlations of Child- and Caregiver-Reported Child Symptoms

Parent- and child-reported PTSD Severity scores were significantly (albeit poorly) correlated ($r = .29, p < .01$). Caregiver- and child-reported internalizing symptoms were not significantly related. Parent trauma symptoms were not significantly correlated with parent- or child-reported parenting on the Parent Behavior Inventory.

DISCUSSION

The results of this investigation enhance our knowledge regarding the manner through which parenting behavior, and current caregiver posttraumatic symptoms are related to child and caregiver reports of child functioning following exposure to a PTE.

Consistent with our hypotheses, hostile and coercive parenting behaviors were a strong predictor of child-reported symptoms in all domains, such that negative parenting behaviors were associated with greater PTSD and internalizing symptomatology. Supportive and engaged parenting was a strong positive predictor of child-reported adjustment. These findings augment the body of literature supporting the link between hostile and coercive parenting and both internalizing and externalizing symptoms by being the first to demonstrate that hostile and coercive parenting is specifically associated with child PTSD symptoms.

Caregiver posttraumatic symptoms following children's exposure to a PTE were generally unrelated to child self-reported symptoms. This finding advances prior research which has exclusively focused on parents' self-report of trauma symptoms in relation to parents' report of their children's symptoms. The current findings suggest that current caregiver posttraumatic symptoms do not account for a significant proportion of variance in predicting child self-reported symptoms.

In contrast, caregivers' current trauma symptoms following their children's exposure to a PTE was a strong predictor of their report of children's internalizing, externalizing, and PTSD symptoms; this finding coheres with prior studies that have demonstrated a significant association between parental distress following a PTE and their report of child symptoms (Daviss, et al., 2000; Kassam-Adams et al., 2006). Thus, caregiver-report of child symptoms is partly driven by their own traumatic reactions and symptoms. Correlations between parent and child reports of symptoms were poor suggesting caregiver-report alone may not be fully reflective of children's functioning in the context of significant caregiver symptoms posttrauma.

There are limitations of the current investigation including lack of parallel forms for assessing child and caregiver report of internalizing and externalizing symptoms and sample-size constraints

that limited examination of specific subtypes of trauma exposure in this sample that could be related to symptoms reported.

The findings of the current investigation possess important clinical implications. Given that hostile and coercive parenting behaviors are associated with greater child symptoms, interventions following a PTE that focus on increasing parental support and decreasing hostile/coercive interactions may result in reduced posttraumatic symptoms. Prospective research is necessary to clarify the strength of the relation between parenting support and child posttraumatic stress. Moreover, assessment of caregivers' symptoms will be essential in treatment planning as caregivers' own traumatic reactions are clearly related to their perceptions of their children's functioning and may impact how they respond to their children following a PTE.

REFERENCES

- Achenbach, T. M., & Rescola, L. A. (2001). *Manual for the ASEBA school-age forms and profiles*. Burlington, VT: University of Vermont Research Center for Children, Youth, and Families.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Blake, D. D., Weathers, F. W., Nagy, L. M., Kaloupek, D. G., Gusman, F. D., Charney, D. S., et al. (1995). The development of a Clinician-Administered PTSD Scale. *Journal of Traumatic Stress*, 8, 75-90.
- Blanchard, E. B., Jones-Alexander, J., Buckley, T. C., & Forneris, C. A. (1996). Psychometric properties of the PTSD Checklist (PCL). *Behavior Research and Therapy*, 34, 669-673.
- Boney-McCoy, S., & Finkelhor, D. (1995). Psychosocial sequelae of violent victimization in a national youth sample. *Journal of Consulting and Clinical Psychology*, 63, 726-736.
- Campbell, C., & Schwarz, D. F. (1996). Prevalence and impact of exposure to interpersonal violence among suburban and urban middle school students. *Pediatrics*, 98, 396-402.
- Daviss, W. B., Mooney, D., Racusin, R., Ford, J. D., Fleischer, A., & McHugo, G. J. (2000). Predicting posttraumatic stress after hospitalization for pediatric injury. *Journal of the American Academy of Child and Adolescent Psychiatry*, 39, 576-583.
- Freeman, I. N., Mokros, H., & Poznanski, E. O. (1994). Violent events reported by normal urban school-aged children: Characteristics and depression correlates. *Pediatrics*, 94, 531.
- Greenberg, M. T. (1999). Attachment and psychopathology in childhood. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 469-496). New York: Guilford Press.
- Kassam-Adams, N., Garcia-Espana, J. F., Miller, V. A., & Winston, F. (2006). Parent-child agreement regarding children's acute stress: The role of parent acute stress reactions. *Journal of the American Academy of Child and Adolescent Psychiatry*, 45, 1485-1493.
- Kim, I. J., Ge, X., Brody, G. H., Conger, R., Gibbons, F. X., & Simons, R. L. (2003). Parenting behaviors and the occurrence and co-occurrence of depressive symptoms and conduct problems among African American children. *Depression, Marriage, and Families*, 17, 571-583.
- Ladakakos, C. A. (2000). Reporting discrepancies between parent and child reports of child's posttraumatic stress symptoms in pediatric trauma patients. Unpublished doctoral dissertation, California School of Professional Psychology: Berkeley/Alameda, CA.

- wejoy, M. C., Weis, R., O'Hare, E., & Rubin, E. C. (1999). Development and initial validation of the Parent Behavior Inventory Psychological Assessment 11, 534-545
- asten, A. S. (2001). Ordinary magic: Resilience processes in development. *American Psychologist*, 56, 227-238
- erson, G. R. (1982). A social learning approach: III. Coercive family process. Eugene, OR: Castalia
- noos, R., Rodriguez, N., & Steinberg, A. (2000). PTSD Index for DSM-IV. Los Angeles, CA: University of California Los Angeles
- Reynolds, C. R., & Kamphaus, R. W. (2002). A clinician's guide to the Behavior Assessment System for Children (BASC). New York: Guilford Press
- Shemesh, E., Newcorn, J. H., Rockmore, I., Shneider, B. I., Emre, S., Gelb, B. D., et al. (2005). Comparison of parent and child reports of emotional trauma symptoms in pediatric outpatient settings. *Pediatrics*, 115, e582-e589
- Weathers, F. W., Litz, B. T., Huska, J. A., & Keane, T. M. (1994). PTSD Checklist. Boston: National Center for PTSD, Behavioral Science Division