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Peritraumatic dissociation and peritraumatic emotional predictors of PTSD in Latino Youth: Results from the Hispanic Family Study

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Abstract

This is the first study to examine peritraumatic dissociation and peritraumatic emotions as they predict PTSD symptoms and diagnosis in Latino youth. Our aim was to test the hypothesis that degree of peritraumatic dissociation would predict of 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

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as a significant predictor of PTSD. A total of 204 Latino youth (mean age = 12.37) completed semi-structured, 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 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

This is the first study to examine peritraumatic dissociation and peritraumatic emotions as they predict PTSD symptoms and diagnosis in Latino youth. A number of studies have indicated an association between PTSD and Latino ethnicity by either demonstrating 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, Ahern, Resnick, Kilpatrick, Bucuvalas, Gold, & Vlahov, 2002). For example, Perilla and colleagues (2002) reported that among adults, Spanish-speaking Latinos had the highest rates of PTSD (38%), following Hurricane Andrew as 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 September 11 terrorist attacks.

Nonetheless, even though Pole and colleagues (2008) concluded that in adult Latino samples “the bulk of evidence indicates higher PTSD rates in this group” (Pole, Gone, & Kulkarni, 2008, 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 et al., 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, Vermetten, Loewenstein, Brand, Schmahl, Bremner, & Spiegel, 2010, p. 640).

Peritraumatic dissociative symptoms have been recognized as a predictor PTSD in adults (Lanius et al. 2010), and several studies have demonstrated peritraumatic dissociation as a predictor of PTSD symptoms in such diverse samples as male Vietnam veterans (Marmar, Weiss, Schlenger, Fairbank, Jordan, Kulka, & Hough, 1994), Canadian police officers (Martin, Marchand, Boyer, & Martin, 2009), a non-clinical sample of college students (Bernat, Ronfeldt, Calhoun, & Arias, 1998), and in adult survivors of child physical and child sexual abuse (Hetzel & McCanne, 2005). Further, 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 (Pole et al., 2005), highlighting the role of peritraumatic dissociation in Latino groups. Specifically, Pole and colleagues (2005, p. 144) 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.” 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 in youth are scarce and have produced inconsistent results; studies in Latino youth are nonexistent. In a study examining PTSD in sexually abused children, Kaplow and colleagues (2005) conducted path analyses which indicated that dissociative symptoms measured around the time of disclosure served as one of three direct paths to PTSD symptoms. Results of path analyses conducted by Saxe, Stoddard, Hall, Chawla, Lopez, Sheridan, King, King, and Yehuda (2005) in a study with pediatric burn patients also found a direct path between size of burn, acute dissociation at time of burn, and PTSD. Further, in a prospective study, Schäfer, Barkmann, Riedesser, and Schulte-Markwort (2004) found that peritraumatic dissociation accounted for 33 percent of the variance in PTSD symptoms reported by a sample of children and adolescents three 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-aged children who had experienced motor vehicle accidents, Bui et al. (2010) revealed that peritraumatic distress predicted PTSD five weeks post-accident while peritraumatic dissociation did not. This finding is similar to that of Daviss and colleagues who examined predictors of PTSD in children hospitalized due to accidental injuries (Daviss et al., 2000). Their analyses showed that parents’ and nurses’ ratings of children’s dissociative symptoms were not associated with child reported symptoms of PTSD at a one-month follow-up.

Criticism of Linking Peritraumatic Dissociation to PTSD

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 and Merckelbach, 2004; Holeva and Tarrier, 2001), at least three meta-analyses have been performed. Ozer, Best, Lipsey and Weiss (2003) conducted a meta-analysis of 68 empirical studies spanning from 1988 to time of their study in order to determine the role of dissociation in predicting PTSD in adults and concluded, “After accounting for general adjustment and general dissociative experiences, peritraumatic dissociative experiences remained a significant predictor of PTSD” (Ozer et al., 2003, p. 69) with the strength of relationship being in small to moderate range ($r \approx .35$).

A more recent meta-analysis (Lensvelt-Mulders, van der Hart, van Ochten, van Son, Steele, & Breeman, 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” but did not erase the significant positive relation between peritraumatic dissociation and posttraumatic stress symptoms with the overall across study association being $r = .40$ (p. 1145), which was similar to Ozer and colleagues’ (2003) estimates. Lensvelt-Mulders’ et al. (2008) meta-analyses included newer research of Briere, Scott, and Weathers (2005), which had shown that the link between peritraumatic dissociation and PTSD disappeared after persistent dissociation was included in their analyses. Nonetheless, Lensvelt-Mulders and colleagues (2008) 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 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, the latter claim more appropriately supported by quasi-prospective studies. Examining the average effect sizes from all selected studies, then dividing studies into quasi-prospective and retrospective studies sets, their meta-analyses demonstrated significant, medium effect sizes that were nearly identical (i.e., $r_s = .36, .35$, 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 (2007) 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. Further, Breh and Seidler (2007) stressed the identification of peritraumatic dissociation as a “risk factor” and not 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 the studies on adults as well as the inconsistent findings with youth suggest the

prudence of investigating peritraumatic dissociative symptoms in Latino youth (Brewin et al., 2000), because despite advances in our understanding of the etiology of PTSD, it 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 number of PTSD symptoms, as well as 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 degree of peritraumatic dissociation would be predictive of 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 and participated in the Hispanic Family Study (HFS; 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 HFS 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 study enrollment. For a more detailed description of 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 principle 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; country of origin; number of siblings; number of adults living in the home; frequency of contact with biological parents; and grade in school. For immigrant youth 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 trauma exposure types were assessed (e.g., natural disasters, car accidents, immigration trauma) but were not the focus of this study. These responses were dichotomously coded (1 = present, 0 = absent). For example, when assessing community violence exposure the youth were asked whether or not 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 or not the child feared for his/her 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 diagnostic status of major depressive disorder, PTSD, alcohol and illicit drug usage, 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, 1989), 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 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 semi-structured interviews adapted from National Survey of Adolescents (see Kilpatrick et al., 2000) and the Navy Family Study (Saunders, Williams, Smith, & Hanson, 2005) the current study assessed to what extent participants felt specific emotional responses during each trauma event endorsed from 0 to 4 with 4 being an extremely severe reaction 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. Extent of peritraumatic dissociation was assessed similarly, e.g., extent that 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. Physical numbing of limbs or body parts was also included in assessment of peritraumatic dissociation (see Haven, 2009 for increasing consensus of integrating physical/body or physio-dissociative symptoms in assessment and treatment of trauma-related dissociative symptoms). Thus, similar to what was done by Ginzburg, Koopman, Butler, Palesh, Kraemer, Classen, & Spiegel (2006), all peritraumatic dissociative items were combined into one dissociative variable score. Reliability analyses indicated a Cronbach's alpha coefficient for the dissociative variable at an acceptable level, $\alpha = .703$ after all peritraumatic dissociative items were combined.

Statistical Analyses

Preliminary correlational analyses performed between predictor variables revealed no evidence for multicollinearity (defined as a .90 correlation or above) among predictor variables (Tabachnik & Fidell, 2001, p. 84). A single linear regression analysis was conducted to identify predictors of 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 inclusion of demographic variables (i.e., youth sex, number of months living in U.S. and lifetime number of trauma), experience of any intense fear of severe injury or death during any of these traumatic events, and lastly after inclusion of peritraumatic emotional responses, including peritraumatic dissociation. A stringent criterion for 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 and Lemeshow, 1989). As a result of more than half of the participants only endorsing one major traumatic event and in an effort to avoid attenuation of sample size only the recalled emotional responses for the first, or only, trauma event were considered in the analyses.

Results

Sample Characteristics and Trauma Prevalence Estimates

Descriptive data for sample violence exposure, 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 ($SD = 2.49$). 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 US-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 ages of onset and time elapsed after first trauma exposures (until clinical interview) have been provided in Table 2. Although there were significant group differences

between those experiencing single versus multiple types of trauma on the variables of age of onset and time elapsed from first trauma, $F(1, 122) = 9.70, p = .002$ and $F(1, 122) = 14.98, p = .000$, neither ages of onset nor time elapsed were significantly correlated with peritraumatic emotional and dissociative symptoms. These results suggested no linear relationship between ages of onset nor time-elapsed from first trauma and recall of peritraumatic emotional and dissociative symptoms. There were no significant differences among the immigrant and US-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; and grade in school. As no differences were indicated these variables were not included in further analyses.

PTSD Predictors

A linear regression analysis indicated several variables that significantly predicted the number of reported PTSD symptoms (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 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 (Table 4; only the final model is shown due to space constraints). It's 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 with adults and children across ethnic groups, results indicated that experiences of child physical abuse (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 (Ozer et al., 2003; Lensvelt-Mulders et al., 2008) 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 was consistent with prior research suggesting that anger may be a way to regain "control over their life" (Stuewig & McCloskey, 2005, p. 326). Further, several studies indicate that, as guilt is a behavior-oriented negative emotion, versus a more global, person-oriented emotion like shame (Stuewig & McCloskey, 2005), guilt may be protective from various forms of psychopathology, productive, and useful for motivating individuals 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 level of general arousal (Brewin, Andrews, & Rose, 2000) and that peritraumatic emotional responses play important roles in prediction of future PTSD (Lawyer, Resnick, Galea, Ahern, Kilpatrick, & Vlahov, 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 experienced intense shame were almost 2 times more likely to be diagnosed with PTSD than those did not, and those experiencing dissociation 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 perception of global self-worth that it motivates children to avoid memories of the abuse rather than engaging in healthy, emotional processing (Feiring & Taska, 2005).

Clinical Implications

The present study supports the importance of considering the peritraumatic emotional and dissociative responses (Feiring, 2002) to events as significant as the events themselves. Furthermore, the therapist's assessment of the event's meaning to the child and their family must include coping style and cultural factors (Deblinger & Runyon, 2005). These study results buttress 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 behavioral therapy (TF-CBT; Cohen, Mannarino, Berliner, & Deblinger, 2000; Deblinger & Runyon, 2005).

The influence of Latino cultural factors, e.g., *marianismo*, *machismo*, *fatalismo*, may need to be given special consideration in trauma-focused CBT because of their possible relationships to the increasingly robust predictors of PTSD in Latino youth: dissociation and shame. Rivera (2008) and others have highlighted Hispanic cultural views that may broadly impact development and manifestation of PTSD symptoms including, *familismo* (the preeminence given familial needs over individual needs), *machismo* (a man's responsibility to protect and provide for their families and the expectation of deference from women and children), *marianismo* (expectation that women and girls maintain their sexual purity, self-sacrificial attitude), 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 development of PTSD through increasing the use of passive coping mechanism by Latinos compared to other ethnocultural groups, e.g., self-blame coping (Perilla et al., 2002; Pole et al., 2005, 2008), or by 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 in-depth assessment for 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 included the use of convenience samples (Kilpatrick, Ruggiero, et al., 2003), and retrospective self-report data which may be vulnerable to recall biases, although current results and others have suggested that retrospective self-report data are not necessarily problematic in this area of study (Breh & Seidler, 2007; Lensevelt-Mulders et al., 2008). Another limitation was the disparate number of participants endorsing certain types of trauma (e.g., child sexual abuse). Further, 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 (Kliewer, 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 in Latino youth, such as peritraumatic emotional and dissociative responses to trauma.

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TABLE 1Trauma exposure for Latino youth ($N = 204$)

	<i>n</i>	%
<u>Trauma exposure</u>		
Witness community violence	111	54.41
Witness domestic violence	30	14.71
Child physical abuse	75	36.76
Physical assault	44	21.57
Child sexual abuse	10	4.90
More than 1 type of trauma	96	47.1
<u>PTSD symptom endorsement</u>		
At least 3 symptoms	53	33.97
Meeting full diagnostic criteria	18	16.22

TABLE 2

Ages of onset and times elapsed since first trauma

	<i>M</i>	<i>SD</i>
<u>Ages of onset (years)</u>		
Youth experiencing single trauma type	8.81	2.95
Youth experiencing multiple trauma types	6.89	3.01
<u>Time elapsed</u>		
Youth experiencing single trauma type	3.54	2.90
Youth experiencing multiple trauma types	6.17	3.70

TABLE 3Linear regression of exposure variables and peritraumatic emotional responses on PTSD symptoms ($N = 204$)

Predictor Variable	B	SE
Child sexual abuse	.07	1.01
Child physical abuse	1.10*	.53
Physical assault	.24	.63
Witnessed domestic violence	.67	.77
Witnessed community violence	.20	.47
Intense fear of severe injury or death at any event	.76	.49
Sex	.26	.11
Age	.04	.09
Months living in U.S.	.00	.00
Lifetime number of traumatic events	.35*	.13
Peritraumatic dissociation	1.71**	.59
Shock	-.09	.29
Helplessness	.32	.31
Anger	-.64*	.03
Disgust	-.29	.35
Loss of emotional control	.88	.36
Guilt	-.73*	.31
Violation of trust	.38	.37
Sadness	.29	.36
Shame	.89**	.32

* $P < .05$;** $P < .01$.

TABLE 4Logistic regression of exposure variables and peritraumatic emotional responses on PTSD diagnosis ($N = 204$)

Predictor Variable	B	Standard error	Odds ratio
Child sexual abuse	.49	.84	1.64
Physical assault	.41	.57	1.51
Witnessed domestic violence	.58	.70	.56
Sex	.65	.49	1.92
Months living in U.S.	.00	.00	.99
Lifetime number of traumatic events	.32	.12	1.38**
Intense fear or horror at any event	.03	.58	.97
Peritraumatic dissociation	.92	.37	2.51*
Shame	.67	.26	1.94*

* $P < .05$;** $P < .01$.