Peritraumatic Dissociation and Peritraumatic Emotional Predictors of PTSD in Latino Youth: Results from the Hispanic Family Study

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ARTICLES

Peritraumatic Dissociation and Peritraumatic Emotional Predictors of PTSD in Latino Youth: Results from the Hispanic Family Study

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This is the first study to examine peritraumatic dissociation and peritraumatic emotions as they predict symptoms and diagnosis of posttraumatic stress disorder (PTSD) in Latino youth. Our aim was to test the hypothesis that the degree of peritraumatic dissociation would predict the number of PTSD symptoms and PTSD clinical diagnosis when the influences of other salient factors were statistically controlled. We also explored the possible contributions of peritraumatic emotional responses to PTSD symptomatology and PTSD diagnosis. We expected that peritraumatic dissociation would emerge as a significant predictor of PTSD. A total of 204 Latino youth (mean age = 12.37 years) completed semistructured individual clinical interviews with bilingual research assistants. These interviews assessed trauma exposure, peritraumatic responses, and current psychopathology. A linear regression analysis demonstrated significant relationships between lifetime number of traumatic events, peritraumatic dissociation, shame, and number of PTSD symptoms endorsed. Significant inverse (protective) relationships were demonstrated between anger and guilt and current PTSD symptomatology. Logistic regression analysis demonstrated significant relationships between peritraumatic dissociation, shame, lifetime number of traumatic events experienced, and PTSD diagnosis. The analyses examined both the number of PTSD symptoms as well as diagnosis of PTSD while simultaneously controlling for age, lifetime exposure to traumatic events, time residing in the United States, and gender. These results support an increasingly robust body of empirical literature suggesting that the peritraumatic dissociative and emotional responses to trauma are important predictors of future PTSD diagnosis. Possible cultural factors contributing to the dissociative responses in Latino youth and clinical implications are discussed.

**KEYWORDS** peritraumatic dissociation, PTSD, Latino, youth, shame
disorder (PTSD) in Latino youth. A number of studies have indicated an association between PTSD and Latino ethnicity by demonstrating either higher prevalence rates of PTSD in adult Latinos or worse severity of PTSD in adult Latinos as compared to other ethnic groups (e.g., Greenwell & Cosden, 2009; Ortega & Rosenheck, 2000; Perilla, Norris, & Lavizzo, 2002; Pole, Gone, & Kulkarni, 2008). Others have identified Latino ethnicity as a risk factor for future PTSD development (e.g., Galea et al., 2002). For example, Perilla and colleagues (2002) reported that among adults, Spanish-speaking Latinos had the highest rates of PTSD (38%) following Hurricane Andrew compared to non-Latino Caucasians (15%) and African Americans (23%). Similarly, Galea and colleagues (2002) found that Latino ethnicity was a significant predictor of PTSD and depression in a representative sample of 1,008 adults interviewed 30–60 days following the September 11 terrorist attacks.

Nonetheless, even though Pole and colleagues (2008) concluded that “the bulk of evidence indicates higher PTSD rates in [adult Latino samples]” (p. 41), the “contributing factors to trauma symptomatology among Latinos are not fully understood” (Greenwell & Cosden, 2009, p. 334). Sometimes deemed a last resort coping response and a robust predictor of PTSD development in adults (Ozer, Best, Lipsey, & Weiss, 2003), peritraumatic dissociation has also been demonstrated to significantly explain some differences in PTSD severity between Latino and non-Latino groups (Pole, Best, Metzler, & Marmar, 2005).

PERITRAUMATIC DISSOCIATION

Approximately 30% of patients recalling traumatic events report dissociative symptoms (Lanius, Bluhm, Lanius, & Pain, 2006), which may be described as the alteration of one’s conscious experiences to disengage from terrifying experiences and intense negative feelings. Types of peritraumatic dissociation include depersonalization, derealization, and temporal-spatial distortions and “involve the disruptions in and fragmentation of the usually integrated functions of consciousness, memory, identity, body awareness, and perception of the self and environment” (Lanius et al., 2010, p. 640).

Peritraumatic dissociative symptoms have been recognized as a predictor PTSD in adults (Lanius et al., 2010), and several studies have demonstrated that peritraumatic dissociation predicts PTSD symptoms in such diverse samples as male Vietnam veterans (Marmar et al., 1994), Canadian police officers (Martin, Marchand, Boyer, & Martin, 2009), a non-clinical sample of college students (Bernat, Ronfeldt, Calhoun, & Arias, 1998), and adult survivors of child physical and child sexual abuse (Hetzel & McCanne, 2005). Furthermore, with a sample of 189 Latino, 317 non-Latino Caucasian, and 162 non-Latino Black police officers, Pole
and colleagues (2005) demonstrated that peritraumatic dissociation significantly explained differences in PTSD severity between Latino and non-Latino groups, highlighting the role of peritraumatic dissociation in Latino groups. Specifically, Pole and colleagues (2005) reported that “peritraumatic dissociation, greater wishful thinking and self-blame coping, lower social support, and greater perceived racism were important variables in explaining the elevated PTSD symptoms among Hispanics” (p. 144). Unfortunately, these variables have not been studied in Latino youth.

Despite extensive research examining the relation between peritraumatic dissociation and later PTSD symptoms in adults, studies of youth are scarce and have produced inconsistent results; studies of Latino youth are nonexistent. In a study examining PTSD in sexually abused children, Kaplow, Dodge, Amaya-Jackson, and Saxe (2005) conducted path analyses that indicated that dissociative symptoms measured around the time of disclosure served as one of three direct paths to PTSD symptoms. Path analyses conducted by Saxe et al. (2005) in a study with pediatric burn patients also showed a direct path between the size of the burn, acute dissociation at the time of the burn, and PTSD. Furthermore, in a prospective study, Schäfer, Barkmann, Riedesser, and Schulte-Markwort (2004) found that peritraumatic dissociation accounted for 33% of the variance in PTSD symptoms reported by a sample of children and adolescents 3 months after a road traffic accident.

Conversely, in their investigation of the relation of peritraumatic emotional distress and dissociation to posttraumatic stress symptoms in school-age children who had experienced motor vehicle accidents, Bui et al. (2010) revealed that peritraumatic distress predicted PTSD 5 weeks post-accident while peritraumatic dissociation did not. This finding is similar to that of Daviss and colleagues (2000), who examined predictors of PTSD in children hospitalized because of accidental injuries. Their analyses showed that parents’ and nurses’ ratings of children’s dissociative symptoms were not associated with child-reported symptoms of PTSD at a 1-month follow-up.

CRITICISM OF LINKING PERITRAUMATIC DISSOCIATION TO PTSD

At least three meta-analyses have been performed in response to criticism of a lack of methodological consistency across studies finding links between PTSD and peritraumatic dissociation in adult samples (e.g., Candel & Merckelbach, 2004; Holeva & Tarrier, 2001). Ozer et al. (2003) conducted a meta-analysis of 68 empirical studies spanning from 1988 to the time of their study in order to determine the role of dissociation in predicting PTSD in adults. They concluded, “After accounting for general adjustment and general
dissociative experiences, peritraumatic dissociative experiences remained a significant predictor of PTSD” (p. 69), with the strength of the relationship being in small to moderate range ($r \approx .35$).

A more recent meta-analysis (Lensvelt-Mulders et al., 2008) similarly reported that for adults there exists a “robust significant and relevant relationship between peritraumatic dissociation and the development of posttraumatic stress symptoms” (p. 1145). This meta-analysis coded for numerous methodological and theoretical variables and concluded that differences in methodological rigor between studies “significantly and sufficiently explained the variability of effect sizes between studies” (p. 1145) but did not erase the significant positive relation between peritraumatic dissociation and posttraumatic stress symptoms, with the overall across-study association being $r = .40$, which was similar to Ozer and colleagues’ (2003) estimates. Lensvelt-Mulders et al.’s (2008) meta-analysis included the newer research of Briere, Scott, and Weathers (2005), which showed that the link between peritraumatic dissociation and PTSD disappeared after persistent dissociation was included in their analyses. Nonetheless, Lensvelt-Mulders and colleagues reported that retrospective perceptions of peritraumatic dissociation may not be as unreliable or distorted as presumed by some critiques (e.g., Candel & Merckelbach, 2004).

Breh and Seidler (2007) provided clarifying meta-analyses, making a distinction between researchers’ consideration of peritraumatic dissociation as a correlate of PTSD (which can be demonstrated by retrospective studies) and peritraumatic dissociation as a risk factor (which can be more appropriately supported by quasi-prospective studies). Examining the average effect sizes from all selected studies, then dividing studies into quasi-prospective and retrospective study sets, their meta-analyses demonstrated significant medium effect sizes that were nearly identical (i.e., $rs = .36$, .35, and .37, respectively), suggesting “that study design (quasi-prospective vs. retrospective) has no impact on magnitude of effect size” (Breh & Seidler, 2007, p. 61). Breh and Seidler’s conclusions stand in harmony with Lensvelt-Mulders and colleagues’ (2008) later findings: Data drawn from retrospective perceptions of peritraumatic dissociation may not be as unreliable or distorted as presumed in comparison to data gathered from quasi-prospective designs. Furthermore, Breh and Seidler stressed the identification of peritraumatic dissociation as a risk factor and not a mere correlate of PTSD in order to make earlier treatment for dissociative symptoms possible and prevent “chronification of disorder” (p. 61).

The robust relationship between peritraumatic dissociation and PTSD symptomatology found in studies on adults as well as the inconsistent findings for youth suggest the prudence of investigating peritraumatic dissociative symptoms in Latino youth (Brewin, Andrews, & Rose, 2000), because despite advances in the understanding of the etiology of PTSD, this topic remains sorely understudied in this population. Thus, the current study
attempts to elucidate the link between peritraumatic responses and PTSD in a sample of Latino youth.

PRESENT STUDY

This study examined the impact of an array of peritraumatic emotional responses, including dissociative symptoms, on subsequent endorsement of PTSD symptomatology. We examined both the number of PTSD symptoms as well as the clinical diagnosis of PTSD while simultaneously controlling for lifetime exposure to traumatic events, time residing in the United States, and gender. Our aim was to test the hypothesis that the degree of peritraumatic dissociation would be predictive of the number of PTSD symptoms as well as PTSD clinical diagnosis when the influences of other salient factors were statistically controlled. We expected that peritraumatic dissociation would continue to emerge as a significant predictor of PTSD symptomatology. In addition, we explored the possible contributions of peritraumatic emotional responses to PTSD symptomatology and PTSD clinical diagnosis.

METHOD

Participants

Two hundred and four participants were recruited for and participated in the Hispanic Family Study (see de Arellano, Danielson, Rheingold, & Bridges, 2006), and all study procedures were approved by the institutional review board of the Medical University of South Carolina. A total of 204 Latino youth were recruited for the Hispanic Family Study through paper and in-person solicitations by trained research assistants. Recruitment and the informed consent processes took place in schools, primary care medical centers, community mental health clinics, and churches that served rural Latino communities. Inclusion criteria were age between 8 and 17 years and self-identification of Latino ethnic descent. Participants were interviewed at the recruitment location or in their homes. Each participant received $25 cash compensation for enrolling in the study. For a more detailed description of the sampling procedures, see Bridges, de Arellano, Rheingold, Danielson, and Silcott (2010).

Procedures

Participants were interviewed by bilingual assistants who received extensive training (including videotaped supervision and review of mock Spanish/English interview protocol administrations by the principal investigator) prior to data collection. High fidelity to interview protocol (>80%)
was required. Interviews were adapted from the structured interviews utilized in the National Survey of Adolescents (see Kilpatrick et al., 2000) and the Navy Family Study (Saunders, Williams, Smith, & Hanson, 2005) and were conducted one on one with the participants. Informed consent was obtained from the caregiver and assent was obtained from the child. The interviewer explained the purpose of the interview and the sensitive nature of the questions and provided information about psychiatric and medical services available to the family following the interview. No adverse events were reported.

Measures

**Demographic characteristics.** Participants were asked their age in years, their country of origin, their number of siblings, the number of adults living in their home, their frequency of contact with their biological parents, and their grade in school. For immigrant youth the number of years residing in the United States was assessed.

**Trauma exposure.** Youth were asked behaviorally specific interview questions about exposure to witnessing community violence, witnessing domestic violence, child physical abuse (perpetrated by caregivers), child sexual abuse, and physical assault (perpetrated by non-caregivers). Other types of trauma exposure were assessed (e.g., natural disasters, car accidents, immigration trauma) but were not the focus of this study. These responses were coded dichotomously (1 = present, 0 = absent). For example, in the assessment of exposure to community violence the youth were asked whether they had ever “seen someone threaten another person with a knife or a gun in real life, not on television or in a movie.” Following an affirmative response for exposure to each type of traumatic event, participants were asked about the identities of the perpetrator(s) and victim(s), the approximate date/location of the event, the infliction of physical injuries, whether the event was reported to police, whether they themselves feared for their own safety, and how many times they had experienced that particular event.

**Trauma-related sequelae.** Although a number of potential trauma-related problems were assessed, including symptoms and the diagnostic status of major depressive disorder, PTSD, alcohol and illicit drug use, and commission of delinquent behaviors, the current study examined both the diagnosis of PTSD and the endorsement of PTSD symptoms. PTSD and trauma-related sequelae were assessed using a modified version of the National Women’s Study PTSD Module (Kilpatrick, Resnick, Saunders, & Best, 1998), which assessed each Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (American Psychiatric Association, 1994) criterion with a yes/no response for the 6-month period prior to the interview. Data support the construct validity, temporal stability, reliability of administration and diagnosis, and other psychometrics of the National Women’s Study.
PTSD Module (e.g., Kilpatrick et al., 1998; Ruggiero, Rheingold, Resnick, Kilpatrick, & Galea, 2006).

**Peritraumatic emotional responses.** Via clinical diagnostic semistructured interviews adapted from the National Survey of Adolescents (see Kilpatrick et al., 2000) and the Navy Family Study (Saunders et al., 2005), the current study assessed to what extent participants felt specific emotional responses during each traumatic event as endorsed from 0 to 4, with 4 being extremely severe and 0 being not present at all. The emotional responses surveyed included fear of severe injury or death during experiences of witnessing community violence, witnessing domestic violence, child physical abuse, child sexual abuse, and physical assault. Peritraumatic emotional response predictor variables included surprise/shock, helplessness, anger, disgust, fear of going crazy or losing control of emotions, sadness, guilt, violation of trust, and embarrassment/shame. The extent of peritraumatic dissociation (e.g., the extent to which the participant felt that the traumatic events were not actually happening, detachment from feelings and emotional numbing, confusion/disorientation as to time or place, and a strong sensation that the trauma was being experienced in a dream) was assessed similarly. Physical numbing of limbs or body parts was also included in the assessment of peritraumatic dissociation (see Haven, 2009, for increasing consensus of integrating physical/body or physio-dissociative symptoms in the assessment and treatment of trauma-related dissociative symptoms). Thus, similar to Ginzburg et al. (2006), we combined all peritraumatic dissociative items into one dissociative variable score. Reliability analyses indicated an acceptable Cronbach’s alpha coefficient for the dissociative variable ($\alpha = .703$) after all peritraumatic dissociative items were combined.

**Statistical Analyses**

Preliminary correlational analyses performed between the predictor variables revealed no evidence of multicollinearity (defined as a .90 correlation or greater) among the predictor variables (Tabachnick & Fidell, 2001). A single linear regression analysis was conducted to identify predictors of the number of PTSD symptoms reported by Latino youth, including demographic variables. All variables were run simultaneously. A stepwise (forward) logistic regression analysis using the likelihood ratio (LR) statistic in SPSS PASW Version 18.0 was conducted to predict the diagnosis of PTSD, first from the experience of their first or only traumatic events (i.e., child sexual or physical abuse, witnessing domestic or community violence, or being a victim of violent physical assault); then after the inclusion of demographic variables (i.e., youth sex, number of months living in the United States, and lifetime number of trauma); then after inclusion of the participants’ experiences of any intense fear of severe injury or death during any of these traumatic events; and, lastly after the inclusion of peritraumatic emotional responses,
including peritraumatic dissociation. A stringent criterion for the inclusion of a variable within the logistic regression model of predictors of .05 was set, which is reasonable for exploratory studies, even though a less stringent criterion of .15 or .20 has been noted as acceptable (see Hosmer & Lemeshow, 2000). Because more than half of the participants endorsed only one major traumatic event, and in an effort to avoid attenuation of sample size, only the recalled emotional responses for the first or only traumatic event were considered in the analyses.

RESULTS

Sample Characteristics and Trauma Prevalence Estimates

Descriptive data for exposure to violence and PTSD symptoms are presented in Table 1. The sample was fairly evenly split between boys (n = 111, 54.41%) and girls (n = 93, 45.59%). Ages ranged from 8 to 17 years, with an average age of 12.37 years (SD = 2.49). Approximately two thirds of the Latino youth participants (n = 131, 64.5%) had been born in another country, with Mexico being the participants’ primary country of origin (90.8% of immigrant youth). The average length of time in the United States for immigrant youth was 4.53 years (SD = 3.19). Of the immigrant youth, 47.3% were interviewed in Spanish, compared to 9.7% of the U.S.-born youth. As Bridges et al. (2010) indicated no differences in PTSD rates between U.S.- and foreign-born youth, we did not treat these groups differently.

Data related to age at onset and time elapsed since first trauma exposure (until the clinical interview) are provided in Table 2. Although there were significant group differences between those experiencing single versus multiple types of trauma for the variables of age at onset and time elapsed since first trauma, $F(1, 122) = 9.70, p = .002$, and $F(1, 122) = 14.98, p = .000$, respectively, neither age at onset nor time elapsed were significantly correlated

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trauma exposure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Witnessed community violence</td>
<td>111</td>
<td>54.41</td>
</tr>
<tr>
<td>Witnessed domestic violence</td>
<td>30</td>
<td>14.71</td>
</tr>
<tr>
<td>Child physical abuse</td>
<td>75</td>
<td>36.76</td>
</tr>
<tr>
<td>Physical assault</td>
<td>44</td>
<td>21.57</td>
</tr>
<tr>
<td>Child sexual abuse</td>
<td>10</td>
<td>4.90</td>
</tr>
<tr>
<td>More than one type of trauma</td>
<td>96</td>
<td>47.1</td>
</tr>
<tr>
<td>PTSD symptom endorsement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>At least three symptoms</td>
<td>53</td>
<td>33.97</td>
</tr>
<tr>
<td>Met full diagnostic criteria</td>
<td>18</td>
<td>16.22</td>
</tr>
</tbody>
</table>

*Notes: PTSD = posttraumatic stress disorder.*
TABLE 2 Age at Onset and Time Elapsed Since First Trauma

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age at onset (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Youth experiencing single trauma type</td>
<td>8.81</td>
<td>2.95</td>
</tr>
<tr>
<td>Youth experiencing multiple trauma types</td>
<td>6.89</td>
<td>3.01</td>
</tr>
<tr>
<td>Time elapsed (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Youth experiencing single trauma type</td>
<td>3.54</td>
<td>2.90</td>
</tr>
<tr>
<td>Youth experiencing multiple trauma types</td>
<td>6.17</td>
<td>3.70</td>
</tr>
</tbody>
</table>

with peritraumatic emotional and dissociative symptoms. These results suggested no linear relationship between age at onset or time elapsed since first trauma and recall of peritraumatic emotional and dissociative symptoms. There were no significant differences between the immigrant and U.S.-born participants on any of the demographic variables measured, including number of siblings, number of adults living in the home, frequency of contact with biological parents, or grade in school. As no differences were indicated, these variables were not included in further analyses.

PTSD Predictors

A linear regression analysis indicated that several variables significantly predicted the number of PTSD symptoms reported (see Table 3), including experience of child physical abuse, lifetime number of traumatic events, peritraumatic dissociation, and shame. Two peritraumatic emotional responses appeared to be inversely related to the number of reported PTSD symptoms: anger and guilt. Logistic regression analyses similarly indicated that lifetime number of traumatic events, peritraumatic dissociation, and the experience of shame were significant contributors to formal PTSD diagnosis (see Table 4; only the final model is shown because of space constraints). It is notable that those who experienced peritraumatic dissociation were more than twice as likely to be diagnosed with PTSD. In sum, these results are consistent with research suggesting that a dissociative response is related to higher PTSD symptoms in Latino youth who have experienced a traumatic event.

DISCUSSION

The present study explored the relationship between peritraumatic emotional responses, particularly peritraumatic dissociation, and development of PTSD symptoms and PTSD diagnosis in Latino youth while controlling for demographic variables.

Consistent with prior research findings for adults and children across ethnic groups, the results indicated that experiences of child physical abuse
TABLE 3  Linear Regression of Exposure Variables and Peritraumatic Emotional Responses on PTSD Symptoms (N = 204)

<table>
<thead>
<tr>
<th>Predictor variable</th>
<th>B</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child sexual abuse</td>
<td>0.07</td>
<td>1.01</td>
</tr>
<tr>
<td>Child physical abuse</td>
<td>1.10*</td>
<td>0.53</td>
</tr>
<tr>
<td>Physical assault</td>
<td>0.24</td>
<td>0.63</td>
</tr>
<tr>
<td>Witnessed domestic violence</td>
<td>0.67*</td>
<td>0.77</td>
</tr>
<tr>
<td>Witnessed community violence</td>
<td>0.20</td>
<td>0.47</td>
</tr>
<tr>
<td>Intense fear of severe injury or death at any event</td>
<td>0.76</td>
<td>0.49</td>
</tr>
<tr>
<td>Sex</td>
<td>0.26</td>
<td>0.11</td>
</tr>
<tr>
<td>Age</td>
<td>0.04</td>
<td>0.09</td>
</tr>
<tr>
<td>Months living in the United States</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Lifetime number of traumatic events</td>
<td>0.35*</td>
<td>0.13</td>
</tr>
<tr>
<td>Peritraumatic dissociation</td>
<td>1.71**</td>
<td>0.59</td>
</tr>
<tr>
<td>Shock</td>
<td>-0.09</td>
<td>0.29</td>
</tr>
<tr>
<td>Helplessness</td>
<td>0.32</td>
<td>0.31</td>
</tr>
<tr>
<td>Anger</td>
<td>-0.64*</td>
<td>0.03</td>
</tr>
<tr>
<td>Disgust</td>
<td>-0.29</td>
<td>0.35</td>
</tr>
<tr>
<td>Loss of emotional control</td>
<td>0.88</td>
<td>0.36</td>
</tr>
<tr>
<td>Guilt</td>
<td>-0.73*</td>
<td>0.31</td>
</tr>
<tr>
<td>Violation of trust</td>
<td>0.38</td>
<td>0.37</td>
</tr>
<tr>
<td>Sadness</td>
<td>0.29</td>
<td>0.36</td>
</tr>
<tr>
<td>Shame</td>
<td>0.89**</td>
<td>0.32</td>
</tr>
</tbody>
</table>

Notes: PTSD = posttraumatic stress disorder.
*p < .05.
**p < .01.

TABLE 4  Logistic Regression of Exposure Variables and Peritraumatic Emotional Responses on PTSD Diagnosis (N = 204)

<table>
<thead>
<tr>
<th>Predictor variable</th>
<th>B</th>
<th>SE</th>
<th>Odds ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child sexual abuse</td>
<td>.49</td>
<td>.84</td>
<td>1.64</td>
</tr>
<tr>
<td>Physical assault</td>
<td>.41</td>
<td>.57</td>
<td>1.51</td>
</tr>
<tr>
<td>Witnessed domestic violence</td>
<td>.58</td>
<td>.70</td>
<td>0.56</td>
</tr>
<tr>
<td>Sex</td>
<td>.65</td>
<td>.49</td>
<td>1.92</td>
</tr>
<tr>
<td>Months living in the United States</td>
<td>.00</td>
<td>.00</td>
<td>0.99</td>
</tr>
<tr>
<td>Lifetime number of traumatic events</td>
<td>.32</td>
<td>.12</td>
<td>1.38**</td>
</tr>
<tr>
<td>Intense fear or horror at any event</td>
<td>.03</td>
<td>.58</td>
<td>0.97</td>
</tr>
<tr>
<td>Peritraumatic dissociation</td>
<td>.92</td>
<td>.37</td>
<td>2.51*</td>
</tr>
<tr>
<td>Shame</td>
<td>.67</td>
<td>.26</td>
<td>1.94*</td>
</tr>
</tbody>
</table>

Notes: PTSD = posttraumatic stress disorder.
*p < .05.
**p < .01.

(Deblinger & Runyon, 2005), lifetime number of traumatic events (Brewin et al., 2000), shame (Feiring, Taska, & Chen, 2002; Feiring, Taska, & Lewis, 1998; Matos & Pinto-Gouveia, 2010), and peritraumatic dissociation (Lensvelt-Mulders et al., 2008; Ozer et al., 2003) were significant predictors of greater PTSD symptoms, with peritraumatic dissociation emerging as the single best
predictor. Anger and guilt emerged as protective factors: Youth reporting
greater levels of anger and guilt also endorsed fewer symptoms of PTSD. This
is consistent with prior research suggesting that anger may be a way to regain
“control over their life” (Stuewig & McCloskey, 2005, p. 326). Furthermore,
several studies have indicated that because guilt is a behavior-oriented
negative emotion versus a more global, person-oriented emotion such as
shame (Stuewig & McCloskey, 2005), guilt may be protective against various
forms of psychopathology, productive, and useful for motivating individ-
uals to focus on improving themselves and their behaviors (Deblinger &
Runyon, 2005; Stuewig & McCloskey, 2005). These findings further support
prior research indicating that assessing the contribution of specific emotional
responses is distinct from assessing the level of general arousal (Brewin et al.,
2000) and that peritraumatic emotional responses play important roles in the
prediction of future PTSD (Lawyer et al., 2006).

Similarly, the lifetime number of traumatic events, peritraumatic shame,
and peritraumatic dissociation emerged as the only significant predictors of
PTSD diagnosis in our logistic regression analyses. Latino youth who expe-
rienced intense shame were almost 2 times more likely to be diagnosed
with PTSD than those who did not, and those experiencing dissociation
were 2.5 times more likely to be diagnosed with PTSD, making shame and
dissociation the most robust overall predictors of PTSD diagnosis. The link
between shame and PTSD found in this study echoes prior studies indicating
long-term associations between shame and future significant levels of PTSD
symptoms (Feiring et al., 2002), possibly because shame may serve as such
a dire threat to the perception of global self-worth that it motivates chil-
dren to avoid memories of the abuse rather than engage in healthy emotion
processing (Feiring & Taska, 2005).

Clinical Implications

The present study supports the importance of considering peritraumatic
emotional and dissociative responses (Feiring et al., 2002) to events as just
as significant as the events themselves. Furthermore, the therapist’s assess-
ment of the meaning of the event to the child and the family must include
coping style and cultural factors (Deblinger & Runyon, 2005). These study
results highlight the need for therapists to utilize effective treatments that
include restructuring negative self-evaluative thoughts that feed into feelings
of shame, such as child trauma-focused cognitive behavior therapy (Cohen,
Mannarino, Berliner, & Deblinger, 2000; Deblinger & Runyon, 2005).

The influence of Latino cultural factors (e.g., mariánismo, machismo,
fatalismo) may need to be given special consideration in trauma-focused
cognitive behavior therapy because of the possible relationships of these
factors to the increasingly robust predictors of PTSD in Latino youth:
dissociation and shame. Rivera (2008) and others have highlighted the fact
that Hispanic cultural views that may broadly impact the development and
manifestation of PTSD symptoms, including *familismo* (the preeminence given to familial needs over individual needs), *machismo* (a man’s responsibility to protect and provide for his family and the expectation of deference from women and children), *marianismo* (the expectation that women and girls maintain their sexual purity and self-sacrificial attitudes), and *fatalismo* (the belief that adversity is sent by God and should be endured). Research with Latino adults has pointed to how the relationship between coping style and *fatalismo* may contribute to the development of PTSD through increasing the use of passive coping mechanisms (e.g., self-blame) among Latinos compared to other ethnocultural groups (Perilla et al., 2002; Pole et al., 2005, 2008) or lowering overall coping effort (Perilla et al., 2002). Peritraumatic dissociation may also be increased by a fatalistic mindset (Greenwell & Cosden, 2009). Although Greenwell and Cosden (2009) did not find a relationship between *fatalismo* and peritraumatic dissociation in Latinos, they noted a need for an in-depth assessment of trauma history, immigration status, and other cultural variables, as this area has not been well studied.

Limitations and Future Research

Methodological limitations of this study include the use of a convenience sample (Kilpatrick et al., 2003) and retrospective self-report data that may have been vulnerable to recall biases, although the current results and others suggest that the use of retrospective self-report data is not necessarily problematic in this area of study (Breh & Seidler, 2007; Lensevelt-Mulders et al., 2008). Another limitation is the disparate number of participants endorsing certain types of trauma (e.g., child sexual abuse). Furthermore, parental emotional availability and encouragement of youth to talk about traumatic experiences were not assessed, although they have been shown to reduce youth distress following victimization (Kliwer, Lepore, Oskin, & Johnson, 1998; Overstreet, Dempsey, Graham, & Moely, 1999). Therefore, future studies should include parental responses to traumatic events as important components of both dissociative and shame-based peritraumatic symptoms and subsequent PTSD development. In order to better inform treatment modalities used with Latino youth, other avenues of future research include studying the relationship between Latino cultural constructs (e.g., *fatalismo*, *marianismo*) and acculturation to maladaptive coping responses, development of symptomatology, and predictors of psychopathology (e.g., peritraumatic emotional and dissociative responses to trauma) in Latino youth.

REFERENCES


