Trauma and Diverse Child Populations

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• Culture • Childhood • Adolescence • Trauma

The importance of cultural diversity in the study of childhood trauma has long been appreciated intuitively. Acquiring the empiric evidence to guide assessment and treatment, however, has been a slow and arduous process, which is not difficult to understand given that culture is a fluid entity relevant to infinite subpopulations. Despite the difficulties, research in the area of childhood trauma has increasingly endeavored to examine and understand issues of culture and diversity.

TYPES OF TRAUMA

Estimates of lifetime prevalence rates of trauma exposure have been challenging because of difficulties with attempts to quantify the nature of trauma, duration, diagnostic criteria used, cultural factors related to the meaning of the traumatic event, and the available support during and after the trauma.[1] There are varying reports of the prevalence rates of childhood trauma in the literature. In 2008, Cohen and colleagues[2] reviewed data and reported that up to 68% of youth in a primary care setting had been exposed to potentially life-threatening events (PTE) and greater than half of these individuals have encountered multiple PTEs. A prospective study involving controls and childhood maltreatment survivors found 98.9% of the 882 participants reported at least 1 traumatic event by the 40 years of age. In this study, the rates of multiple interpersonal traumas were more pronounced in child maltreatment survivors, but the rate of other types of traumatic exposures (ie, natural disasters, combat experience,

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human made disaster, and so forth) were similar to controls. These results, in keeping with previous studies, pointed to greater revictimization rates among individuals with childhood trauma histories.

LITERATURE REVIEW

In this section, the authors summarize key findings of a review of the current literature (**Figs. 1** and **2**) as it pertains to the influence of culture on: (1) incidence of trauma, (2) mental health impact of trauma, (3) resilience, and (4) cultural approaches to care and healing.

Incidence and Prevalence

A comprehensive literature search of trauma and diverse child populations for the years 2000 to 2010 is presented in **Fig. 1**. The pie chart is a visual representation of the most likely types of sources of trauma found in the backgrounds and histories of these children and corresponds to the following percentages: sexual abuse 24%, physical abuse 9%, psychological maltreatment 0%, neglect 21%, terrorism 9%, natural disasters 1%, refugee trauma or war zone trauma 1%, domestic violence 11%, complex trauma 0%, traumatic grief 0%, community violence 1%, school violence 2%, medical trauma or medical child abuse 0%, and other trauma 43%.

Another search using identical parameters and databases as in **Fig. 1**, but expanding them to include the years 1990 to 2010 is represented in **Fig. 2**. The bar graph demonstrates a dramatic increase in the volume of research relating to trauma and diverse childhood populations from 1990 to the present.

The development of trauma-related maladaptive symptoms has been shown to vary dependent upon trauma type and cumulative rates of exposure because of cultural and ethnic variables. In 2009, Kar delineated youths' risk for subsequent posttraumatic stress disorder (PTSD) associated with trauma type noting natural disasters

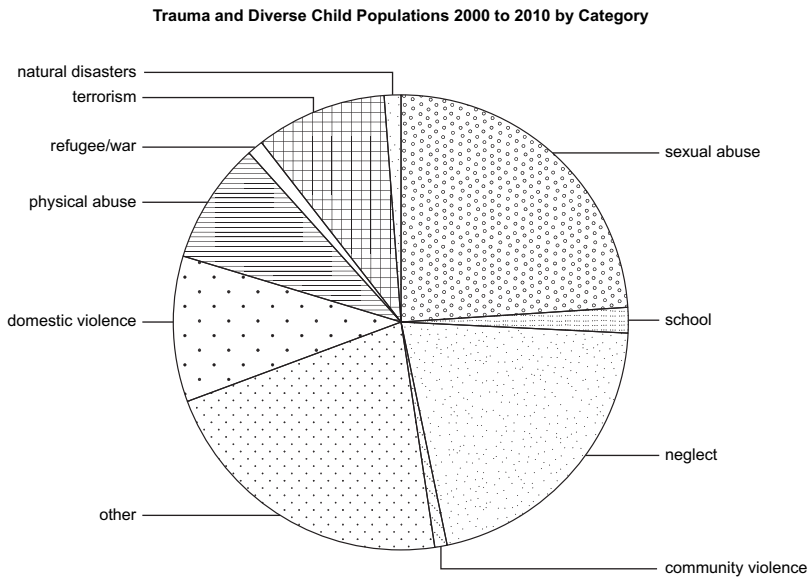

Fig. 1. Trauma and diverse child populations 2000 to 2010 by category. (*Courtesy of* Lee Carlisle, MD, Seattle, WA.)

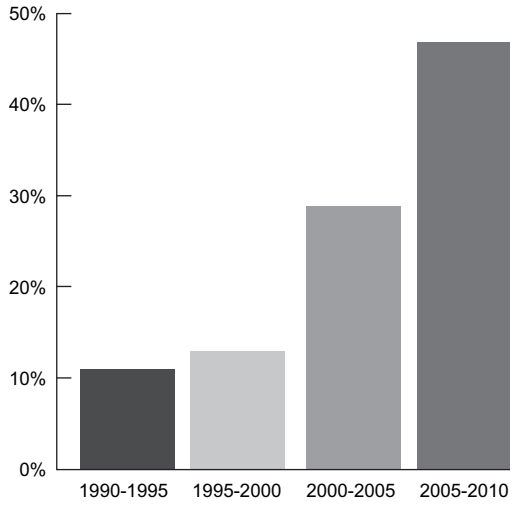

Fig. 2. Trauma and diverse child populations. (*Courtesy of* Lee Carlisle, MD, Seattle, WA.)

(earthquakes, hurricanes, floods, tsunami, cyclone, and so forth) in the range of 5% to 43% or greater, and man-made disaster survivors (community violence, war, terrorism, and so forth) with higher rates of PTSD (30% to 100%).[1] In 2009, Courtois and Ford outlined Terr's (1991) differentiation of trauma types and prevalence rates.[3,4] Trauma types were delineated based upon frequency, type I traumas were described as the result of single, unexpected occurrences; whereas, type II (complex traumas) were described as repetitive or chronic in nature. The prevalence rates varied between types. According to research, type II trauma is more prevalent and is associated with a greater risk for developing PTSD versus type I trauma (33%–75% vs 10%–20%).[3]

Research concerning effects of cultural diversity on child sexual abuse (CSA) accounted for the greatest number of studies and more empiric data than any of the other childhood traumas. It also generated the greatest amount of questions, confusion, and conflicting evidence. For example, studies of cross-cultural differences in CSA have generated widely varying results. In 1984, Kercher and McShane[5] found that more Latino women reported child sexual abuse than African Americans or non-Latino whites. In 1986, Lindholm and Wiley[6] found African American children reported higher rates than Latino or non-Latino whites, who both had similar rates. In yet another study from 1994, Urquiza and Goodin-Jones[7] found lower levels of CSA among Latino college students.

Similar inconsistencies have been present in studies addressing willingness to disclose, severity of abuse, and emotional response to CSA. Comparisons across studies were difficult because of varying research methods, nonuniform definitions of CSA, and the presence of study subjects from multiple cultures within broad ethnic groups researched.

Among Asian Americans, Zhai and Gao[8] found lower rates and lower recurrence of child maltreatment as compared with other cultural populations. In regard to the type of abuse, Asian Americans had lower rates of neglect and sexual abuse and higher rates of physical abuse when compared with other cultural groups. The investigators proposed that beliefs in physical punishment and the value of parental authority were risk factors for physical abuse in this population.

In a unique study, Freisthler, Bruce, and Needell[9] applied spatial regression procedures to 940 census tracts in California to explore the impact of neighborhood processes on child maltreatment. For African American children, they found higher rates of maltreatment were associated with higher rates of poverty. In addition to this expected finding, however, they also found a higher density of off-premise alcohol outlets correlated with higher rates of maltreatment. Decreased rates of child maltreatment for African American youths were associated with an increase in population since the 1990 census, neighborhoods consisting of a higher percentage of African Americans, and neighborhoods with an influx of more new residents. Similarly, percentages of Hispanic youth in neighborhoods also correlated with decreases in reports of child maltreatment. The investigators hypothesized that neighborhoods were less likely to report child maltreatment as they became more segregated or that these neighborhoods became less suspicious of parenting choices of their neighbors as caseworkers and residents became more familiar with the parenting styles. Child-care burden, defined by the number of adults (>20 years of age), children (<13 years of age), and the percentage of elderly residents, was also assessed. Higher rates of child maltreatment were correlated with increased child-care burden only in non-Hispanic white children, contrary to the hypothesis that neighborhood disorganization results in higher maltreatment reports. What may be representative of disorganization in one culture may be strength in another culture.

Mental Health Impact of Trauma

Roberts and colleagues[10] looked at race/ethnic differences related to PTSD trauma type and help seeking. African Americans and Hispanics had higher risk of child maltreatment; whereas, Asian Americans, African American men, and Hispanic women had higher risk of war-related events than non-Hispanic whites. Among those exposed to trauma, PTSD risk was slightly higher among African Americans and lower among Asian Americans compared with non-Hispanic whites.

A prospective study of 574 children aged 5 to 21 years, by Lansford and colleagues,[11] explored early physical abuse and its association with adolescent sequelae in work, romantic relationships, parenthood mental health, and violent delinquency. With a particular focus on race and gender, they found significantly greater effects of early physical abuse on later violence in African American youth as compared with non-Hispanic whites and girls versus boys. Researchers speculated poorer outcomes for African Americans were caused by minority status associated with increased rates of residential instability, residing in violent neighborhoods, experiences with racism, fewer opportunities for mental health care, or inadequate mental health care.

Studies have documented the risk for revictimization is greatest among CSA survivors. Other investigators delineated adverse childhood experiences, such as emotional withdrawal by a caretaker, physical neglect by a caretaker, a caretaker's failure to provide protection, sexual abuse by a non-caretaker, and any type of sexual abuse, were found to be predictive of future victimization.[12,13]

Traumatic experiences have been documented to occur within the context of immigration. Literature findings delineating the adverse mental health sequelae that were outside of the scope of this literature review have been summarized by these authors. Trauma exposure for immigrant children, in addition to encompassing the same, full spectrum of risk as other youth, is aggravated by the unique process of immigration, a process that, by itself, is inherently traumatic. Immigration trauma can be broken down into 3 phases: preimmigration, migration/journey, and resettlement.

Preimmigration trauma occurs in the child's homeland and often includes exposure to violence and persecution. Bolea and colleagues[14] explored the experiences of Sudanese immigrants in the Midwest for whom murders of parents and siblings were common in this phase. Children have also witnessed torture and rape of family and community members; whereas, others have been coerced into committing these acts as child soldiers. The investigators propose that the grieving process associated with these traumas is often overlooked because, despite the fact the traumas occurred there, these children still experience the loss of their homeland. Finding the support from family or immigrating community may be difficult because parents and other adults are suffering from the same traumas.[15]

Migration traumas include dangerous, often long, journeys, separation from parents or other family members, and those associated with detention facilities and refugee camps. In their flight to safety, Sudanese immigrants experienced starvation, attacks by lions, and near drowning in rivers inhabited by crocodiles. The camps were also dangerous, with scarcity of water, food, and medicine. The foster parents of one child substantiated the reports of the lack of safety in the camps as exemplified by their foster child hiding his clothes and shoes each night because they had been stolen as he slept in camps.[14] Children who are separated from family members experience higher rates of trauma and associated depression, anxiety, and PTSD symptoms as compared with accompanied minors.[16] Growing up with the uncertainty associated with these camps and facilities causes many children to lose hope of ever getting a new home.[15]

Resettlement traumas are about adapting to a new culture. Immigrant children, in addition to dealing with racism and stigmatization in both the neighborhood and school, have been described as cultural brokers because of their tendency to acquire language faster, which often leads to intergenerational tensions at home.[16]

Ngo and Le[17] investigated serious violence in immigrant youth of Chinese and Southeast Asian origins. The Cambodian and Laotian youth were exposed to the highest levels of stressors. Physical abuse in all groups except Chinese youth was a predictor of violence. The individual's level of perceived support buffered against most stressors. This finding was in contradistinction to acculturation, intergenerational conflict, and individualism, which predicted more violence.

Additional data obtained outside of the literature review in **Fig. 1** revealed factors associated with the negative impact of natural disasters on childhood mental health. In 2006, Thienkrua and colleagues[18] reported on data collected at 2 and 9 months after the tsunami. These researchers utilized a modified version of the PsySTART Rapid Triage System, the University of California at Los Angeles PTSD Reaction Index, and the Birleson Depression Self-Rating Scale and noted that the presence of PTSD and depression was highest among children who were displaced and resided in camps. A total of 75% of the children in displacement camps had direct contact with tsunami exposure. PTSD symptoms were seen in 13% of children in the camps in comparison to those from unaffected villages (6%). PTSD symptoms persisted in the children residing in camps at 9 months (10%). The prevalence of depressive symptoms remained the same in children residing in camps: 11% at 2 months and 12% at 9 months. Risk factors for PTSD symptoms included delayed evacuation times, displacement, increased exposure to disaster, perceived life danger of either self or loved ones, experiencing fear or anxiety during traumatic exposure, and sustaining a physical injury. Risk factors for depressive symptoms included perception of life or family endangerment and older age.

When youth have been exposed to natural disasters, war, and family violence, the risk for subsequent psychiatric sequelae are increased. In 2008, Catani and colleagues[19] examined this relationship with childhood tsunami survivors and found

higher rates of PTSD (30.4%) and major depression (19.6%) and previous and current periods of suicidality (22.6% and 17.2% respectively) in children with prior war exposure, family violence, and father's history of alcohol intake.

In a prior review of Hurricane Katrina's impact on childhood mental health, Drury and colleagues[20] cited disrupted mental health services, and inadequate, poorly coordinated governmental responses as infrastructure deficits that contributed to initial challenges with supporting the mental health of Katrina survivors. These investigators reported data from the Kaiser Foundation (2007) that noted worsening of mental health status of adults (15%) and their children (4%) and lack of access to mental health services for children in the 6 months before this study (9%).[21] One study reviewed in this manuscript identified PTSD symptoms in a multiethnic school-age population to be 50% (62.5% who remained in New Orleans vs 43.5% who evacuated before the hurricane).[22] Of the children who screened positive for PTSD, 88.% were found to have a comorbid psychiatric disorder with separation anxiety disorder and oppositional defiant disorders most common. Two favorable intervention studies were cited; group formats utilizing relaxation and exposure therapy, and cognitive behavioral therapy and narrative therapy in either group or individual formats were all found to reduce anxiety symptoms in hurricane survivors.

Recent cross-sectional data from Peters and colleagues[23] identified the risk of increased alcohol and drug use among 170 African American and Hispanic-American males after Hurricane Ike. These researchers identified statistically significant use of substances was increased in boys (aged 9–19 years) who attempted to suppress thoughts related to the hurricane: alcohol ($P<.5$), marijuana ($P<.1$), codeine cough syrup ($P<.00$), antienergy drinks ($P<.00$), crystal methamphetamine ($P<.00$), and sildenafil citrate (Viagra; [$P<.00$]). Similar to other studies that identified increase substance use in adults following disasters, Peters and colleagues found increased rates of substance use in a child and adolescent population.

Resilience: Protective and Risk Factors

Given high rates of lifetime trauma exposure, attention to protective and risk factors will aide in the understanding of which youth are most likely to suffer adverse and long-standing sequelae of trauma. Both biologic and psychosocial factors have been associated with psychological resilience. More recent attention has been focused on exploration of the role of environment and genetic influences on the stress response during development. Heritability has been shown to contribute to 30% to 40% of the risk to develop mood and anxiety disorders including PTSD.[24]

Gillespie and colleagues[24] summarized data reported on this topic. Stressful life events experienced during development have been shown to alter the hypothalamic-pituitary-adrenal (HPA) axis, which can result in subsequent anxiety or mood disorders. Predisposing genetic variables lend either toward the development of vulnerabilities or resilience in youth exposed to traumatic events. Scientists have identified FKBP5 and CRHRI as 2 genes involved in the regulation of the HPA axis following exposure to traumatic events. Additional data reviewed by Gillepsie and colleagues suggested that a critical period exists during which brain exposure to corticosterone affects fear learning that is modulated by the quality of maternal care. Therefore, when trauma is experienced within a supportive environment, an amygdala-dependent emotional circuit is developed that can distinguish between nonthreatening and threatening environmental cues.

Resilience has emerged as an independent research issue involving a plethora of interesting social and cultural considerations. DuMont and colleagues[25] prospectively followed a cohort of CSA, physical abuse, and neglect cases matched with

nonabused children of similar age and ethnicity over 22 years. Eight domains of resilience were measured: education, psychiatric disorder, substance abuse, official reports of arrest, self-reports of violent behavior, employment, homelessness, and social activity. Overall, 48% of abused children compared with 61% of controls were resilient in adolescence, and in young adulthood, 30.2% compared with 46%, respectively. Nonwhites were statistically more likely to be resilient in adolescence. Individuals who were shown to be consistently resilient throughout adolescence and young adulthood had the following characteristics: female and either lived with both parents, had a long first placement, or had a highly supportive relationship. Nonresilience was associated with being male, white, and either having a brief first placement, less likely to live with both parents, or less likely to have a supportive relationship. This study contributed to the field's understanding of resilience identifying that female, African Americans who were maltreated in childhood appeared to be more resilient in this sample.

Children exposed to trauma demonstrate higher rates of delinquency. Several studies have now demonstrated that a strong ethnic identity can be a mitigating factor in delinquency following childhood trauma. Bruce and Waelde[26] studied 307 adolescents in the California Bay Area and found higher levels of ethnic identity correlated with less delinquency in the presence of increasing trauma symptoms. This protective effect of ethnic identity is much stronger for minorities than for non-Hispanic whites.

Zhai and Gao[8] found lower rates of neglect and CSA among Asian Americans. Protective factors were thought to arise from the focus on family harmony, reputation, and high degree of indulgence of preschool children. However, when CSA did occur in a study involving South Asian immigrant women, Singh and colleagues[27] used semistructured interviews and found the following protective factors: sense of hope, South Asian social support system, social advocacy, and intentional self-care.

Castro and colleagues[28] identified resilience in Latino adolescents whose fathers were illicit drug users. Family traditionalism, specifically the conservative cultural values of respect for elders and family traditions, and sense of social responsibility toward the cultural community were all found to be protective. Austin[29] studied connections between use of alcohol, tobacco, and other drug use and violence among rural native Hawaiians and suggested ethnic pride to be protective against violent behavior. Siqueira and Crandall[30] looked at differences in risk and protective factors for binge drinking among adolescents from 6 Hispanic subgroups in Florida. Their conclusion was that prevention programs focused on Hispanic subgroups ethnically rather than addressing all Hispanics as one culture.

Moscardino and colleagues[31] used semistructured interviews with caregivers of child survivors of the terrorist school siege in Beslan, Russia in 2004 and suggested return to normality, reinforcement of the positive, good social supports, and culturally shared values toward the common threat of possible future terrorist attacks as protective factors. Spilsbury and colleagues[32] found, as have others, nonwhite ethnicity to be a protective factor for behavioral problems in children exposed to domestic violence.

The escalating HIV/AIDS epidemic in Tanzania and Kenya raised concern by Lalor[33] of increased CSA related to a practice in which infected individuals use sex with a child to cleanse themselves. Plummer and Njuguna[34] collected data from 36 professionals from a variety of tribal groups across Kenya and found their concerns to be similar. Protective factors were based on traditions and religion, criminal punishment, rigid gender roles, and the high value placed on a female child's virginity. Risk factors, which included strict patriarchy, inflexible gender roles, and low emphasis on children's rights, were likewise deeply rooted in culture, the same culture in which the

protective factors were present. The consensus of this study was that sexual abuse is clearly intertwined with culture and therefore any prevention and treatment approach would, by necessity, need to be culturally relevant.

Psychological resilience after trauma has been documented in diverse child and adolescent populations. Individual, family, community, and cultural variables have been identified that can support posttraumatic growth and development in children exposed to trauma. Further study is warranted to develop clinical application.

Cultural Approaches to Care and Healing

When experiencing psychological distress, racial and ethnic minorities are less likely to follow up with traditional mental health providers while experiencing psychological distress and more likely to seek help through family, faith leaders, or through folk medicine.[35] All minority groups (African Americans, Asian Americans, Hispanic Americans) were less likely to seek treatment for PTSD than non-Hispanic whites and fewer than half of minorities with PTSD sought treatment in the study conducted by Roberts and colleagues.[10] These authors reviewed the following factors contributing to decreased help seeking: (1) stigma related to mental health disorders and treatment, (2) lack of desire to pursue and receive psychological support outside of the family unless under extreme conditions, (3) perceived ethnic or racial bias in mental health or health care providers, and (4) decreased access to health and mental health care in lower socioeconomic communities. The findings from Roberts and colleagues indicated that PTSD and other psychiatric sequelae of childhood trauma among US race and ethnic minorities have been largely undiagnosed and untreated, indicating a need for investment in accessible, culturally sensitive treatment options.

CLINICAL ASSESSMENT/DIAGNOSTIC CHALLENGES

A myriad of adverse health and mental health sequelae of childhood trauma have previously been described in the literature. When conducting a mental health evaluation of a youth following a traumatic event, there are many broad areas or domains to be assessed. In addition to information gathered through clinical interviews and collateral reports, psychometric instruments have been useful to assist with the assessment process of children and adolescents who have experienced trauma; low agreements between caregiver and youth reports of internalized symptoms warrant multiple informants and psychometrics. **Box 1** contains a review of psychometric tools used in diverse youth populations.[36–38]

The authors of this article used Kendall-Tackett's outline of 4 potential pathways following childhood maltreatment as a framework for child trauma assessment.[12] In addition to the 4 areas identified by Kendall-Tackett (behavioral, social, cognitive

Box 1
Trauma and diverse child populations

Semistructured and self-report measures have been summarized in the literature by Spates and colleagues,[36] Lemos-Miller and Kearney,[37] and Hawkins and Radcliffe[38]:

1. Semi-structured: Child and Adolescent Psychiatric Assessment: Life Events Section and PTSD Module, Children's PTSD inventory
2. Self-report: Children's PTSD Inventory, Trauma Symptom Checklist for Children, Child PTSD Symptom Scale, Screen for Child Anxiety Related Emotional Disorders, Children's Depression Inventory, Posttraumatic Cognitions Inventory, Adolescent Dissociative Experiences Scale

and emotional), the authors included a fifth pathway to address cultural factors to be considered in the clinical evaluation of a youth.

Behavioral

Among all of the pathways, the behavioral outcomes of trauma are the best described, including harmful activities, such as the misuse and abuse of substances (tobacco, alcohol, and illicit substances); disordered eating; self-injurious behavior; suicide attempts and ideation; high-risk sexual behavior; and poor sleep hygiene. These harmful behaviors often result in subsequent medical and psychiatric sequelae. During initial and subsequent evaluations, traumatized youth warrant screening for individual (suicidality; self-injurious behavior; substance intoxication/withdrawal; high-risk sexual practices; and aggression toward others, property, and so forth), family (domestic violence, physical, sexual, or psychological abuse by current caretakers), and community (community violence) safety concerns. Vital signs; urine toxicology screens; and laboratory data to assess the nutritional and metabolic status, the presence or absence of sexually transmitted diseases, and general health of the youth have been recommended based upon clinical history. In addition to the monitoring of safety concerns, the encouragement of consistent feeding and sleeping schedules and the return to normal routines have been shown to improve clinical outcomes of trauma survivors.

Social

Social pathways of childhood trauma survivors lead to adverse outcomes in adulthood. These adverse outcomes are related to interpersonal styles, victimization rates, and rates of homelessness. Kendall-Tackett reviewed the data of Becker-Lausen and Mallon-Kraft (1997) that described the maladaptive interpersonal styles of childhood maltreatment survivors.[39] Becker-Lausen and Mallon-Kraft characterized individuals as either manifesting avoidant or intrusive patterns of interacting with others based upon varying degrees of interdependency, self-disclosure, and warmth. When comparing the interaction styles, individuals who demonstrated an avoidant style were described as having low self-disclosure, low interdependency, and low warmth, and individuals who demonstrated intrusive styles were described as having high interdependency, high self-disclosure, and an excessive need for closeness. Both of these patterns of interpersonal styles led to impaired social interactions and limited social support. Prior studies have highlighted the association between adequate social support and good health behaviors, particularly in individuals of lower socioeconomic status. Obtaining historical information from the youth and collateral reports will assist in identifying potential maladaptive interpersonal styles to be addressed during treatment planning.

As previously discussed, there is a high risk of revictimization among CSA survivors. With revictimization, the trauma survivor has an increased risk of acquiring a sexually transmitted disease and for chronic stress negatively impacting health and psychological wellbeing. Given the risk of revictimization, ongoing surveillance for safety concerns is indicated in conjunction with treatment plans, including a formal mechanism to improve safety awareness.

Homelessness has been identified as another potential social consequence of childhood trauma. Sexual and physical abuse in studies involving women have shown that abused women with similar socioeconomic status were more likely to be homeless in comparison to their counterparts who were domiciled. The association between family violence, separations caused by foster care placements, and homelessness place children with histories of family violence at risk for subsequent traumas and fragmented

social networks. In addition, a disproportionate number of minority children from underrepresented backgrounds have been placed in the foster care system, which carries added risk for potential homelessness.[40] Homelessness has caused and exacerbated harmful health effects related to malnutrition, lack of medical care, inclement weather exposure, increased risk of physical injury, and lack of routine hygiene.

Cognitive

Beliefs and attitudes have been shown to impact health. The internal working model has been studied as a framework individuals have used to interpret the motives or actions of others and stressful or negative life events. Childhood trauma survivors have been described to distort reality in multiple domains, negatively interpreting life events, underestimating their own capacity to deal with real and perceived danger, and overestimating adversity and danger. Cognitive distortions such as these have increased psychological distress in trauma survivors and increased the likelihood of depression. Interpersonal trust and optimism have both been linked to longevity; however, childhood trauma survivors have less potential for both of these cognitive patterns based on prior adversities. Other investigators have also described the relationship between traumatized youth's cognitions and psychological symptoms. Cognitions related to traumatic experiences have been shown to be key factors for the onset of PTSD and emotional dysregulation. Obsessive thoughts; negative self-appraisals; and avoidant coping strategies, such as thought suppression, have been found in maltreated youth.[37] Within the context of a mental health assessment, eliciting information regarding the youth's cognitions and related emotions associated with traumatic events has been an essential component of case formulation and the identification of appropriate treatment recommendations.

Along with having a propensity to develop cognitive distortions, the literature has described a frequent misperception of perceived danger in childhood trauma survivors. These misperceptions have resulted in increased levels of cortisol or stress hormone levels leading to immune system suppression, neurotoxicity, increased rates of chronic diseases, and slower wound healing. Mulvihill further reviewed adverse health outcomes of childhood trauma and noted the increased rates of chronic diseases, including ischemic heart disease, liver disease, cancer, chronic lung disease, and skeletal fractures.[41] As previously discussed, the mental health evaluation and treatment of childhood survivors has health implications that call for collaboration with primary care physicians to assure optimum physical health over the lifespan of this patient population.

Emotional

Over the past 3 decades, researchers have identified the significance of negative emotions related to childhood trauma. Researchers have described unique challenges that clinicians may face who attempt to conduct culturally sensitive evaluations during or after a traumatic event for youth and families.[1] In conjunction with being attuned to the cultural nuances of clinical presentations, health and mental health care providers who work with the pediatric population are also called to take into consideration the developmental phase and cognitive capacity of the individual. The limited verbal abilities and level of cognitive development have been identified as barriers clinicians encounter during the assessment and treatment process. Recognizing the impact of development on clinical symptoms, the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) has added specific descriptors for children and adolescents to aide in the diagnosis of psychiatric disorders. Symptoms following traumatic exposure may overlap with the symptoms of several diagnostic categories, including anxiety,

mood, disruptive, and substance abuse disorders. Following exposure to traumatic events, if symptomatic, the majority of youth will experience either anxiety, or mood symptoms following a traumatic event.[38] This next section will focus specifically on pediatric and adolescent posttraumatic stress disorder and associated impairments and conditions following traumatic exposures.

Since the introduction of PTSDs, many investigators have proposed alternate criteria to delineate the full range of symptoms extending beyond PTSDs classic triad of intrusion, avoidance, and hyperarousal seen in youth with complex trauma histories. In 2009, Courtois and Ford reviewed the scientific literature's call for attention to posttraumatic adaptation and a broader examination of the complete range of symptoms following childhood complex trauma.[3] They cited the work of van der Kolk[42] and the National Child Traumatic Stress Network, which has supported the incorporation of Developmental Trauma Disorder (DTD) in the upcoming addition of DSM V (Fifth Edition).

Similar to disorders of extreme stress not otherwise specified described by Herman and van der Kolk in adults,[3,43] DTD would include developmentally adverse interpersonal trauma as an objective Cluster A1 criteria. DTD would also provide criteria to denote 3 additional features outside of classic PTSD that highlight behavioral and relational challenges more pronounced in traumatized youth: (1) dysregulation triggered by trauma related stressors negatively impacting emotions, cognitions, physical/somatic, behavior, self attributions, and behavior; (2) beliefs altered by recurrent betrayals and occurrences of abandonment that have negatively impacted personality structure development, creating a lack of trust in others and future expectations of revictimization and self-blame; and (3) impairments in major domains of functioning (interpersonal relationships [family or peer], school, employment, and legal issues). The range of dysfunction caused by complex trauma spans all 5 axes, including (1) Axis I: frequent comorbidity with mood disorders, somatoform disorders, eating disorders, substance abuse disorders, and other anxiety disorders; (2) Axis II: personality disorders; (3) Axis III: acute and chronic health conditions described previously; (4) social, educational, vocational, and legal challenges; and (5) overall impaired functioning.

Cultural

As previously described, exposure to traumatic events in childhood has occurred globally in varying degrees among all ethnic groups. Culture has been shown to influence and modify behavioral and emotional responses to trauma, the cognitive beliefs regarding the trauma itself, and impact of the societal roles of the family, and the community's individual and collective response to trauma. Since the establishment of cultural psychiatry in 1969, this field has highlighted the importance of factoring in cultural influences when evaluating behaviors, help-seeking patterns, and response to psychiatric treatment. Cultural perspectives are needed to differentiate between normative and maladaptive behaviors. Models for conducting culturally sensitive assessments for children, adolescents, and families have been described.[44] Hays's model, which incorporates various aspects of an individual's identity and group affiliations, has been described in the literature.[45,46] Brown describes Hays's acronym ADDRESSING to delineate the following social locations: A: age-related factors (chronologic age and cohort); DD: disability (acquired and developmental ability, visible, and invisible); R: religion and spirituality; E: ethnic origins, culture, race/phenotype; S: social class, current, and former; S: sexual orientation (lesbian, gay, bisexual, heterosexual, questioning); I: indigenous heritage/colonization (history of colonizer); N: national origin (immigration status, personal or family; refugee); G: gender and biologic sex (male, female, intersex); and gender identity (masculine, feminine, or transgender).

The challenges associated with the evaluation of children and adolescents within an appropriate sociocultural context have been well documented. Lack of knowledge about a particular culture and personal clinician bias negatively impact clinical encounters.[44] Likewise, an individual or family's negative bias against mental health care and the mental health provider's cultural background also threaten or interfere with the successful establishment of a therapeutic alliance.

Within the DSM, there are 2 sections of content that have been helpful to identify cultural considerations for mental health clinicians. The DSM-IV-TR (Text Revision) outline for cultural formulation (2000) has been used as a tool to improve the skill of the clinician to address these cultural concerns in a systematic manner; this issue of the DSM also included a glossary of culture-bound syndromes.[47] In 2001 Gaw reviewed culture-bound syndromes and idioms of distress related to acute stress disorder, such as falling out in African American and Caribbean cultural groups, and proposed utilizing DSM IV diagnostic categories for clinical application.[48] For additional information regarding conducting culturally relevant child and adolescent mental health assessments, refer to article by Pumariega and colleagues elsewhere in this issue.

Treatment

Because of the multiple domains that childhood trauma affects, a multidisciplinary team that addresses the biologic, psychological, and sociocultural sequelae has been proven most effective. Using the behavioral-social-cultural-cognitive-emotional framework proposed in the assessment section, the authors recommend a similar approach for treatment. Safety concerns of the youth or family identified in the evaluation are addressed throughout the assessment and treatment phases. Using this clinical vignette, the authors explore a step-wise assessment and treatment process of a traumatized youth based upon clinical guidelines and research evidence.

CASE PRESENTATION

Preflight

Astrid is a fictitious name used to protect the identity of a 12-year-old Haitian girl. Before January 12, 2010 she lived in Port-au-Prince, Haiti in a small concrete house with her mother and 2 younger sisters. Before her father left the household, he would frequently physically abuse Astrid's mother. His departure led to a worsened financial state for her family.

Flight

When the earthquake occurred that afternoon, Astrid was playing outside with her 8-year-old sister. As the quake shook her house, Astrid and her sister were terrified. While they watched, their house collapsed, killing Astrid's mother and her 5-year-old sister. Astrid was terrified during the earthquake and then horrified as she ran to the house, lying in rubble. She looked for her mother and sister and did not find them. An adult neighbor found Astrid and her sister and got food for them amid the chaos. Astrid and her sister had not been physically injured but were frightened and crying. Over the next 2 weeks, Astrid stayed with her neighbor's family and obtained food periodically. They slept outdoors. Astrid was withdrawn and generally noncommunicative. In an effort to cope with the recent tragedy, Astrid and her sister drank teas to heal the soul from mourning daily and attended prayer vigils with their neighbors held across the city; however, no formal mental support was accessed.

Resettlement

Astrid's maternal aunt, Ruby, lives in the Haitian community in Boston. She had immigrated to Boston 15 years previously to attend college and remained as a teacher in a public high school. Ruby is married to a fellow Haitian and has 2 children (5 years old and 2 years old). She learned of her sister's death in the earthquake, which left Astrid and her sister orphaned. In the 2 weeks immediately following the earthquake, Ruby made arrangements to bring Astrid and her sister to Boston. They were able to come to Boston to stay with her aunt in early February. Astrid spoke Creole, which her aunt's family also spoke. She shared a room in the family's apartment with her sister and was registered to attend the neighborhood middle school in Boston.

Shortly after arriving in Boston, Astrid began waking up each night crying with nightmares. She also began complaining of chest pain, abdominal pain, and dizziness followed by syncopal-like episodes at school, regularly visiting the school nurse. She also began complaining before school. Her aunt became alarmed and took Astrid to visit the local health center. Astrid would not speak with her doctor but her physical examination, chest radiograph, and cardiogram were all normal. The physician asked how Astrid was doing emotionally and Ruby assured the doctor that she was "OK."

Astrid's teacher, Mrs Lewis, contacted Ruby about Astrid's behavior and performance in school and recommended that she take Astrid for a mental health evaluation. Ruby became very defensive and did not want to discuss Astrid's difficulties with her teacher. Ruby felt that Astrid was behaving appropriately at home, and knew that she was having significant difficulty concentrating in school and was not attempting schoolwork. She was aware that Astrid's emotions fluctuated between crying; withdrawal; and complaining of pain, dizziness, and periods of blacking out. Ruby felt more comfortable sharing Astrid's struggles with her parish's priest, who recommended prayer sessions with church leaders to heal Astrid's soul.

After a month of taking Astrid to meet with the priest and participate in prayer sessions, a fellow congregant mentioned that her cousin had received help from the Boston Haitian Mental Health Network for similar problems following the earthquake. Ruby was encouraged to take Astrid to a local neighborhood mental health center that had an affiliation with the Haitian Mental Health Network. Ruby relayed to the counselor the difficulties that Astrid had been having at school. Ruby stated that Astrid did play with her sister and would interact with her younger cousins but that at times she would isolate in her room.

The counselor contacted a member of the Haitian Mental Health Alliance who met with Astrid and her aunt. This therapist spoke with Astrid in Creole and helped Astrid explain her pain and discomfort. The Haitian American clinician also helped Astrid begin to talk about what happened during the earthquake. Astrid spoke of her terror when the ground shook and of her guilt about her mother's death and her sadness at missing her mother. She fluctuated between being in pain, being tearful, and acting stoic and dazed. The Haitian American therapist agreed to continue to meet with Astrid. Astrid did seem relieved after talking with the Haitian American counselor.

Five months after the earthquake Astrid was continuing to have nightmares, but was attending school. Astrid was able to play with her sister and was learning English. She was continuing in weekly therapy with the Haitian American therapist.

Astrid's problem list included displacement from her homeland and subsequent language barrier and cultural dissonance between Astrid and her school environment, death of caregiver, and prior and acute trauma exposure from domestic violence and the recent disaster. Using the framework discussed previously, based upon

Kendall-Tackett's and Hay's models, the authors identified the following factors in her assessment. In the *behavioral* pathway, Astrid had not demonstrated any safety concerns or harmful behaviors based upon clinical examination and collateral reports from her aunt and teachers; however, she did receive continued screening for such behaviors throughout treatment.

Historical details from Astrid's case highlighted deficits in her *social* functioning. Following the earthquake, Astrid and her sister experienced an abrupt change in their home life with the traumatic loss of their mother, homelessness, and the temporary lack of basic needs. Case management is beneficial in such instances in assisting with the immediate and ongoing needs of children and families impacted by trauma. Case managers can help families navigate the complexities of interfacing with governmental, social, educational, and mental health agencies and organizations.

During the initial phases of her resettlement with her maternal relatives in the United States, Astrid did manifest a maladaptive interpersonal style seen commonly in childhood survivors as indicated by her avoidant interaction patterns with peers and family. Psychoeducation provided to Astrid, her family, and school personnel assisted with a greater understanding of her trauma sequelae and supported the need for treatment. School-based group cognitive behavioral therapy programs promoting adaptive interpersonal skills have proven effective for trauma survivors (cognitive behavioral interventions for trauma in schools) and could prove beneficial to Astrid.[2] Group interpersonal psychotherapy to target mood, anxiety, and conduct symptoms in refugee children with war-related traumas successfully reduced depressive symptoms in female, but not male, children who participated in Verdeli's 2008 study.[49] In 2008, Rousseau and Guzder reviewed alternate school-based prevention programs aimed at supporting successful postmigration and found them to have longitudinal outcomes that encourage their use to promote protective factors in refugee youth.[50] Astrid and her sister could benefit from participation in school-based intervention to address existing difficulties and prevent subsequent psychiatric sequelae related to trauma, loss, and migration.

With the aid of the DSM cultural-bound syndromes, a consideration for falling out will be made based upon Astrid's symptoms of dizziness that proceed collapse, which may correspond to either a conversion disorder or dissociative disorder. Falling out, or blacking out, as a culture-bound syndrome has been described in the DSM as a culturally recognized idiom of distress in Caribbean populations and seen in the southern United States.[47]

Relocation with her maternal relatives provided Astrid and her sister with a family unit that has previous history with cultural differences between their native country and host country. Her aunt could potentially identify with Astrid's acculturation issues. Ruby initially sought help in her community of faith, but pursued the congregant's suggestion of a formal mental health assessment. In other refugee families, this might not be the case where the practice of voodoo, sometimes seen in this cultural group, and the use of indigenous healers would be the preferred sources of psychological support.

Astrid's initial tendency to use avoidant coping strategies enhanced her likelihood to develop psychiatric sequelae following trauma. Along with these maladaptive strategies, Astrid's *cognitive* distortions were recognized during the clinical interview previously discussed. Within the context of individual psychotherapy, data supports that these cognitive distortions could be addressed using cognitive and behavioral therapy or trauma-focused cognitive behavioral therapy.

In reviewing the *emotional and cultural* pathways of Astrid's case, her diagnoses consisted of acute stress reaction with the potential for posttraumatic stress disorder

and possibly the culture-bound syndrome of falling out. During the initial aftermath of traumatic events after the disaster, emotional first aid strategies and their benefits toward fostering social support and emotional regulation following traumatic events have been well delineated in the literature.[1] A myriad of psychotherapy and pharmacotherapy options could be used in treatment of her symptoms of acute stress. Along with cognitive behavioral therapy modalities, additional recommendations for evidence-based psychotherapy include the use of brief psychoanalytic psychotherapy to explore the traumatic events. This practice has been shown to assist the childhood survivor with anxiety reduction, prevent progression of depression, and process grief.[1]

For refugee children traumatized by war-related violence, narrative exposure therapy (KidNet) demonstrated reduction in PTSD symptoms in this patient population, which was sustained for up to 1 year.[51] This treatment option may have a role in all forms of trauma to assist with the habituation of the trauma response while constructing a narrative of the youth's life events, including past traumas. For Astrid's younger 5-year-old sibling, play therapy and parent-child psychotherapy would be appropriate interventions given her developmental level and cognitive abilities.

Astrid's psychiatric symptoms (anxiety, mood, somatic, and sleep) have improved with mental health services and community support. Therefore, a pharmacologic intervention was not indicated at this point. The role of pharmacotherapy in the context of treating traumatized youth has limited evidence; however, use of psychotropic agents to treat comorbid psychosis, agitation, mood dysregulation, anxiety, and impaired sleep has been recommended clinically. In 2010, Harris and Sargent outlined the current recommendations for adult and pediatric populations, which include (1) antidepressants (selective serotonin reuptake inhibitors, selective serotonin-norepinephrine reuptake inhibitors), (2) adrenergic agents (clonidine, prazosin), (3) atypical antipsychotics, (4) anticonvulsants, and (5) benzodiazepines.[52]

When prescribing for diverse patient populations, observation for the potential impact of cultural and ethnic differences on medication response and or adverse effects is warranted. For more than 30 years, varying responses to psychotropic medications have been described in the literature.[53] In addition to ethnic specific mutations that can impact the metabolism of drugs, there are nonbiologic factors, including diet (herbs, caffeine, and so forth), smoking, gender, and age, that justify consideration.[54] For a more comprehensive discussion of specific ethnic differences in metabolism of psychotropic agents, please refer to Ruiz and colleagues (2000),[55] Ng and colleagues (2008),[56] and article by Lawson and colleagues elsewhere in this issue.

FUTURE DIRECTIONS/SUMMARY

Although some responses to trauma are universal, culture counts in the impact of trauma in children and youth from ethnically and racially diverse groups. Risk and incidence of trauma, manifestations of idioms of distress, psychopathology, and maladaptive responses to traumatic experiences are all culturally modified. Culture plays an important role in what, if any, help is sought for posttraumatic mental health need, whether it be from a mental health professional or someone in the sociocultural realm of the child. This help may be from a family member, a religious leader, or a traditional healer. Culture is an important factor in determining resilience. Both perceived social support and strong ethnic identity have been found to foster resilience in children and youth from US ethnic and racial minority groups.

The statement that risk factors are not predictive factors because of protective factors is highly applicable to diverse children and youth exposed to trauma. Given

the high exposure of minority youth to negative social determinants of health, such as poverty and adverse living environments, it is imperative that we invest in preventive approaches and as much as possible shore up protective factors to buffer against inevitable stress and trauma in distressed, diverse communities. We must also anticipate posttraumatic mental health needs by providing early intervention to eliminate, or at least mitigate, the impact on development and adult outcomes. Future research should explore culturally tailored approaches to intervention and determine promising practices to maximize posttrauma resilience.

Psychiatrists and other mental health professionals must develop relationships across systems and sectors. These outreach efforts include establishing liaison relationships with educational systems, pediatric and adolescent medicine, and faith-based groups to reduce the stigma of mental health help seeking, provide psychological education about the impact of trauma and useful models of treatment (ie, emotional first aid), and maximize our reach for case finding as early as possible so that we may address, in a timely fashion, posttraumatic mental health needs in children and youth to achieve optimal outcomes.

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