



Published in final edited form as:

J Clin Psychol. 2010 June ; 66(6): 583–598. doi:10.1002/jclp.20686.

Ethnicity in Trauma and Psychiatric Disorders: Findings from the Collaborative Longitudinal Study of Personality Disorders

Carlos I. Pérez Benítez,

University of Miami/Albert Medical School of Brown University

Shirley Yen,

Albert Medical School of Brown University

M. Tracie Shea,

VA Medical Center and Albert Medical School of Brown University

Maria O. Edelen,

Albert Medical School of Brown University

John C. Markowitz,

New York State Psychiatric Institute

Thomas H. McGlashan,

Yale University School of Medicine

Emily B. Ansell,

Yale University School of Medicine

Carlos M. Grilo,

Yale University School of Medicine

Andrew E. Skodol,

University of Arizona

John G. Gunderson, and

Harvard Medical School

Leslie C. Morey

Texas A & M

Abstract

The study's aims are to explore ethnic differences in rates of adverse childhood experiences and lifetime traumatic events and in rates of psychiatric disorders for patients exposed to similar traumas. Rates of these events and rates of major depressive disorder, posttraumatic stress, substance use, and borderline personality disorders were compared among 506 non-Hispanic Whites (N-HW), 108 Latina(o)s, and 94 African Americans (AA) participating in the Collaborative Longitudinal Personality Disorder Study. We found that Whites reported higher rates of neglect than African Americans and Latina(o)s, higher rates of verbal/emotional abuse than African Americans, and higher rates of accidents and injuries/feared serious injury than Latina(o)s. African Americans had higher rates of seeing someone injured/killed than Whites. No significant interaction was observed between adverse events and ethnicity for mental disorders.

© 2010 Wiley Periodicals, Inc.

Correspondence concerning this article should be addressed to: Carlos I. Pérez Benítez, Assistant Research Professor, Department of Educational and Psychological Studies, University of Miami, 5202 University Drive, 312 Merrick Building, Coral Gables, Florida, 33146; c.perezbenitez@miami.edu.

Keywords

trauma; child abuse; African Americans; Latinos

Introduction

The association between childhood abuse and trauma with negative mental health outcomes is strong and has been well-documented (Browne & Finkelhor, 1986; Kessler, Davis, & Kendler, 1997). Epidemiological studies have found that a reported history of childhood abuse is associated with mood, anxiety, substance use disorders (Kendler et al., 2000; Molnar, Buka, & Kessler, 2001; Mullen, Martin, Anderson, & Romans, 1993), and borderline personality disorder (BPD; Zanarini et al., 1989, 1997), and that lifetime history of trauma is also significantly associated with mood, anxiety, and substance use disorders (Kessler, 2000).

In the last two decades, the trauma literature has emphasized the importance of better understanding the role of cultural and ethnic factors in the experience of stressful and traumatic events and in subsequent psychological distress (Carlson, 2005; Keane, Kaloupek, & Weathers, 1996; Mennen, 1995; Moisan, Sanders Phillips, & Moisan, 1997; Stamm & Friedman, 2000). Carlson (2005) suggested that culture may moderate the consequences of trauma and influence the healing process after exposure to trauma. Fontes (1995) proposed that cultural beliefs and values may mediate the experience and effects of abuse, while others have speculated that ethnic and cultural factors may moderate the relationship between negative life experiences and development of psychopathology (Garcia-Coll & Garrido, 2000).

Empirical studies have found different rates of negative childhood experiences (Cappelleri, Eckenrode, & Powers, 1993), lifetime traumas (Arellano, Kuhn, & Chavez, 1997; Breslau et al., 1998; Torres & Han, 2000; Turner & Lloyd, 2004), war-related traumas (Ortega & Rosenheck, 2000), and psychiatric disorders (Torres & Han, 2000) associated with ethnic groups.

Although theoretical and empirical studies about ethnic differences in negative childhood experiences have had growing prominence in the child and adolescent literature (Elliott & Urquiza, 2006), studies in the last decade have documented these differences in adult populations. For example, a survey of 461 college students revealed that Black¹ women had significantly higher prevalence rates (40.3%) of sexual abuse episodes than Hispanic (33.3%), White (25.5%), and Asian (21.5%) women (Ullman & Filipas, 2005). Another community survey, of 2,881 men who have sex with men (MSM) living in major cities, also reported ethnic differences in rates of reported child abuse. Latino MSM were twice as likely to report childhood sexual abuse as non-Latino MSM (22% and 12%, respectively; Arreola, Neilands, Pollack, Paul, & Catania, 2005).

Evidence of ethnic differences in the relationship between negative childhood experience and psychological disturbances is scarce. An empirical study found differences by ethnic groups in the association between negative childhood experiences and alcohol problems in adulthood (Caetano, Field, & Scott, 2003), but a representative community survey did not find ethnic differences in the relationship between child sexual abuse and depression (Roosa, Reinholtz, & Angelini, 1999). Using face-to-face interviews with a probability sample of

¹The reviewed literature on ethnic comparisons names ethnic groups in different ways. We decided to retain the same ethnic or racial categories each study used.

3,270 individuals in an epidemiological study, Caetano et al. (2003) found that Black and Hispanic men and women reported higher rates (black males 36%, black females 31%, Hispanic males 23%, Hispanic females 25%) of childhood physical abuse or exposure to parental violence than White participants (males 19%, females 15%). Among those reporting childhood physical abuse and exposure to parental violence, Hispanic men had significantly higher rates of alcohol-related problems than White men (odds ratio, 1.7). Black men reported the highest rate of alcohol-related problems (34%) among those reporting exposure to violence (Caetano et al., 2003). Another community survey (Roosa et al., 1999) designed to explore potential ethnic differences in the relationship of childhood sexual abuse (including severity of abuse and type of relationship with the perpetrator) to depression, considering “background” variables (mother’s education, family size, marital status, childhood physical abuse, and teenage parents), found that although other significant predictors were unique for each ethnic group (e.g., severity of abuse, family size), childhood physical abuse significantly predicted depression for all ethnic groups studied (non-Hispanic Whites [NH-W], African Americans [AA], Mexican Americans, and Native Americans).

In addition to rates of child abuse experiences, rates of lifetime trauma have been found to differ among ethnic groups as well. The Detroit Area Survey (Breslau et al., 1998) showed that the lifetime prevalence of assaultive violence (e.g., rape, shooting, or stabbing) was higher in non-Whites than in Whites (54.7% and 31.8%), respectively, whereas rates of other types of trauma (e.g., non-violent injury or shock, learning about trauma of others) did not significantly differ among ethnic groups, after adjusting for other demographic factors (e.g., household income).

There is also some evidence of ethnic differences in the association of rates of lifetime trauma with negative mental health outcomes. For example, interviewing a representative community sample of 1,803 non-Hispanic White, Cuban-American, non-Cuban Hispanic, and African American young adults, Turner and Lloyd (2004) found that non-Hispanic White participants reported the highest rate of sexual molestation and physical abuse, while African Americans reported the highest rates of being attacked with deadly weapons and of “witnessed violence” events (Turner & Lloyd, 2004). Interestingly, African Americans reported the lowest rate of depressive disorders despite describing significantly higher numbers of adverse events (major negative life events, life traumas, witnessed violence, and traumatic news) than other ethnic groups after controlling for socioeconomic status (Turner & Lloyd, 2004). Another study with physically abused women recruited from shelters and courthouses (Torres & Han, 2000) showed that non-Hispanic White women reported forced sex at significantly higher rates ($N=62$, 97%) than their Hispanic counterparts ($N=62$, 74%). Forced sex was significantly associated with development of posttraumatic stress disorder (PTSD), but only for the Hispanic group. Hispanic women reported significantly higher rates of being attacked with a knife or a gun by their partners, and this physical abuse was significantly correlated with depression (Torres & Han, 2000). The Detroit study found that people who experienced assaultive violence had the highest probability of developing PTSD (Breslau et al., 1998). In addition, a national study found that Mexican American and Puerto Rican Vietnam veterans had a higher probability of PTSD and more severe combat-related trauma symptoms than White and Black veterans, after adjusting for premilitary factors (e.g., year of birth, childhood poverty, education) and military factors (e.g., age when began active service, adult nonmilitary trauma, participation in atrocities; Ortega & Rosenheck, 2000). However, this study did not control for premorbid psychopathology. In regard to substance use disorders, the National Epidemiological Survey on Alcohol and Related Conditions showed that U.S.-born non-Hispanic Whites had greater odds of lifetime alcohol abuse than U.S.-born Puerto Ricans (Alegria, Canino, Stinson, & Grant, 2006), but this study did not examine rates of exposure to trauma.

To summarize, initial empirical evidence suggests consistent trends: non-Hispanic Whites report more sexual abuse than Hispanics and African Americans (Turner & Lloyd, 2004), while minority individuals seem to experience more physical abuse (Caetano et al., 2003) and assaultive trauma (Breslau et al., 1998). Furthermore, Latinos appear more vulnerable to developing PTSD when exposed to sexual (Torres & Han, 2000), assaultive (Torres & Han, 2000), or combat-related traumatic events (Ortega & Rosenheck, 2000), after controlling for socioeconomic status.

Despite growing interest in exploring ethnic and cultural factors, especially in child maltreatment research (Clear, Vincent, & Harris, 2006; Elliott & Urquiza, 2006; Miller & Cross, 2006), most of the existing literature concerning ethnic differences in childhood and lifetime trauma has not considered the impact of class, cultural, and racial differences (Bacigalupe, 2001). Research examining ethnic differences in mental disorders among individuals with trauma histories has been limited by the use of self-report measures rather than structured clinical interviews. To our knowledge, no study has evaluated potential ethnic group differences, traumatic events, and psychiatric disorders using clinical samples. Clinical samples provide a more efficient means to study psychiatric symptoms and disorders. Finally, most clinical studies have focused on Axis I disorders (e.g., major depression, anxiety disorder), ignoring potential ethnic differences in personality disorders (PDs) despite the known association between early negative experiences and development of PD.

Earlier findings of the Collaborative Longitudinal Personality Disorders Study (CLPS) revealed that Latina(o)s are more likely to have BPD than African Americans and non-Hispanic Whites (Chavira et al., 2003) and found a significant association of early childhood experiences and traumas with different psychiatric disorders (Battle et al., 2004; Yen et al., 2002). Yen et al. found that patients with BPD reported higher rates of unwanted sexual contact prior to age 18 than participants with other PD diagnoses (Yen et al.)

The aims of the present study are to explore: (a) differences in adverse childhood experiences and lifetime traumatic events among ethnic groups in the CLPS sample, and (b) whether ethnic differences exist in the prevalence of lifetime and current *DSM-IV* diagnoses of major depressive disorder (MDD), PTSD, substance use disorder, and BPD among individuals exposed to similar negative childhood experiences or lifetime traumatic events. In other words, does the association between psychopathology and negative experience or type of traumatic event differ by ethnicity?

Methods

Participants

CLPS is a multisite, naturalistic, prospective longitudinal study of four PD groups: schizotypal (STPD), borderline (BPD), avoidant (AVPD), obsessive-compulsive (OCPD), and a comparison group with MDD but no PD (Gunderson et al., 2000). One of the primary aims of CLPS is to describe the characteristics and course of personality disorders. Participants (60%) were recruited primarily from treatment clinics affiliated with the four CLPS sites (Boston, New Haven, New York, and Providence). The remaining participants of CLPS (40%) who had to be in present or past treatment were recruited by fliers and advertisements. Individuals with a history of schizophrenia, schizophreniform, or schizoaffective disorder were excluded, as well as those with conditions that precluded the ability to provide accurate information, including acute substance intoxication or withdrawal, active psychosis, or cognitive impairment. Individuals were eligible to participate if they met diagnostic criteria assessed by the Diagnostic Interview for *DSM-IV* Personality Disorders (DIPD-IV; Zanarini, Frankenburg, Sickel, & Yong, 1996) for at least

one of the four PDs targeted in the CLPS; or if they met criteria for the comparison group, MDD, as assessed by the Structured Clinical Interview for *DSM-IV* Axis I Disorders Patient Version (SCID-I/P; First, Gibbon, Spitzer, & Williams, 1996), without PD. Interviewers had master's-level or doctoral-level training (or equivalent clinical experience) in a mental health related discipline. Each participant signed an informed consent, approved by the institutional review boards at their respective sites-institutions.

The total CLPS study group comprises 733 participants, recruited in two cohorts. The first cohort included 506 non-Hispanic Whites, 80 African Americans, 62 Latino individuals, and 25 of other ethnicities; the second cohort included 28 African American and 32 Latino (a) participants. The second cohort was recruited five years later to increase the proportion of minority participants in the sample. In total, 96 participants met criteria for STPD, 240 for BPD, 325 for AVPD, and 262 for OCPD. (The sum exceeds the total sample size because of comorbidity of PDs). There were 95 participants in the MDD (no PD) comparison group.

The sample for the current study included 708 patients who identified themselves as non-Hispanic Whites ($n=506$, 71%), Black/African Americans ($n=108$, 15%), or Latinos (as) ($n=94$, 13%). Childhood experience and lifetime trauma data were available for 642 and 689 of the 708 participants, respectively. Participants were interviewed at 6 months, 1 year, and then annually after the baseline assessment of symptoms and functioning. All participants signed a written informed consent after full explanation of the research procedures.

Measures

The DIPD-IV, a semistructured interview, was administered at baseline to assess each criterion of the 10 *DSM-IV* PDs (Zanarini et al., 1996). Interrater and test-retest reliability of the DIPD-IV (kappa) for the four target PDs of the study were .68 and .69 for BPD, .68 and .73 for AVPD, and .71 and .74 for OCPD, respectively (Zanarini et al., 2000). The interrater reliability sample had too few cases of STPD to calculate kappa for this disorder; the test-retest kappa for STPD was .64 (Zanarini et al., 2000).

The Structured Clinical Interview for *DSM-IV* Axis I Disorders-Patient Version (SCID-I/P; First, Spitzer, Gibbon, & Williams, 1996) was used to diagnose major Axis I disorders. In the CLPS, reliability of SCID-I/P diagnoses ranged from .57 to 1.00, depending on the disorder, with a median kappa of .76. Test-retest reliability ranged from .35 to .78, with a median kappa of .64. Interrater reliability kappa and test-retest kappa for specific Axis I disorders can be found elsewhere (Zanarini et al., 2000).

The Childhood Experience Questionnaire-Revised (CEQ-R; Zanarini et al., 1989) is a semistructured interview assessing a variety of childhood experiences and was administered at the 6-month follow-up. The chronic caretaker behaviors section, which includes types of abuse (e.g., emotional, verbal, physical, and sexual abuse) and seven types of neglect, was used for the analysis. A categorical rating (presence/absence) is given for each type of abuse or neglect at each of three age periods (0–5, 6–12, 13–17). The CEQ-R has good psychometric properties: interrater reliability kappas range from .64 to 1.00, with a median k of .88 (Zanarini et al., 1989). The items were combined to create broader categories based on Zanarini's criteria (Zanarini et al., 1997). For this study, four categories were created reflecting chronic caretaker behaviors: (a) neglect (physical neglect, emotional withdrawal, inconsistent treatment, emotional denial, failure to protect, lack of real relationship, parentification of patient), (b) verbal/emotional abuse (emotional abuse, verbal abuse), (c) physical abuse, and (d) sexual abuse.

The SCID Trauma Addendum (Resnick, Falsetti, Kilpatrick, & Freedy, 1996) was used to provide information on exposure to traumatic events at all ages. This addendum uses the

DSM-IV definition for criterion A trauma. This interview, administered in conjunction with the SCID-I, contains prompts regarding respondents' history of traumatic events such as military combat experience or military service in a war zone, serious accident, forced or threatened sexual contact, being attacked with or without a weapon, situations involving serious injury or fear of being killed or seriously injured, witnessing someone being seriously injured or killed, and witnessing sexual abuse or assaults.

Data Analysis

χ^2 analyses were conducted to compare ethnic groups according to demographic categorical variables (e.g., education and employment) and one-way analysis of variance was conducted for age comparison. Because there were two cohorts of minority participants recruited 5 years apart, we conducted a series of chi-square analyses to compare the two minority cohorts on 10 demographic and clinical variables (e.g., rates of negative childhood experiences, lifetime trauma, and mental disorders). To explore ethnic differences in rates of negative childhood experiences and lifetime trauma we used a series of logistic regression analyses. All categorical variables included in the analyses were dichotomous except ethnicity (with three categories/groups). Employment and education variables were included in the models with lifetime trauma as dependent variables because there were significant ethnic group differences in these two variables. Because of obvious developmental sequence, these variables were not controlled for when evaluating negative childhood experiences. To assess whether the association between type of event and psychopathology (MDD, PTSD, substance use disorder, and BPD) differed by ethnicity, we conducted logistic regressions with each disorder as the dependent variable, and entered simultaneously the type of event (e.g., neglect), ethnicity (using dummy codes), the interaction term (type of event \times ethnicity), as predictor variables, and level of education, and employment status as covariates. Bonferroni method was used to correct for multiple comparisons derived from the number of negative childhood and traumatic experiences.

Results

The sample comprised 447 women (63%) and 261 men (37%), with a mean age of 32.7 ($SD=8.06$) years (See Table 1 for demographic characteristics). Significant differences emerged on level of education and employment, with non-Hispanic Whites reporting a higher level of education (77% having post-high school education) than African Americans, (61%) $\chi^2(1, n=614)=11.52, p=.001$, and Latina(o)s, (61%) $\chi^2(1, n=600)=10.96, p=.001$. Similarly, non-Hispanic Whites had higher rates of employment (42%) than African Americans, (24%) $\chi^2(1, n=614)=12.66, p<.001$, and Latina(o)s, (27%) $\chi^2(1, n=600)=8.34, p=.004$. No between group differences were found in age, sex, and marital status (43% of non-Hispanic Whites, 46% of African Americans, and 45% of Latina(o)s were married or living together). The two cohorts of minorities recruited 5 years apart were comparable, with no significant differences in demographic and clinical variables (e.g., rates of negative childhood experiences, lifetime trauma, and mental disorders).

Table 2 displays rates of negative childhood experiences by ethnic group and odd ratios based on logistic regression for group differences. The most frequent CEQ-R negative childhood experience was neglect (80% of all participants) followed by emotional and verbal abuse (60%). Significant ethnic differences were found for neglect and verbal/emotional abuse categories. Non-Hispanic Whites reported significantly higher rates of neglect than African Americans and Latina(o)s and higher rates of verbal/emotional abuse than African Americans.

Table 3 shows rates of lifetime trauma categories by ethnic group and odds ratios based on logistic regression for group differences after controlling for employment status and

educational level. With the exception of military combat-related traumas, all other events were frequently reported across the three ethnic groups (range, 23–51%). Rates of serious accidents, serious injury or feared death or serious injury, and witnessing harm to others (e.g., someone injured/killed or sexually assaulted) differed significantly across groups. Non-Hispanic Whites reported significantly higher rates of serious accidents and injuries/fears of being injured than Latina(o)s, but lower rates of witnessing traumatic events than African Americans.

The second set of analyses examined whether the association between psychopathology and negative experience or type of traumatic event differ by ethnic group. Logistic regressions predicting each disorder revealed no significant interaction effects between any childhood negative experiences/lifetime trauma and ethnicity for any of the four diagnoses after controlling for main effects for type of event, ethnicity, employment status, and level of education. Tables 4 and 5 show the frequency of MDD, PTSD, substance use disorder, and BPD by each type of negative childhood experience and lifetime trauma, respectively.

Discussion

Results indicate that rates of reported negative childhood experiences and traumatic events are very high across the three ethnic groups studied (non-Hispanic Whites, African Americans and Latina(o)s) in a clinical sample of patients selected on the basis of *DSM-IV* personality disorder(s) or MDD diagnoses. A previous CLPS study reported high rates of traumatic exposure in all personality disorder diagnoses, particularly high rates of sexual trauma among participants with BPD (Yen et al., 2002). In the current study, differences among ethnic groups appeared in two of the four negative childhood experience categories (neglect, verbal abuse) and in three of the six traumatic event categories (serious accident, injury/fear of being injured and witnessing violent events). Non-Hispanic Whites reported the highest frequency in most categories. They reported significantly higher rates of neglect and verbal/emotional abuse, as well as higher rates of traumatic events, such as serious accidents, and injury/fear of injury than the other two ethnic groups. African Americans reported witnessing violent acts more frequently than non-Hispanic Whites after controlling for level of education and employment status.

It is not clear in the present study why non-Hispanic Whites reported more negative and traumatic experiences than other ethnic groups. One plausible explanation is that non-Hispanic Whites as a group has learned to cope more effectively with social stigmas in reporting these incidents being less resistant to disclose these negative life events with strangers or in a research setting. Also, there may be ethnic differences in the perception of events classified as child abuse or neglect. That African Americans reported higher rates of witnessing violence is consistent with Turner and Lloyd (2004)'s findings in a community-based study of psychiatric and substance use disorders, in which African American young adults more frequently witnessed violence than their White and Hispanics counterparts (Turner & Lloyd, 2004).

We found no significant interactions between rates of negative experiences/life time traumas and proportion of subjects from different ethnic backgrounds with MDD, PTSD, BPD, or substance use disorders. These negative findings do not support the idea that particular ethnic groups might have greater vulnerability to specific psychiatry diagnoses (e.g., PTSD, MDD) in response to specific negative experiences (e.g., child abuse; Roosa et al., 1999). Turner and Lloyd (2004) also found that African Americans did not differ from Whites and Latina(o)s in lifetime prevalence of anxiety disorders. However, they found that African Americans had a lower prevalence of depressive disorders than the other groups, despite greater exposure to violent events (Turner & Lloyd, 2004). The authors argued that the

consequences of traumatic events in African Americans might be reflected more in physical symptoms than psychological symptoms or disorders, and that those diagnostic measures underestimated the presence of psychopathology in this population.

This exploratory study attempted to answer calls in the literature for evaluating ethnic differences in development of psychopathology after exposure to similar traumatic events (Hough, Canino, Abueg, & Gusman, 1996; Turner & Lloyd, 2004). Our findings contribute to the understanding of ethnic differences in rates of traumatic events and their relationships with mental disorders in a particular clinical population. To our knowledge, this is the first exploration in a clinical sample of the association of psychopathology and childhood experience and traumatic events according to ethnicity. The significance of these findings relies in part on the methodological rigor of the CLPS study, in which diagnoses were based on comprehensive structured diagnostic clinical interviews (as opposed to survey, chart reviews, or report databases) with a large sample of patients recruited in four different urban sites from varied clinical settings (Gunderson et al., 2000).

However, the current study has several limitations. Despite the methodological strengths of the CLPS study, the nature of the sample selection (specific personality disorders or MDD without personality disorder) may limit generalizability to other clinical samples. The exploratory nature of this study and the multiple statistical tests that were conducted using a relatively small sample size suggest that the results should be taken with caution and merit replication. The retrospective nature of the trauma data may pose reliability concerns, particularly for childhood events (Elliott & Urquiza, 2006). Individuals with psychiatric disorders might be more likely to recall traumas that “explain” their current symptoms or become more attuned to such trauma than people who have higher levels of functioning or no disorders. This is a limitation of many studies that examine childhood adversity. Of the minority participants, a subset was recruited 5 years after the initial wave of recruitment introducing a possible cohort effect as a methodological artifact. However, the two samples appeared comparable on the variables examined. That Latina(o) participants were fluent in English is another limiting factor for the generalizability of the findings, as a high proportion of Latina(o)s in the United States do not speak English fluently. The 2006 American Community Survey revealed that 77% of Mexicans, 69% of Central Americans, and 51% of South Americans who live in this country speak English “less than very well” (Census-Bureau, 2008). Latina(o)s in the United States comprise a heterogeneous mix of individuals who come from different Latin-American countries and represent very different subcultures (values, belief system, and religiosity) and experiences. This study did not collect data about country of origin but included all Latinos in the same group. Furthermore, socioeconomic status (SES) was measured only by educational level and employment status (employed vs. unemployed), but other unmeasured SES variables such as household income and type of neighborhood may have an influence on the reported ethnic differences. It has already been documented that, without measuring all relevant SES dimensions, ethnic differences in health variables cannot be considered independent from SES (Braveman et al., 2005; Kaufman, Cooper, & McGee, 1997). Also, sociocultural variables, such as acculturation or experience of discrimination, may have influenced exposure to trauma or subsequent development of psychopathology.

We found high variability in the frequency of adverse child experiences, traumatic events, and psychopathology development among African Americans, Latina(o)s and non-Hispanic Whites. A growing number of researchers in ethnic minority psychology have argued for the need to identify and operationalize aspects of culture to better examine its role in mental health outcomes (Elliott & Urquiza, 2006). Future research should consider exploring proximal cultural variables (e.g., values and norms) that might play more specific roles in the experience of different traumas and likelihood of developing specific types of

psychopathology. For example, does acculturative stress or cultural beliefs about violence mediate the relationship between ethnicity and development of psychopathology? As Betancourt and Lopez have noted (1993), researchers should explore direct evidence that specific cultural variables are related or explain ethnic differences. It is also important to further understand why specific ethnic groups are more likely to develop specific disorders. Prevention efforts and treatment interventions can be designed or tailored for specific ethnic communities if we know more about specific vulnerabilities within each community.

Acknowledgments

This research was supported by the following NIMH grants R01 50837, R01 50838, R01 50839, R01 50840, R01 50850, R01 MH051415, K23 MH073708, K05 MH 01645, 1K23 MH080942.

References

- Alegria M, Canino G, Stinson FS, Grant BF. Nativity and DSM-IV psychiatric disorders among Puerto Ricans, Cuban Americans, and non-Latino Whites in the United States: Results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Journal of Clinical Psychiatry*. 2006; 67(1):56–65. [PubMed: 16426089]
- Arellano CM, Kuhn JA, Chavez EL. Psychosocial correlates of sexual assault among Mexican American and White non-Hispanic adolescent females. *Hispanic Journal of Behavioral Sciences*. 1997; 19(4):446.
- Arreola SG, Neilands TB, Pollack LM, Paul JP, Catania JA. Higher prevalence of childhood sexual abuse among Latino men who have sex with men than non-Latino men who have sex with men: Data from the Urban Men's Health Study. *Child Abuse & Neglect*. 2005; 29(3):285. [PubMed: 15820544]
- Bacigalupe G. Latinos Sobrevivientes de Abuso Sexual Infantil en los Estados Unidos: un acercamiento relacional al diagnóstico e intervención [Latino child sexual abuse survivors in the United States: Relational assessment and intervention]. *Psyche*. 2001; 10(2):167–180.
- Battle CL, Shea M, Johnson DM, Yen S, Zlotnick C, Zanarini MC, et al. Childhood maltreatment associated with adult personality disorders: Findings from the collaborative longitudinal personality disorders study. *Journal of Personality Disorders*. 2004; 18(2):193–211. [PubMed: 15176757]
- Braveman PA, Cubbin C, Egerter S, Chideya S, Marchi KS, Metzler M, et al. Socioeconomic status in health research: One size does not fit all. *Journal of the American Medical Association*. 2005; 294(22):2879–2888. [PubMed: 16352796]
- Breslau N, Kessler RC, Chilcoat HD, Schultz LR, Davis GC, Andreski P. Trauma and posttraumatic stress disorder in the community: The 1996 Detroit Area Survey of Trauma. *Archives of General Psychiatry*. 1998; 55(7):626–632. [PubMed: 9672053]
- Browne A, Finkelhor D. Impact of child sexual abuse: A review of the research. *Psychol Bull*. 1986; 99(1):66–77. [PubMed: 3704036]
- Caetano R, Field CA, Scott N. Association between childhood physical abuse, exposure to parental violence, and alcohol problems in adulthood. *Journal of Interpersonal Violence*. 2003; 18(3):240.
- Cappelleri JC, Eckenrode J, Powers JL. The epidemiology of child abuse: Findings from the Second National Incidence and Prevalence Study of Child Abuse and Neglect. *American Journal of Public Health*. 1993; 83(11):1622–1624. [PubMed: 8238691]
- Carlson BE. The most important things learned about violence and trauma in the past 20 years. *Journal of Interpersonal Violence*. 2005; 20(1):119–126. [PubMed: 15618568]
- Census-Bureau. Statistical Portrait of Hispanics in USA. 2008. Retrieved March, 25, 2010, from <http://pewhispanic.org/files/factsheets/foreignborn2006/foreignborn.pdf>
- Chavira DA, Grilo CM, Shea M, Yen S, Gunderson JG, Morey LC, et al. Ethnicity and four personality disorders. *Comprehensive Psychiatry*. 2003; 44(6):483–491. [PubMed: 14610727]
- Clear PJ, Vincent JP, Harris GE. Ethnic differences in symptom presentation of sexually abused girls. *Journal of Child Sexual Abuse*. 2006; 15(3):79–98. [PubMed: 16893820]

- Elliott K, Urquiza A. Ethnicity, culture, and child maltreatment. *Journal of Social Issues*. 2006; 62(4): 787.
- First, MB.; Spitzer, RL.; Gibbon, M.; Williams, JBW. *Structured Clinical Interview for DSM-IV - Patient Edition (SCID-I/P)*. Washington, DC: American Psychiatric Press; 1996.
- Fontes, LA. *Sexual abuse in nine North American cultures: Treatment and prevention*. Thousand Oaks, CA: Sage; 1995.
- Garcia-Coll, C.; Garrido, M. Minorities in the United States: Sociocultural context for mental health and developmental psychopathology. In: Sameroff, AJ.; Lewis, M.; Miller, SM., editors. *Handbook of developmental psychopathology*. 2. Dordrecht, Netherlands: Kluwer Academic Publishers; 2000. p. 177-195.
- Gunderson JG, Shea T, Skodol AE, McGlashan TH, Morey LC, Stout RL, et al. The Collaborative Longitudinal Personality Disorders Study: Development, aims, design, and sample characteristics. *Journal of Personality Disorders*. 2000; 14(4):300–315. [PubMed: 11213788]
- Hough, RL.; Canino, GJ.; Abueg, FR.; Gusman, FD. PTSD and related stress disorders among Hispanics. In: Friedman, MJE.; Marsella, AJE., editors. *Ethnocultural aspects of posttraumatic stress disorder: Issues, research, and clinical applications*. Washington, DC: American Psychological Association; 1996. p. 301-338.
- Kaufman JS, Cooper RS, McGee DL. Socioeconomic status and health in blacks and whites: The problem of residual confounding and the resiliency of race. *Epidemiology*. 1997; 8(6):621–628. [PubMed: 9345660]
- Keane, TM.; Kaloupek, DG.; Weathers, FW. Ethnocultural considerations in the assessment of PTSD. In: Marsella, AJ.; Friedman, MJ., editors. *Ethnocultural aspects of posttraumatic stress disorder: Issues, research, and clinical applications*. Washington, DC: American Psychological Association; 1996. p. 183-205.
- Kendler KS, Bulik CM, Silberg J, Hettema JM, Myers J, Prescott CA. Childhood sexual abuse and adult psychiatric and substance use disorders in women: An epidemiological and cotwin control analysis. *Archives of General Psychiatry*. 2000; 57(10):953. [PubMed: 11015813]
- Kessler RC. Posttraumatic stress disorder: The burden to the individual and to society. *Journal of Clinical Psychiatry*. 2000; 61(Suppl 5):4–14. [PubMed: 10761674]
- Kessler RC, Davis CG, Kendler KS. Childhood adversity and adult psychiatric disorder in the US National Comorbidity Survey. *Psychol Med*. 1997; 27(5):1101–1119. [PubMed: 9300515]
- Mennen FE. The relationship of race/ethnicity to symptoms in childhood sexual abuse. *Child Abuse and Neglect*. 1995; 19(1):115–124. [PubMed: 7895141]
- Miller AB, Cross T. Ethnicity in child maltreatment research: A replication of Behl et al.'s content analysis. *Child Maltreatment*. 2006; 11(1):16. [PubMed: 16382088]
- Moisan PA, Sanders Phillips K, Moisan PM. Ethnic differences in circumstances of abuse and symptoms of depression and anger among sexually abused Black and Latino boys. *Child Abuse and Neglect*. 1997; 21(5):473–488. [PubMed: 9158907]
- Molnar BE, Buka SL, Kessler RC. Child sexual abuse and subsequent psychopathology: Results from the National Comorbidity Survey. *American Journal of Public Health*. 2001; 91(5):753–760. [PubMed: 11344883]
- Mullen PE, Martin JL, Anderson JC, Romans SE. Childhood sexual abuse and mental health in adult life. *British Journal of Psychiatry*. 1993; 163:721. [PubMed: 8306113]
- Ortega AN, Rosenheck R. Posttraumatic stress disorder among Hispanic Vietnam veterans. *American Journal of Psychiatry*. 2000; 157(4):615–619. [PubMed: 10739422]
- Resnick, HS.; Falsetti, SA.; Kilpatrick, DG.; Freedy, JR. Assessment of rape and other civilian trauma-related PTSD: Emphasis on assessment of potentially traumatic events. In: Miller, TW., editor. *Theory and assessment of stressful life events*. Madison, CT: International Universities Press; 1996. p. 235-271.
- Roosa MW, Reinholtz C, Angelini PJ. The relation of child sexual abuse and depression in young women: Comparisons across four ethnic groups. *Journal of Abnormal Child Psychology*. 1999; 27(1):65–76. [PubMed: 10197407]

- Stamm, B.; Friedman, MJ. Cultural diversity in the appraisal and expression of trauma. In: Yehuda, R.; Shalev, AY., editors. *International handbook of human response to trauma*. Dordrecht, Netherlands: Kluwer Academic Publishers; 2000. p. 69-85.
- Torres S, Han HR. Psychological distress in non-Hispanic White and Hispanic abused women. *Archives of Psychiatric Nursing*. 2000; 14(1):19–29. [PubMed: 10692803]
- Turner R, Lloyd DA. Stress burden and the lifetime incidence of psychiatric disorder in young adults racial and ethnic contrasts. *Archives of General Psychiatry*. 2004; 61(5):481–488. [PubMed: 15123493]
- Ullman SE, Filipas HH. Ethnicity and child sexual abuse experiences of female college students. *Journal of Child Sexual Abuse*. 2005; 14(3):67. [PubMed: 16203695]
- Yen S, Shea TM, Battle CL, Johnson DM, Zlotnick C, Dolan Sewell R, et al. Traumatic exposure and posttraumatic stress disorder in borderline, schizotypal, avoidant and obsessive-compulsive personality disorders: Findings from the Collaborative Longitudinal Personality Disorders Study. *Journal of Nervous and Mental Disease*. 2002; 190(8):510–518. [PubMed: 12193835]
- Zanarini, MC.; Frankenburg, FR.; Sickel, AE.; Yong, L. *The Diagnostic Interview for DSM-IV Personality Disorder*. Belmont, MA: McLean Hospital, Laboratory for the Study of Adult Development; 1996.
- Zanarini MC, Gunderson JG, Marino MF, Schwartz EO, Frankenburg FR. Childhood experiences of borderline patients. *Comprehensive Psychiatry*. 1989; 30(1):18–25. [PubMed: 2924564]
- Zanarini MC, Skodol AE, Bender D, Dolan R, Sanislow C, Schaefer E, et al. The Collaborative Longitudinal Personality Disorders Study: Reliability of Axis I and II diagnoses. *Journal of Personality Disorders*. 2000; 14(4):291–299. [PubMed: 11213787]
- Zanarini MC, Williams AA, Lewis RE, Reich R, Vera SC, Marino MF, et al. Reported pathological childhood experiences associated with the development of borderline personality disorder. *American Journal of Psychiatry*. 1997; 154(8):1101–1106. [PubMed: 9247396]

Table 1

Demographic Data for Sample of Participants

| | NH-W | AA | L | Total |
|----------------------------|-------------|-------------|-------------|-------------|
| First cohort | 506 | 80 | 62 | 648 |
| Second cohort | – | 28 | 32 | 60 |
| Total | 506 | 108 | 94 | 708 |
| Sex (women) | 308 | 73 | 66 | 447 |
| Mean age (<i>SD</i>) | 33.1 (7.98) | 32.2 (8.43) | 31.2 (7.89) | 32.7 (8.11) |
| Education level | | | | |
| High school or less | 117 | 42 | 37 | 196 |
| Post-high school education | 389 | 66 | 57 | 512 |
| Rates of employment | | | | |
| Unemployed | 291 | 82 | 69 | 442 |
| Employed | 215 | 26 | 25 | 266 |
| Marital status | | | | |
| Single/divorced | 290 | 59 | 52 | 401 |
| Married/living together | 216 | 49 | 42 | 307 |
| Axis II diagnosis | | | | |
| STPD | 62 | 22 | 8 | 92 |
| BPD | 122 | 25 | 40 | 187 |
| AVPD | 130 | 22 | 18 | 170 |
| OCPD | 121 | 20 | 17 | 158 |
| Axis I MDD | 71 | 19 | 11 | 101 |

NH-W, Non-Hispanic Whites; AA, African-Americans; L, Latinos(as); *SD*, standard deviation; STPD, schizotypal personality disorder; BPD, borderline personality disorder; AVPD, avoidant personality disorder; OCPD, obsessive-compulsive personality disorder; MDD, major depressive disorder.

Table 2
 Frequency, Percentages, and Odds Ratios of Negative Childhood Experiences by Ethnic Group

| Negative childhood experience | Non-Hispanic Whites (W) n = 465 n (%) | African Americans (AA) n = 97 n (%) | Latina(o)s (L) n = 80 n (%) | Total N = 642 n (%) | Group comparisons | Odds ratio ^a (95% CI) | p |
|-------------------------------|------------------------------------------|----------------------------------------|--------------------------------|------------------------|-----------------------------|-----------------------------------------------------------------------|------------------------------|
| Neglect | 389 (84) | 65 (67) | 58 (72) | 512 (80) | W-AA W-L | 2.52 (1.54–4.11) 1.94 (1.12–3.36) | <.001 .018 |
| Verbal/emotional abuse | 298 (64) | 45 (46) | 43 (54) | 386 (60) | L-AA W-AA W-L | 1.30 (.68–2.48) 2.06 (1.33–3.21) 1.53 (.95–2.48) | .430 .001 .079 |
| Physical abuse | 162 (35) | 26 (27) | 28 (35) | 216 (34) | L-AA W-AA W-L | 1.34 (.74–2.43) 1.44 (.88–2.35) .99 (.60–1.63) | .330 .144 .978 |
| Sexual abuse | 136 (29) | 36 (37) | 33 (42) | 205 (30) | L-AA W-AA W-L L-AA | 1.45 (.76–2.76) .70 (.44–1.11) .58 (.35–.94) 1.22 (.66–2.23) | .258 .127 .027 .529 |

CI, confidence interval.

^aOdds ratios comparing ethnic groups based on logistic regression analyses. The second group is the reference group. Bonferroni correction, $p=.012$.

Table 3
 Frequency, Percentages, and Odds Ratios of Lifetime Traumas by Ethnic Groups Based on Logistic Regressions

| Lifetime trauma | Non-Hispanic Whites (W) n = 496 n (%) | African Americans (AA) n = 107 n (%) | Latina(o)s (L) n = 86 n (%) | Total N = 689 n (%) | Group comparisons | Odds ratio ^a (95% CI) | p |
|-----------------------------|------------------------------------------|-----------------------------------------|--------------------------------|------------------------|-------------------|----------------------------------|------|
| Serious accident | 194 (39) | 39 (36) | 21 (24) | 254 (37) | W-AA | 1.16 (.75–1.81) | .497 |
| | | | | | W- L | 2.07 (1.22–3.52) | .007 |
| Forced sexual contact | 175 (35) | 51 (48) | 36 (42) | 262 (38) | L-AA | .56 (.30–1.06) | .074 |
| | | | | | W-AA | .66 (.43–1.01) | .057 |
| | | | | | W- L | .83 (.52–1.34) | .452 |
| | | | | | L-AA | .79 (.44–1.41) | .425 |
| Attacked w/, w/o weapon | 221 (44) | 55 (51) | 42 (49) | 318 (46) | W-AA | .86 (.56–1.33) | .510 |
| | | | | | W- L | .97 (.61–1.56) | .911 |
| Injury/fear of | 185 (37) | 35 (33) | 20 (23) | 240 (35) | L-AA | .89 (.50–1.59) | .689 |
| | | | | | W-AA | 1.31 (.83–2.05) | .242 |
| | | | | | W- L | 2.10 (1.22–3.60) | .007 |
| | | | | | L-AA | .62 (.33–1.19) | .151 |
| Witnessing traumatic events | 164 (32) | 54 (50) | 31 (36) | 249 (36) | W-AA | .53 (.34–.82) | .005 |
| | | | | | W- L | 1.00 (.61–1.63) | .996 |
| Military combat | 13 (3) | 3 (3) | 0 (0.0) | 16 (2.3) | L-AA | .53 (.30–.97) | .038 |
| | | | | | W-AA | 1.09 (.30–4.00) | .891 |
| | | | | | W- L | – | – |
| | | | | | L-AA | – | – |

^aOdds ratios comparing ethnic groups based on logistic regression analyses where ethnicity, employment status, and education level were included as categorical variables. The second group is the reference group.

Bonferroni correction, $p=.008$.

Table 4
Frequencies and Percentages of Negative Childhood Experiences and Disorders by Ethnic Group

| Negative childhood experiences | Disorder | Non-Hispanic Whites <i>n</i> =465 | African Americans <i>n</i> =97 | Latina(o)s <i>n</i> =80 | Total <i>N</i> =642 |
|--------------------------------|-------------------|--------------------------------------|-----------------------------------|----------------------------|------------------------|
| Neglect | MDD ^a | 304 (65) ^b | 51 (53) | 47 (59) | 402 (63) |
| | PTSD ^c | 122 (26) | 30 (31) | 21 (26) | 173 (27) |
| | SUD ^d | 219 (47) | 32 (33) | 30 (37) | 281 (44) |
| Verbal/emotional abuse | BPD | 145 (34) ^e | 24 (29) ^f | 35 (46) ^g | 204 (34) ^h |
| | MDD | 232 (50) | 39 (24) | 35 (44) | 306 (48) |
| | PTSD | 112 (24) | 23 (24) | 18 (22) | 153 (24) |
| | SUD | 181 (39) | 22 (23) | 24 (30) | 227 (35) |
| Physical abuse | BPD | 122 (28) ^e | 20 (24) ^f | 30 (39) ^g | 172 (29) ^h |
| | MDD | 120 (26) | 22 (17) | 23 (29) | 165 (26) |
| | PTSD | 74 (16) | 16 (17) | 16 (20) | 106 (16) |
| | SUD | 103 (22) | 16 (17) | 17 (21) | 136 (21) |
| Sexual abuse | BPD | 71 (17) ^e | 8 (10) ^f | 20 (26) ^g | 99 (17) ^h |
| | MDD | 99 (21) | 28 (29) | 27 (34) | 154 (24) |
| | PTSD | 75 (16) | 20 (21) | 16 (20) | 111 (17) |
| | SUD | 95 (20) | 15 (15) | 19 (24) | 129 (20) |
| | BPD | 72 (17) ^e | 13 (16) ^f | 17 (23) ^g | 102 (17) ^h |

MDD, major depressive disorder; PTSD, posttraumatic stress disorder; SUD, substance use disorders; BPD, borderline personality disorder; PD, personality disorders.

^aPatients with MDD may have a co-morbid PD diagnosis and may have had other Axis I diagnoses as well.

^bNumbers in parenthesis represent percentages of participants who reported the type of experience and endorse the type of disorder from a particular ethnic group.

^{c, d}All patients with PTSD and SUD also have a PD diagnosis, and may have had other Axis I comorbid diagnoses as well.

^e*n*=430.

^f*n*=82.

^g*n*=76.

^h*n*=587 (missing values).

Table 5

Frequencies and Percentages of Lifetime Trauma and Disorders by Ethnic Group

| Type of trauma | Disorder | Non-Hispanic Whites n =496 | African Americans n =107 | Latina(o)s n =86 | Total N =689 |
|------------------------------|-------------------|-------------------------------|-----------------------------|----------------------|----------------------|
| Serious accident | MDD ^a | 149 (30) ^b | 29 (27) | 13 (15) | 191 (28) |
| | PTSD ^c | 71 (14) | 16 (15) | 7 (8) | 94 (14) |
| | SUD ^d | 122 (25) | 20 (19) | 14 (16) | 156 (23) |
| Unwanted sexual contact | BPD | 65 (14) ^e | 12 (13) ^f | 10 (12) ^g | 87 (14) ^h |
| | MDD | 141 (28) | 40 (37) | 28 (33) | 209 (30) |
| | PTSD | 101 (20) | 31 (29) | 19 (22) | 151 (22) |
| Attacked w/or w/o weapon | SUD | 123 (25) | 26 (24) | 21 (24) | 170 (25) |
| | BPD | 87 (19) ^e | 20 (22) | 22 (27) | 129 (20) |
| | MDD | 163 (33) | 45 (42) | 34 (40) | 242 (35) |
| Injury/fear of being injured | PTSD | 102 (20) | 28 (26) | 14 (16) | 144 (21) |
| | SUD | 145 (29) | 34 (32) | 26 (30) | 205 (30) |
| | BPD | 93 (20) ^e | 20 (22) | 28 (35) | 141 (22) |
| Witnessing harm to others | MDD | 148 (30) | 28 (26) | 18 (21) | 194 (28) |
| | PTSD | 77 (15) | 18 (17) | 5 (6) | 100 (14) |
| | SUD | 116 (23) | 20 (19) | 12 (14) | 148 (21) |
| Military combat | BPD | 73 (16) ^e | 11 (12) | 14 (17) | 98 (15) |
| | MDD | 126 (25) | 40 (37) | 25 (29) | 191 (28) |
| | PTSD | 71 (14) | 27 (25) | 10 (12) | 108 (16) |
| Military combat | SUD | 101 (20) | 32 (30) | 18 (21) | 151 (22) |
| | BPD | 60 (13) ^e | 20 (22) | 21 (26) | 101 (16) |
| | MDD | 9 (2) | 3 (3) | – | 12 (2) |
| Military combat | PTSD | 8 (2) | 2 (2) | – | 10 (1) |
| | SUD | 13 (3) | 1 (9) | – | 14 (2) |
| | BPD | 5 (1) ^e | – | – | 5 (8) |

MDD, major depressive disorder; PTSD, posttraumatic stress disorder; SUD, substance use disorders; BPD, borderline personality disorder; PD, personality disorders.

^aPatients with MDD may have a comorbid PD diagnosis and may have had other Axis I diagnoses.

^bNumbers in parenthesis represent percentages of participants who reported the type of experience and endorse the type of disorder from a particular ethnic group.

^{c, d}All patients with PTSD and SUD also have a PD diagnosis, and may have had other Axis I comorbid diagnoses as well.

^e
n=462.

^f
n=91.

^g
n=81.

^h
n=634 (missing values).