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CHILDREN WHO HAVE EXPERIENCED TRAUMA: AN EXAMINATION OF THE ROLE OF RACE, ETHNICITY, AND CULTURAL FACTORS IN PRESENTING SYMPTOMS AND AT THREE MONTH (OR FIRST RECORDED) FOLLOW UP

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A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of
Philosophy at Virginia Commonwealth University

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Abstract

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Child traumatic stress is a pervasive problem that affects the well-being and healthy development of children from all races, ethnicities, and cultures. Major factors known to affect trauma symptoms include type of trauma, level or severity of trauma exposure, and age and gender of children. Utilizing Bronfenbrenner's ecological model, this study measured the additional influence of children's race, ethnicity, and cultural factors on symptoms after trauma. A dataset of children in treatment after experiencing trauma (0-21 years, $N =$ 10,115) from The National Child Traumatic Stress Network (NCTSN), a federally funded initiative that collected longitudinal data across 56 research and treatment centers in the US, was examined, looking at clinical symptoms at baseline and at three month (or first recorded) follow-up. Predictors for symptoms included number of trauma types, age, gender, race, ethnicity (Latino/non-Latino), and three cultural markers, born outside the United States, English as the primary language not spoken at home, and refugee/immigrant status. Results (hierarchical regressions, logistic regressions) confirmed that age, gender, and number of trauma types predict the scores and clinical level of eight validated outcomes (e.g., CBCL externalizing, internalizing; PTSD measures) as well as the total numbers of functional

problems and clinical problems. Results also demonstrated that race, ethnicity, and culture affect symptoms but to a very small extent (i.e., these accounted for little variance) and in varying directions. For example, Black/African American children had lower internalizing scores compared to White/Caucasian children, while being Latino was associated with lower externalizing and higher internalizing scores than non-Latinos. Children with differing cultures sometimes scored better, sometimes worse, than their counterparts. For example, children who spoke English at home and were born in the United States had more functional problems, though fewer clinical problems. At three month (or first recorded) follow up, results demonstrated all children's scores improving. No differences at three month (or first recorded follow up) were found between our predictors in clinical rates except for children with more types of trauma who continued to show a greater likelihood of falling into the clinical range for externalizing and internalizing. Discussion focuses on the possible protective effects of cultural factors and the importance of an ecological model in understanding trauma symptoms in diverse populations.

Children Who Have Experienced Trauma: An Examination of
the Role of Race, Ethnicity, and Cultural Factors in Presenting Symptoms and
At Three Month (Or First Recorded) Follow Up

Child traumatic stress is a pervasive problem that affects the well-being and healthy development of children from all races, ethnicities, and cultures. Post-trauma symptoms experienced by child sufferers stem from a variety of occurrences, including illness (Catherall, 2004), family violence (Grych, Jouriles, Swank, McDonald, & Norwood, 2000), community violence (Cook-Cottone, 2004), natural disasters (Lieberman & Van Horn, 2004), and war (Balaban, 2009). While the majority of children are resilient and will not suffer long-term consequences, nor necessarily need treatment, many others–both with and without pre-trauma vulnerability–will suffer short-term and long-term effects of trauma exposure (Vijayakumar, Kannan, & Kumar, 2006). Whether a child is exposed to one specific type of traumatic event, or to a series of traumatic occurrences, a variety of physiological, developmental, and psychological consequences may result (Catherall, 2004). Such effects can range from mild anxiety symptoms to diagnosed Posttraumatic Stress Disorder (PTSD) and beyond (Cook-Cottone, 2004). It is critical to more fully understand post-traumatic effects in children, as poor developmental outcomes have been found for those children whose symptoms are not identified and treated (Grych et al., 2000). Despite this importance, the literature is in the early stages of understanding child response to trauma (Balaban, 2009), particularly regarding whether children of differing races, ethnicities, and cultures have different responses to trauma and its treatments (Himle, Baser, Taylor, Campbell, & Jackson, 2009).

To examine these factors, we must clearly define them before we are able to explore any effects. *Race* refers to phenotype, specifically physical differences that have a biological route that can be observed by physical appearance (Bradby, 2012). *Ethnicity* refers to membership in a group that has a specific heritage and shares core values, beliefs, and customs (Phinney, 1996; Schwartz, Unger, Zamboanga, & Szapocznik, 2010). In contrast, *culture* refers to shared meanings and understandings that are held by a group of people (Schwartz et al., 2010; Shore, 2002). Included in the definition of culture can be national affiliation and norms (Schwartz et al., 2010). Cultural factors include a broad array of descriptors such as acculturation, country of birth, and language choice. They also may include experiences that create shared meanings, understandings, and norms, such as being a refugee/immigrant.

Some literature suggests that trauma exposure, experience, and coping mechanisms may differ across races, ethnicities, and cultural factors (Chipman, Palmieri, & Hobfoll, 2011; Himle, Baser, Taylor, Campbell, & Jackson, 2009; Roberts, Gilman, Breslau, Bresalau, & Koenen, 2011), but few studies exist that specifically explore the possible roles that race, ethnicity, and cultural factors may have on trauma (Balsam, Lehavot, Beadnall, & Circo, 2010; Harrington, Crowther, & Shipherd, 2010; Lester, Artz, Resick, Young-Xu, 2010; Marshall, Schell, & Miles, 2009; Triffleman & Pole, 2010). Race, ethnicity, and cultural factors may contribute to the range of responses children have to trauma, from serving protective functions to leaving the children with more vulnerability (Wilson & Tang, 2009). Race, ethnicity, and cultural factors may also have unique roles in the way trauma is defined and understood (Aptekar & Stocklin, 1997; Wilson & Tang, 2009). The present study aimed to further expand our understanding of this topic in order to better diagnose and treat children from all backgrounds.

In the following literature review, child trauma and the possible influences of race, ethnicity, and cultural factors will be explored. The specific cultural factors of whether the child was or was not born in the United States, primary language spoken at home, and Refugee/Immigrant status will be focused upon.

First, an ecological framework will be introduced in order to provide a roadmap of how the individual, and his or her race, ethnicity, and cultural factors, can overlap with other environmental and self-factors to contribute to a child's response to trauma. Then, an overview of child trauma and its effects will be presented. Next, the review will discuss factors that have been identified to impact trauma effects, including the type and severity of trauma exposure, and the age and gender of the child. Finally, the review will explore the topics of race, ethnicity, and the cultural factors of country of birth, language spoken at home, and refugee/immigrant status and how they may impact the effects of trauma.

Review of Literature

Ecological Framework Applied To Trauma

Ecological frameworks within psychology have been put forth since the 1960s, and have developed from their initial use to later include Bronfenbrenner's ecological classification system (1979, 1986) and Moos' socio-ecological model of human adaptation (2002). Bronfenbrenner's classification system suggests that development occurs among multiple levels of interaction between the individual and his or her environment. These interactions are bidirectional, occurring both by the individual affecting the environment and by the environment affecting the individual. The levels include the *ontogenic* (individual factors), the *microsystem* (relationships/interactions the child has directly with surroundings including family, school, neighborhood), the *mesosystem* (interactions among the child's microsystems such as the child's parents' interactions with the child's teachers), the

exosystem (larger social system in which child may not be directly involved, such as community resources available and parental work hours) and the *macrosystem* (society and cultural beliefs) (Bronfenbrenner, 1979). Bronfenbrenner identifies the proximal processes as being the most influential in development, especially at the microsystem level, but affirms that outer levels can also have strong influences on inner structures (Berk, 2006).

An ecological framework as applied to trauma can be defined as taking into account Bronfenbrenner's classifications and examining the interactions among the person, event, and environment that led to the individual's posttraumatic response and resilience. Such a model informs treatment by aiming to achieve the best "ecological fit" for the person through the incorporation of the following: a person's unique constellation of experiences/characteristics; the specific factors of the event or events that can be classified as traumatic; and the social, cultural, and political context within which the person and the event has been framed. This model allows for capitalization of resilient factors and community support, without assuming that all victims of trauma need formalized treatment programs (Harvey, 2007). The model further defines "resilience" as multidimensional rather than binary, something that a person either has or does not have. Resilience is seen as transactional, shaped by the interactions among biological traits, social interactions, and other environmental factors which allow for the individual's active participation in shaping–and being shaped–into a resilient being (Rigger, 2001). Because resilience is not all-or-nothing, it becomes possible for a person to suffer and to tap into resilient resources simultaneously (Harvey, 2007).

Current work in the trauma field has begun to yield results regarding identification of some of the areas that should fit within the overall ecological framework, including cultural demands, cultural resources (Hobfoll et al., 2002) and the generational transmission of trauma (Prelow, Danoff-Burg, Swenson, & Pulgiano, 2004). Despite this progress, many

more cultural factors have yet to be identified and explored in the effort to fully understand how trauma is experienced and can be overcome.

The ecological model defines recovery from trauma through examining functioning in eight domains (Harvey, 1996). A person may be impaired in certain domains but express resilience in others. The model, while encouraging and including individual-focused treatment, recognizes that many survivors will not seek or be comfortable with specialized care. For this reason the model looks also towards environmental and community resources that can support recovery. Additionally, its assessment process is robust, and includes not just an evaluation of distress and functioning- but also inquiry into attitudes and values of the society surrounding the person (and relevant family and friends, service providers, community leaders, etc.), as well as any other factors that may impact the ecological map of the person's life. This dynamic set of influences work together in an individual's response and recovery (Harvey, 2007).

Currently, the majority of research involving children and trauma focuses more on individual risk factors and associated psychopathology, and far less on resiliency or group factors in general (Betancourt & Khan, 2008; Fergus & Zimmerman, 2005). By applying an ecological model, resilience and group factors can be better focused upon and explored.

There is a dearth of research that tests and explores the ecological model for trauma, and even less research concerning children. However, a few findings do exist. In two studies involving child soldiers of Sierra Leone, an ecological framework was applied. One study, using a sample of 260 children ages 10-17, involved an understanding of internalizing, externalizing, risk, and protective factors in mental health outcomes. The study identified community acceptance as being associated with decreases in externalizing and internalizing problems of Sierra Leone child soldiers (Betancourt, Brennan, Rubin-Smith, Fitzmaurice, &

Gilman, 2010). In a second study with this population, the focus was on stigma and psychosocial adjustment. Researchers found that the higher the discrimination experienced by the child soldier, the less family/community acceptance that occurred. Additionally, the higher familial acceptance experienced, the less hostility expressed by the child soldiers (Betancourt, Agnew-Blais, Gilman, Williams, & Ellis, 2010). Both of these studies were able to identify factors unique to the Sierra Leone population concerning the effect of trauma that would not have been uncovered had domains beyond the individual not been explored.

Other research conducted using an ecological framework includes studies utilizing the framework for understanding parenting in the face of domestic violence (Levendosky & Graham-Berman, 2000). One study, based on a sample of 69 outpatients of 5-12 years old, tested an ecological suicide risk model across six domains: family support, family stressors, child risk factors, child protective factors, child traumas, and social supports. The child's ethnicity was embedded as a component within the child protective factors, though no mention of cultural values was included (Jackson & Nuttall, 2001). In another study, a cross-sectional community sample involving 654 Australian maltreated children tested outcomes of a therapeutic intervention based on the ecological framework, which allowed the authors to identify and explore variables–including culture–as both a potential risk factor (intergenerational trauma, being part of the non-dominant culture, lack of belonging) and a potential resilience source (Jackson, Frederico, Tanti, & Black, 2009). In a third study, which tested a grief and trauma group model among Hurricane Katrina child survivors, an ecological perspective was utilized to create and test the treatment (Salloum et al., 2009).

Though the literature that utilizes an ecological framework for trauma is sparse, the ability of such an approach to discern more layers beyond the individual–including culture–is profound and suggests a need for further consideration. The study reported here attempts to

begin filling in these gaps by exploring ways in which race, ethnicity, and the cultural factors of country of birth, primary language spoken at home, and refugee/immigrant status may be contributing factors in a child's response to trauma.

Child Trauma Response

Childhood trauma can impact personality, cognitive performance, self-esteem, impulse control, and outlook concerning the future (Pynoos & Nader, 1993). In the immediate aftermath of a traumatic event, children will often cry, be extremely frightened, and exhibit high levels of distress (Cohen et al., 2009). From the time of trauma, most children begin to have repetitive and intrusive thoughts about the event. Intrusive thoughts will often occur during times of relaxation, or when attempting to sleep. Such thoughts may happen in response to environmental triggers that remind them of the traumatic event or elements of the experience. While intrusive thoughts appear common, it is far more unusual for a child to experience dissociative flashbacks, in which the event is re-experienced in vivid detail. Instead, children will often have sleep disturbances in the immediate weeks after the event, including fears of the dark, nightmares, and an inability to remain asleep for extended periods of time (Eth, 2001).

Separation anxiety is another common effect of trauma on children. This may take the form of the child not wanting the caregiver to leave his or her side and may also entail a return to co-sleeping, even for adolescents (Stien & Kendall, 2004).

Child trauma survivors are often pressured by those around them to talk about their experiences, but may feel reluctant or unable to share the full extent of their suffering. Their reluctance may be due to developmental limitations or a fear of upsetting their caregivers. Peers will often hesitate to ask children about the trauma, to avoid further upsetting them and

as a result of being unsure how to broach the topic. Sometimes this may lead to children feeling alienated, different from others, or that others do not care (Smith et al., 1999).

Cognitive changes experienced by traumatized children can be profound. These changes can include concentration problems, which lead to difficulty in recalling past learned skills and in progressing successfully in their education (Stien & Kendall, 2004). Studies have found that traumatized children experience difficulty with memory (Dalgleish et al., 2005; Moradi, Neshat Doost, Taghavi, Yule, & Dalgleish, 1999), with attention (Meesters, Merckelbach, Muris, & Wessel, 2000), and with abstract reasoning (Beers & De Bellis, 2002).

Neurophysiological and biological changes have also have been found to occur within traumatized children (Perry, Pollard, Blakley, Baker, & Vigilante, 1995). The fight-or-flight mechanism is less fully formed in children, and thus traumatized children will often experience hyper-arousal. If not calmed via parental intervention or subsiding of the threat, hyper-arousal can lead to immobilization and then to dissociation as a mechanism of coping. Once dissociation occurs, the child is then able to normalize his or her heart rate and feel calm; however, the dissociation may have other more profound long-term effects (Putnam, Hornstein, & Peterson, 1996;Van der Kolk, 2007). Some traumatized children lose control of the startle response (Ornitz & Pynoos, 1989) or experience changes in their circadian rhythm (Glod & Teicher, 1996). Traumatized children may also be adversely affected by sustained increases of neurotransmitter activity, which can lead to inhibited development of the brain and potential developmental disorders (Pfefferbaum, 1997; Perry, 1994).

Another impact of trauma on children is that trauma survivors will often become mature beyond their years, developing an understanding of their own mortality. This results

in a loss of innocence and can lead to further estrangement from peers and to overall feelings of pessimism about the world and their future (Eth, 2001).

Further, children often develop fears related to the trauma they encountered. These fears can lead to avoidance of many situations and can interfere with daily functioning (Cohen et al., 2009). Child survivors also have been identified as sometimes having survivor guilt, leading to feeling badly that they survived and others did not, or even feelings of self-blame for what happened to them (Tobin & Friedman, 1984).

While all children may become depressed and suffer from high levels of anxiety and even panic attacks as a result of the trauma, adolescents tend to have higher incidences of depression and suicidal ideation (Eth, 2001).

The amount and severity of symptoms experienced often is directly related to the level of exposure to the trauma, with higher levels of exposure leading to more intense symptoms. This effect has been found with different ethnicities and cultures around the world – including Nicaragua (Goenijian et al., 2001), South Korea (Lee et al., 2004), Australia (McDermott et al., 2005), Armenia (Pynoos et al., 1993), and other countries.

In summary, trauma in children can lead to depression, anxiety, and a variety of other internalizing and externalizing symptoms. Trauma can also cause neuropsychological symptoms and physiological changes within the brain (Cohen et al., 2009). The higher the level of exposure to the trauma, the more likely the effects will be profound (Pynoos et al., 1993).

Post traumatic stress disorder (PTSD). PTSD can be defined as an anxiety disorder which occurs in response to a traumatic stressor. PTSD is differentiated according to the Diagnostic and Statistical Manual of Mental Disorders (DSM IV) by (1) persistent re-experiencing of thoughts or dreams about the event, (2) avoidance of cues associated with the

trauma or emotional numbing, and (3) persistent physiological hyperactivity or arousal. These symptoms must be present for more than one month following the traumatic event and cause clinically significant disturbance in functioning. PTSD is classified as acute when present for less than three months, chronic when present for more than three months, or delayed onset when symptoms initially develop six months or more after the trauma (American Psychiatric Association, 1994, DSM IV). In the immediate aftermath of a trauma, some children may experience Acute Stress Disorder (ASD) while some may develop PTSD after a period of time has passed. For diagnosis, ASD and PTSD both require re-experiencing, avoidance, and arousal symptoms for diagnosis. However, in addition to these core symptoms, ASD also requires evidence of dissociative symptoms, such as feeling disconnected to surroundings and difficulty in recalling important parts of the trauma. ASD can only be diagnosed between two days and four weeks after the traumatic event, unlike PTSD, which can only be diagnosed after four weeks (DSM-IV TR; Harvey & Bryant, 1999). It is estimated that one-third of those diagnosed with ASD will develop PTSD (Harvey & Bryant, 1999).

   Prevalence rates of PTSD. Estimates of PTSD prevalence are for the most part conducted after different types of disasters. The rates reported differ dramatically as a result of several dissimilar aspects of applied methodologies, including different measures being used, different sample sizes, different time periods between the traumatic incident and the survey, and many others. However, where standard methodologies have been used, incidence is often between 30-60% of survivors (Yule, 2001).

   PTSD prevalence rates also differ based on the type of trauma encountered, with intentional traumas (such as sexual abuse) and personal exposure to war being more traumatic overall than natural disasters (Peltonen & Punamaki, 2010). PTSD prevalence rates

further differ based on the severity of the traumatic event, how close the child was to the trauma, and the time elapsed since the trauma occurred (McCart, Sawyer, & Smith, 2008). Other variables that may increase risk of PTSD include being injured from the trauma, perceiving a threat to one's life during the trauma, a family history of psychopathology, and lower levels of perceived social support (McCart et al., 2008). Finally, prevalence rate differences can be found throughout the literature as a function of whether full diagnosis of PTSD is being reported versus merely reporting of PTSD symptoms (Dyregrov & Yule, 2006).

     Flaws of applying PTSD classification to children. The diagnosis of PTSD has many flaws when being applied to children. Its primary flaw is that the diagnostic criteria were developed specifically for adults, based on research on adults, without special consideration for application to children (Putnam, 1997, Van Der Kolk, 2007). As such, some children who suffer from PTSD may not fit the criteria, while other children who fit the criteria may actually have another disorder (Stien & Kendall, 2004, Van Der Kolk, 2007).

     Assessing whether the PTSD criteria have been met in children may be difficult to impossible, for a variety of reasons. First, many children have limited verbal skills and developmentally different ways of reacting to stressors. Such differences can include an inability to verbalize symptoms or to demonstrate numbing and withdrawal. The re-experiencing of symptoms may also be manifested differently than adults–such as through dreams and reenacted play–versus the flashbacks or intrusive thoughts that are common in adults with PTSD (Balaban, 2009; Eth & Pynoos, 1985; Scheeringa, Zeannah, Drell, & Larrieu, 1995). Children who have suffered trauma will often have vivid dreams, in which they re-live the event or events with all the feelings experienced at that time. Traumatized children may end up being killed in their dreams; they often will repeat the same dream every

night (Terr, 1991). With regards to play, post-trauma children may engage in two-dimensional monotonous play, in which the same themes surrounding the trauma are carried out. This type of play differs from normal three-dimensional play in which children use play as a tool to expand their mind and explore their environment, and in which the themes change as the children develop (Terr, 1991).

There are other symptom manifestations of trauma that exist only in children, or have a higher rate of occurrence in children, and are not fully accounted for by the current DSM IV diagnosis (Putnam, 1997; van der Kolk, 2007). Such symptoms include somatization, a heightened level of normal fears, impaired concentration, hyperactivity, increased aggression and tantrums, irritability, a heightened startle response, pessimism, and magical thinking (Stien & Kendall, 2004). It is for this reason that the current study chose to look at a full array of potential symptoms from trauma–beyond just PTSD–to include internalizing/externalizing symptoms and behavioral indicators.

Factors That May Impact Trauma Effects

Some of the major factors that have been identified to impact the effects of trauma on children include the type and level of exposure to trauma, children's age, and children's gender. Children can be exposed to a variety of traumatic events occurring in the different ecological layers of their lives, including the ontogenic level, microsystem, exosystem, and macrosystems in which they function. Depending on the trauma, various symptoms may be more or less present (Karr, 2009).

Ontogenic. Within the ontogenic level, children can experience a medical trauma or traumatic loss and grief. A medical trauma can include injury, illness, medical procedures, and treatments. Common symptoms include anxiety and irritability, intrusive thoughts about the illness or medical issue, and avoidance of going to the doctor or the hospital (Brown,

Pearlman, & Goodman, 2004; The National Child Traumatic Stress Network, n.d.). Thoughts and feelings surrounding the medical issues can differ between children and their family members, sometimes adding to the stress burden. The symptoms can also have a spillover effect interfering with the children's functioning at home, with peers, and in school (Brown et al., 2004).

Traumatic loss and grief occurs when children experience the death of a loved one, leading to traumatic symptoms that interfere with their ability to process the loss in a developmentally appropriate manner (Brown et al., 2004). The death may be caused by traumatic means—such as violence or a large-scale disaster—but it may also be from natural causes. The essential characteristic of traumatic grief is the child's own interpretation of the experience as traumatic, beyond what is typically expected surrounding such a loss (Friedman & Keane, 2007). One common symptom specific to traumatic grief is children re-experiencing the loss through images of death; the child may have intrusive thoughts about the person who has died. Children may also engage in avoidance of reminders of both the actual death and the persons they have lost. Such avoidance can include avoiding specific places or activities that used to be enjoyed with the person. Additional traumatic grief symptoms common in all trauma types include irritability, sleep interference, concentration, and hyper-arousal (Pearlman, Schwalbe, & Cloitre, 2010).

Microsystem. Within the microsystem children can experience maltreatment, domestic violence, and resulting complex trauma. Child maltreatment includes physical abuse, sexual abuse, emotional abuse, and neglect (Wolf & Nayak, 2003). Unique trauma-specific symptoms often seen are feelings of powerlessness, stigmatization surrounding the events, and feelings of betrayal leading to difficulties in interpersonal relationships (Finkelhor & Browne, 1985). Particular to children who have been physically abused, they

will often exhibit higher levels of aggression, delinquency, and risk-taking behaviors (Margolin & Gordis, 2000). Children who have been sexually abused, by contrast, will often suffer from sexual development problems as well as gender identity and sexual orientation concerns (Tharinger, 1990).

Domestic violence includes physical, sexual, or emotional abuse occurring between adults within children's homes. This abuse can be actual or threatened and can encompass the children witnessing such an occurrence and/or mere exposure to its presence (Moroz, 2005). Common symptoms arising from such trauma include parentification of the children, aggression, violent outbursts, isolation, and psychosomatic problems (Fantuzzo & Mohr, 1999).

Intra-family trauma tends to lead to the greatest severity in symptoms. This may be partially due to survivors' tendency to internalize fault. With increased self-blame often comes an increase of symptoms (Chaffin, Wherry, & Dykman, 1997; Ford, Stockton, Kaltman, & Green, 2006). Child maltreatment and domestic violence often co-occur and cause children exposure to multiple traumatic events. When such events occur for a prolonged period of time or in extensive amounts, they are often classified under the umbrella term, complex trauma. Complex trauma can have a profound impact on children's development in all domains. Complex trauma typically occurs beginning in early childhood, within the primary caregiving system, and is chronic in nature (The National Child Traumatic Stress Network, n.d.). As a result, children may develop severe emotional dysregulation that can have a cascade effect, causing them to become more vulnerable to experiencing subsequent traumas throughout childhood and beyond (The National Child Traumatic Stress Network, n.d.).

Exosystem. Within a child's exosystem, children can experience community or school violence that can have a profound impact on development. Community violence is violence between persons who are not related. Such violence can include but is not limited to shootings, physical assaults, and rapes. Children may experience community violence in a variety of roles, including as victims, witnesses, or perpetrators (The National Child Traumatic Stress Network, n. d.). School violence also transpires between non-relatives and tends to encompass a broad range of occurrences to both students and teachers, including but not limited to violence, threats, victimization, bullying, and overall disruption of a positive educational climate (The National Child Traumatic Stress Network, n.d.). School violence can result in children becoming hyper-vigilant at school (in order to avoid becoming a victim), wary of their peers, and less able to learn, thereby inhibiting academic success (Flannery, Wester, & Singer, 2004). Children may also feel powerless, become angry, exhibit increased aggression, and have an increased likelihood for engaging in self-harm (Flannery et al., 2004).

Macrosystem. Within the macrosystem in which the children functions, children may experience a natural disaster, refugee/immigrant or war zone trauma, or acts of terrorism. A natural disaster is defined as any natural catastrophe such as hurricanes, earthquakes, and fires that cause widespread damage. Such destruction must be so extensive as to require government and other relief organizations to help with the aftermath (The National Child Traumatic Stress Network, n.d.). Factors unique to natural disaster trauma often include specific threats to children's lives or near death experiences, the loss of loved ones, and/or the loss of children's homes and possessions. Children will often experience extreme feelings of helplessness, personal responsibility for not mitigating the harm, and potential dislocation from family and home (Carswell & Carswell, 2008; Baker & Shalhoub-Kevorkian, 2008).

War zone trauma includes war related exposures, political violence, Refugee/Immigrant experiences, and forced servitude as soldiers. The trauma symptoms from such exposure tend to resemble those seen in veterans of combat (The National Child Traumatic Stress Network, n.d.). Exposure leads to high levels of PTSD, depression, and other psychiatric disorders (Masinda & Muhesi, 2004). The most common effects of war trauma exposure across cultures are PTSD and anxiety disorders, followed by aggression and depression (Baker & Shalhoub-Kenorkian, 1999). Such effects have been seen in children from a variety of cultures including Lebanon (Macksoud et al, 1996), Mozambique (Boothby, 2006), and Cambodia (Sack, Seeley, & Clarke, 1997).

Additionally, terrorism often occurs in relation to war zone trauma. Terrorism is defined as the use of violence in order to coerce governments or populations to follow certain political or religious paths. Such acts can occur as large-scale events that affect masses of persons, or as individual occurrences such as a sniper attack (The National Child Traumatic Stress Network, n.d.). Symptoms most commonly seen in relation to terrorism acts include intrusive memory of the event, heightened startle reactions, and insomnia (Shaw, 2002; Stuber et al., 2002). Additionally, parental anxiety and extensive news coverage have been demonstrated to increase children's symptoms of distress (Shaw, 2002).

Age. Children's age has also been demonstrated to be a factor in the severity of reaction to trauma (Green et al., 1991). In Western cultures, pre-school age children demonstrated less psychological distress after disasters than older children with the same exposure (Scheeringa, Zeanah, Myers, & Putnam, 2003), including less emotional numbing and avoidance (Dyregrov & Yule, 2006). However, pre-school children exhibited higher occurrences of fears, regression in toileting, aggressive actions (Green et al., 1991), repetitive play, and re-enacting the event (Dyregrov & Yule, 2006). In this age group, parental reaction

has been demonstrated to have the strongest effect on the children's adjustment. If the parents react calmly, they serve to model how to adapt to the circumstance for the children (Handford et al., 1986; Scheeringa et al., 2003). For children over the age of ten, their reactions come closer to adult responses to trauma (Dyregrov & Yule, 2006). Such children are more able to cognitively understand the event, reflect upon their experience, and grasp consequences of the trauma (Dyregrov & Yule, 2006). For these reasons, older children have been found to have a greater overall incidence of emotional distress than their younger counterparts (Yule, Perrin, & Smith, 1999).

The influence of children's age on the severity of their reaction to trauma has also been found across cultures. In different cultures there is some evidence that age is associated with more severe PTSD symptoms. For example, younger age was associated with PTSD symptoms in children who experienced an earthquake in Japan (Endo, Shioiri, & Someya, 2009) and in Polish children after a flood (Bokszczanin, 2007). However, in China, older children who experienced an earthquake were found more at risk for depression and PTSD than other age groups (Fan et al., 2010). By contrast, other studies have found little age difference in PTSD rates; for example, a meta-analysis examined 34 samples of 2,697 children and found no notable differences based on children's ages (Fletcher, 1996). No differences were also found in a study of Turkish children (ages 8-15) following an earthquake (Bal, 2008).

Gender. Children's gender plays an influence in the incidence and level of PTSD experienced, with the majority of the literature finding that girls have higher rates and more severe levels of PTSD (Green et al., 1991). Some estimate that girls have up to five times a greater likelihood of developing PTSD, and that girls are also more likely to report symptoms they are experiencing (Breslau, Davis, Andreski, Peterson, & Schultz, 1997). Such findings

are consistent with other research demonstrating girls' tendency to internalize distress more in the form of anxiety and depression, whereas boys tend to externalize problems in their outward behavior, leading to aggression (Ostrov & Keating, 2004).

Gender differences in PTSD symptoms have been found across cultures. Girls were found to have higher rates of PTSD in several studies, including a study of children displaced after the war in Croatia (Durakovic-Belko, Kulenovic, & Dapic, 2003), a study of Turkish children after an earthquake (Bokszczanin, 2007), and a literature review examining mental health issues of unaccompanied Refugee/Immigrant minors (Huemer et al., 2009).

Some studies, however, contradict gender differences in PTSD symptoms. A group of studies suggest that sex differences do not exist for pre-school age children (Burke et al., 1982; Green et al., 1991), but instead begin to appear for school age children (Gleser et al., 1981) and continue to be found for adolescents (Milgram et al., 1988). In another study, involving children living in Kabul, girls were found to have a lower prevalence of PTSD (14%) than boys (26%). The study examined a school sample of children and their cumulative experiences. Its prevalence rates may be different because the PTSD was not associated with a specific common experience such as a natural disaster or war (Catani et al., 2009).

Race and ethnicity. The race and ethnicity of children may change their risk of experiencing certain types of trauma (Roberts et al., 2011). Race and ethnicity may also change the likelihood of experiencing PTSD (Adams, Boscarino, & Galea, 2006; Kulka et al., 1990) or of experiencing certain symptoms from trauma (Choi & Park, 2006). Additionally, race and ethnicity may play a role in treatment seeking and response to treatment (Anderson & Mayes, 2010).

There is some evidence that trauma exposure has been found to differ by racial and ethnic minority status, but few studies pertain specifically to children. These few studies have examined sexual abuse prevalence rates and suggest higher rates for Latino female adolescents as compared to other ethnic minority groups (Newcomb, Munoz, & Carmona, 2009) and lower rates among Asian women (Russell, 1986). According to one study, African Americans and Latinos in the U.S. had a higher risk of child maltreatment than European Americans and other ethnic minorities. Furthermore, Asians, African American males and Latino females had a higher risk of exposure to war related trauma (Roberts et al., 2011). Notably, these findings were in a retrospective study of 34,653 adult respondents and not with a child sample (Roberts et al., 2011).

Some studies suggest that there is an increased risk for PTSD in racial and ethnic minority persons (Norris & Alegria, 2005; Pole, Gone, & Kulkarni, 2008). Reasons that have been suggested include cumulative burden of previous trauma, the severity of the trauma, psychiatric comorbidity, and lack of access or utilization of mental health treatment (Brewin, Andrews, & Valentine, 2000). In one study conducted in the U.S., the risk of PTSD was found to be higher among African Americans, and lower among Asians, in comparison to European Americans (Roberts et al., 2011). Higher levels of PTSD have also been found among Latino populations in the U.S. (Pole et al., 2005).

Differing symptom expression has been found among racial and ethnic minority groups. With depression, differences have been found for somatic symptoms, with Asian and Latino children experiencing higher levels than other ethnic minority groups (Choi & Park, 2006). There is even some suggestion that the acceptable physical symptoms may differ by ethnicity, with Latinos being more likely to endorse constipation and diarrhea, as compared to other physical complaints, when suffering from depression (Choi & Park, 2006).

Further differences by race and ethnicity when experiencing depression include: African American children have been found to experience higher levels of anger and aggression; Latino children experience more decreased energy, crying, and low self esteem; and Asian children experience more overall sad mood (Choi & Park, 2006).

When experiencing anxiety, different symptom expression has also been observed across racial and ethnic minority children. Similar to depression, Latino children more often experience somatic symptoms in relation to anxiety (Pina & Silverman, 2004). Some theorize that such symptom expression is more acceptable in Latino cultures, especially for males who often internalize the "Machismo" concept which stresses the importance of being a strong male (Pina & Silverman, 2004), as well as being more acceptable in Asian cultures, for which psychological illness carries with it cultural stigma (Chen et al., 1998).

Mechanisms for differences among racial and ethnic groups in trauma exposure and symptoms. An additional component to understanding how race and ethnicity may impact trauma exposure and symptoms is to understand the possible contributing causes of differences. Potential mechanisms suggested by the literature include biological differences among groups (Murakami et al., 1999), differences in historical backgrounds (Al-Issa & Tousignant, 1997), unique family processes (Anderson & Mayes, 2010), and differing treatment seeking behaviors (Roberts, Gilman, Breslau, Breslau, & Koenen, 2011).

Some literature suggests that racial or ethnic minority groups differ biologically, which may lead to differences in psychological expression. For example, there is some evidence that certain alleles that have been linked to anxiety traits and depression appear in different frequencies among Japanese, African American, and European American adults (Murakami et al., 1999; Katsuragi et al., 1999). Additional biological differences have been suggested concerning the onset of puberty and the linkage to depression with early

maturation; early puberty is associated with positive feelings in African American girls but negative feelings in Latina girls (Anderson & Mayes, 2010; Nadeem & Graham, 2005). Finally, physiological arousal differences have been suggested based on race and ethnicity, with Latina girls reporting higher physiological anxiety than African American girls, and African American boys reporting higher physiological anxiety than European American boys (McLauglin et al., 2007). In contrast, another study compared arousal rates while performing a behavioral task. European American children demonstrated higher pulse rates and blood pressure as compared to their African American counterparts (Beidel et al., 1994). Understanding the biological differences between races and ethnicities—and how such differences may inform differences in behavior—is still in its infancy stage, especially in studying children, but the literature thus far suggests there are many mechanisms that have yet to be fully understood.

Historical background may also lead to differences in child reaction to trauma. Persons of a race or ethnicity with a history of oppression or genocide may live with the effects of such trauma exposure, even though it did not happen to them as individuals but instead to their ancestors. This concept and its effect has yet to be fully explored, but has been studied most in depth with African Americans, Jewish Holocaust survivors, and indigenous people of North America (Brown, 2008). For African Americans, the involuntary migration to the United States—combined with legalized slavery, discrimination, and racism—created an environment of traumatization and an increased vulnerability to further trauma (Pole et al., 2008). While it is important to note that some persons included in the African American category came more recently to the United States as immigrants from Africa and the Caribbean, these immigrants also face the racial inequality and ongoing

discrimination which was legalized up until the 1960s and that continues through various mechanisms today (Pole et al., 2008).

Another contributor to differences in racial and ethnic minority reaction to trauma may be differences in family processes, which can serve both as a vulnerability or protective factor depending on the culture and the type of trauma. Within the African American community, the family structure often extends beyond the nuclear family to extended members such as grandparents and cousins, as well as to non-related persons who are considered family members (Carswell & Carswell, 2008; Hatchett, Cochran, & Jackson, 1991). These kin members provide support to family members in need, often adopting rejected and orphaned members, particularly children and the elderly (Hatchett, Cochran, & Jackson, 1991). As such, strong familial ties serve to protect and buffer the negative affects of trauma.

Current research is limited as to how such processes may play out in the various types of trauma, but there is some literature that explores family structure and physical abuse. For example, in Latino cultures the concept of Machismo is an important value for males. It is defined as strong identification and adherence to rigid gender roles that can include being aggressive, authoritarian, and having a negative attitude towards females (Deyoung & Zigler, 1994). In a family that subscribes strongly to such a belief, the father is considered the head of the family and may inflict as much punishment as he sees fit in order to assure the children's good behavior (Bird & Canino, 1982). Of note, Machismo also instructs one to protect and provide for his family, and instills self-respect in those that believe in it (Torres, 1998). An example of another protective family cultural factor in Latino culture is the value of "Familism." Familism emphasizes family unity and a sense of obligation to provide emotional support and care for all of its members. It emphasizes the family over the

individual's needs (Cuellar, Arnold, & Gonzalez, 1995). In the context of physical abuse, Familism can be a protective factor counteracting the Machismo ideal. However, Familism can also be a source of vulnerability, because a family that is less focused on the individual may provide less nurturing to each individual child (Ferrari, 2002).

An additional difference in racial and ethnic reaction to trauma may lie in treatment utilization, or whether members of a culture seek out and use professional services for psychological disturbances. Reasons for racial and ethnic minority groups underutilization of services include culturally associated stigma (Zayfert, 2008), the lack of culturally sensitive and appropriate treatments (Lester et al., 2010), and the socioeconomic impact of seeking treatment, including cost, lack of transportation, and needed child care (Schruafnagel, Wagner, Miranda, & Roy-Byrne, 2006).

While the literature suggests definitive differences in child trauma experience, reaction, and treatment overall among children from different races and ethnicities, it is important to recognize that often the true reason for differences can be hard to discern in the face of the large heterogeneity among racial and ethnic minorities, including differences in socioeconomic status, urban/rural location, immigration status, refugee/immigrant or native experience, and acculturation level (Pole et al., 2008). For this reason, exploration in this study went beyond race and ethnicity, and took into account cultural factors through examining country of birth, primary language spoken at home, and refugee/immigrant status.

Cultural factors. Beyond ethnic identity, children's cultural background serves as the backdrop to frame interpretations of what they experience. The cultural background includes how the child's culture defines trauma. It also incorporates common symptoms that are typically seen within the child's culture, including culture-bound syndromes that may exist within his or her culture. Furthermore, the cultural background includes cultural factors

such as level of acculturation and experiences that may be culturally related, such as being a refugee/immigrant.

Cultural definition of trauma. Some have suggested that what is considered "trauma" in itself is a culturally bound decision (Lewis & Ippin, 2004). For example, the practices of circumcision and caning may seem like traumatizing events according to certain cultural ideals. However, within the frameworks in which they occur, these children do not necessarily experience the event as traumatic, nor suffer any negative consequences as a result (Lewis & Ippin, 2004). Different trauma definitions were demonstrated in a qualitative study of eight Sudanese Refuge children living in the United States. Some of the children defined trauma as "missing anything of value of self" or "something that is a depressing feeling" (Bolea, Grant, Burgess, & Plasa, 2003). Such a definition differs remarkably from a Western definition of trauma, which typically defines trauma as "a disordered psychic or behavioral state resulting from severe mental or emotional or physical injury" (Merriam-Webster, 2010). The Western definition has been used in the creation of measures of trauma, but the validity of such measures to cultures which define trauma differently have yet to be explored. For example, the category of PTSD has been considered by some as a culture-bound designation which can be difficult to apply to other cultures. The specific diagnostic category of PTSD often does not have equivalent terms in language description or in symptoms experienced (Silove & Bryant, 2006). It is possible that using the PTSD designation may in fact impede traditional healing practices, because it may shift the emphasis from normal coping to abnormal experiences that need treatment (Silove & Bryant, 2006).

How culture can impact symptoms of trauma. Many factors shape responses and resiliencies to children's trauma, including attachment (Lewis & Ippin, 2004), self-control

(Lambert, Weisz, & Knight, 1989), parenting practices (Nader, 2009), national cultural features (Nader, 2009) and past history of trauma (Herman, 1992).

Attachment. Early attachment has been demonstrated to shape responses and resiliencies to trauma. The availability of the caregiver and the underlying attachment system can be activated or depressed in the face of trauma by both parents and children (Lewis & Ippin, 2004). Additionally, caregivers' or other attachment figures' cultural identity—and their culturally dictated role regarding whether to advocate for their children—will impact the children's trauma experience (Lewis, 1996). However, both attachment style and attachment type differ somewhat based on culture. For example, Israeli, Japanese, and Indonesian attachment practices have been noted to differ from North American practices (Nader, 2009; Lewis & Ippin, 2004). Culture can also influence rapport between interviewer and interviewee, willingness to report, and what is revealed in the report by the attachment figures (Mezulis, Abramson, Hyder, 2005). Culturally acceptable ways of expression of depression and anxiety can range widely, from being silent concerning levels of emotional pain to exaggerated emotionality (Boehnlein, 2001; Laria & Lewis-Fernandez, 2006). Further, some cultures such as Asian and Middle Eastern countries may attach shame to emotional sharing. As a result, child trauma survivors that express such feelings may be rejected by their primary attachment figures and stigmatized by others in the community (Kinzie, 1993; Shiang, 2000). When stigma is associated with the sharing of mental health problems, effects of trauma may be under-reported and trauma symptoms may be untreated. In addition, many persons in non-emotional sharing cultures may express distress in physical symptoms (Shiang, 2000).

Issues of self-control can also vary by culture and may lead to different expression of symptoms in children. For example, cultures that require controlled behaviors from its

members–like Kenya and Thailand–will tend to produce children who demonstrate more over-controlled symptoms such as depression, anxiety, fears, and physical complaints (Lambert, Weisz, & Knight, 1989; Mash & Dozois, 2003). By contrast, cultures that do not require over-controlled behavior–like the United States–will have more children exhibiting under-controlled symptoms such as disobedience and cruelty to others (Weisz, Sigman, Weiss, & Mosk, 1993).

Additionally, culture affects parenting practices. How parents choose to reward or punish various behaviors is guided by the culture in which they are embedded. These patterns of behavior will then influence how, and to what extent, children will manifest distress, as well as what is allowable in their household (Liu & Tekeuchi, 2001). Reporting patterns may also differ for parents of different cultures. Whether parents tend to focus on externalizing issues with their children, or whether they are willing to recognize and report problems faced by their children, may be dependent on the shame element that exists within that culture (Lau & Takeuchi, 2001).

Certain national culture features are other factors that can profoundly impact the sanctioned reaction to trauma, the interpretation of traumatic events, and the support available (Nader, 2009). These include power distance (the extent to which powerful and powerless members of the culture accept the inequality of the power distribution), individualism/collectivism (taking care of oneself and one's immediate family versus an expectation that the community helps to take care of its individuals), masculinity/femininity (how much a culture's dominant values focus on masculine traits such as assertiveness, resource allocation, and a lack of caring for others, versus feminine traits such as social goals, quality of life, and relationships), uncertainty/avoidance (wanting to avoid unpredictability), gender behavior expectations, time orientation (long-term future planning

versus short-term focus), and emotional expression (what is accepted or taboo to reveal) (Nader, 2007).

Some cultural groups may have experienced a long past history of trauma which is then transmitted through the generations. Other cultural groups may have a history of repeated exposure to trauma. Specifically, Refugee/Immigrant children may have a long history of traumatic events, thus making it important to look beyond just the current trauma being reported (Herman, 1992). Refugee/Immigrant children themselves may not have experienced direct trauma, but vicariously have been traumatized by parental accounts of past events. For example, in one study concerning Guatemalan children in a Refugee/Immigrant camp, the children told stories and drew pictures of torture and war, despite having never had direct exposure themselves (Miller, 1996).

Culture bound syndromes. The effects of trauma in other cultures may have no exact Western equivalent but instead fit into specific culturally defined categories. Such categories have been labeled "cultural bound syndromes" or "cultural related specific syndromes," and are defined as mental or psychiatric conditions that are closely related to cultural factors (Tseng, 2006). The DSM-IV identifies 25 such syndromes identified in various cultures around the world, along with a brief description of the symptoms falling within each category. Despite the syndrome identification within the DSM-IV, there are few if any empirical studies that have attempted to identify any of these syndromes among traumatized children. Based on the symptom descriptions, it appears that many may be natural results of a traumatizing event. For example "Susto" or "fright" or "loss soul" is a folk illness found among some Latino groups and persons in Mexico, Central, and South America. It is an illness believed to form from a frightening occurrence that has led to the soul departing the body, leaving the person sick and unhappy. Persons with Susto may suffer from appetite and

sleep problems, sadness, low motivation, low self-worth, and a variety of somatic complaints. Different constellation of such symptoms can be found to resemble PTSD. Like PTSD, Susto can have delayed onset (Castro & Eroza, 1998) and is caused from traumatizing events such as accidents, witnessing a death, or witnessing the devil (Weller, Baer, de Alba Garcia, & Rocha, 2008). Some researchers have even found that the belief in Susto can make Latino Americans' more susceptible to suffering from PTSD (McFarlane et al., 2005).

There have been few studies comparing PTSD to Susto or assessing both simultaneously. In one of the few studies, researchers studied Mayan Refugee/Immigrants and the prevalence of ethno-medical syndromes. The study found 59% of adults and 48.4% of children experienced Susto and that these symptoms were significantly associated with posttraumatic stress symptoms, depression, and anxiety (Smith, Sabin, Berlin, & Nackerud, 2009). In this cross-sectional study, measures were created specifically to evaluate the various research questions posed. As such, there was limited psychometric data provided, and the validity and strength of results is questionable. In another study, conducted in Australia, Latino Refugee women who were found to be suffering from Susto had also undergone torture or other trauma (Allotey, 1998). This sample was extremely small, and no formal measures evaluating the trauma or the Susto were utilized. In fact, the women presented as self-diagnosed (Allotey, 1998). Despite these severe limitations, both studies serve to suggest a possible link between trauma and Susto, and it is an area that should be further explored.

An additional cultural syndrome found within Latino populations is called "Ataques de Nervios." This is defined as nervous attacks induced by intense stress occurrences, which lead to anger and grief (Laria & Lewis-Fernandez, 2006). Symptoms include fainting, shaking, heart palpitations, and shouting (Guarnaccia et al., 1996). This disorder has also been compared with and linked to PTSD, though there are few formal studies that explore such a relationship (Guarnaccia, 1993).

According to Tseng (2001), culture can play a role in psychiatric symptoms through six common pathways. These include: pathogenic effect (culture leading to the forming of the disorder), psycho selective effect (culture choosing and accepting specific behavior patterns to deal with stressors), psycho plastic effect (culture changing how a disorder is expressed), path elaborating effect (culture grouping specific mental symptoms into a unique category), psycho facilitating effect (culture causing an increase of frequency of symptoms), and psycho reactive effect (culture molding how its members respond to the clinical state). By understanding the different possible methods by which culture can shape and define psychiatric disorders, it becomes clearer that a greater understanding of how culture and trauma interact is needed, which is one of the goals of this study.

Level of acculturation. Acculturation can be understood as how ethnic minority individuals who have moved to a new country learn to adapt and incorporate the dominant culture into their core selves (Berry, Trimble, & Olmedo, 1986). Acculturation is an ongoing and multidimensional process that occurs when members of different cultures come in continuous contact over a long period of time (Organista, Marin, & Chun, 2010). This process results in changes in the original cultural pattern, both externally (language, expression of self) and sometimes internally (values, customs, beliefs) (Organista, et al., 2010). One model of acculturation put forth by Canadian psychologist Berry (2003) suggests that all individuals' acculturation can be classified into one of four different strategies: Assimilation, Separation, Marginalization, and Integration. In both Assimilation and Separation, a person attempts to choose one culture and ignore as much as possible the other. Assimilation occurs when the person tries to de-emphasize the original culture, and instead tries to interact, and identify primarily with the new culture. By contrast, Separation occurs when the person tries to maintain his or her culture of origin purely, avoiding interaction with

and learning about the other culture. In Marginalization, the person does not try to preserve his or her culture of origin nor learn about the other culture. Finally, in Integration the person preserves his or her own culture but also participates in the other culture (Berry, 2003; Organista et al., 2010). According to Berry, among these different approaches, Integration will lead to the lowest level of acculturation stress while Marginalization will lead to the highest levels of stress (Berry, 2003).

In considering trauma in this context, children's traumatic experiences may be amplified by acculturation stress that they experience. Acculturative stress can include stressors such as problems with language, perceived or actual discrimination by those from the dominant culture, and perceived cultural discordancy (Gil, Vega, & Dimas, 1994).

Risk factors for producing acculturative stress include lack of language competency (Rodriguez, Myers, Mira, Flores, & Garcia-Hernandez, 2002), emigrating after 12 years of age (Mena, Padilla, & Maldonado, 1987), generational status, persons who are visibly different from the majority—such as by color of skin or language (Organista et al., 2010)—and persons who were forced to migrate to the new culture (Organista et al., 2010). High levels of acculturative stress can lead to psychological symptoms such as depression, anxiety, and becoming alienated from peers (Sue & Sue, 2003). Some research further suggests that those low in acculturation are less resilient in the face of trauma, as they are unable to use the host culture as a source of help (Webster et al., 1995; Perilla et al., 2002).

Various instruments exist to measure acculturation. Generally, such instruments are self-report measures that include questions about attitudes, norms, and behaviors (Organista, et al., 2010). Included in a robust measure of acculturation are questions concerning language use and preference, media usage, ethnicity of friends, food consumption habits, cultural values, and many more areas of living (Zane & Mak, 2003). Scales differ between those that

take a unidirectional approach (where responses range from culture of origin to the new culture) and scales that take a bidirectional approach (in which an individual does not have to "lose" one culture in favor of the other) (Marin & Gamba, 1996; Organista, et al., 2010). While currently the bidirectional approach is preferred by most researchers, the unidirectional approach is still in use (Organista et al., 2010). The most recurrent factor used in acculturation measures overall asks about language ability, preference, and use (Zane & Mak, 2003). Another commonly used marker of acculturation is if the child was born in the United States, sometimes referred to as nativity (Schwartz, et al., 2010)

As the concept of acculturation recognizes, even if a child speaks English, was born in the United States, and resides in the United States, he or she may not necessarily fit into the cultural norms prescribed by the country. Despite the fact that the United States is composed of multiple cultures, there is a bias within its boundaries towards a European American framework and reference point. Some children who are from other cultures but have lived in this country for long periods of time, or whose families have been present for multiple generations, may have adjusted to these norms and identify more with the customs typically found within this group, while others may not.

Refugee/Immigrant status. Children become refugees when they have been exposed to war or political violence, and have been forced or voluntary displaced from their homes (The National Child Traumatic Stress Network, n.d.). Child refugee trauma often leads to high levels of PTSD, depression, anxiety, grief, and other psychiatric disorders (Masinda & Muhesi, 2004; Nader et al., 1993). Some researchers estimate that the prevalence rates of PTSD in refugees are double the rate of non-refugees (Giaconia et al., 1995). Reasons for this include the combination of exposure to war and violence, losses suffered as a result of leaving the home country, and adjustment issues once entering a new country (Hodes, 2002;

Sack et al., 1997). Due to such high levels of PTSD in this population, some researchers suggest the diagnosis is inadequate in fully capturing the refugee experience (Eisenbruch et al., 1991). Instead, these researchers argue for the use of a cultural bereavement model, which can more fully capture the torment of the refugee experience. Despite this suggestion, to date the idea has not been embraced, and instead the PTSD criteria are the most widely used.

PTSD in refugee children has been measured in a variety of cultures including Tibet (Servan-Schreiber et al., 1998); Cambodia (Kinzie et al., 1989), Lebanon (Saigh, 1991), Rwanda (Dyregrov et al., 2000) and others. In addition to experiencing PTSD, refugee children from around the world have been shown to experience depression, anxiety, and grief. Depression has been reported at rates ranging from 11.5% in Tibetan refugee children (Servan-Schreiber et al., 1998) to 47% in Bosnian refugee children (Papageorgiou et al., 2000). Depression has been measured with various instruments, which also may account at least in part for the differing rates. Anxiety has been reported in the refugee population at rates ranging from 11% of Vietnamese child refugee (Felsman et al., 1990) to 23% of Bosnian child refugee (Papageorgiou et al., 2000).

Beyond anxiety and depression, grief reactions are a large part of the refugee's experiences, because grieving often includes the loss of family members and of their homeland. Despite the large numbers of children who suffer different types of bereavement, grief reactions have been largely ignored by the literature (Ehntholt & Yule, 2006). In studies that have measured grief rates, ranges of up to 98% of the sample measured have been found all over the world, including refugee children from Kuwait (Nader et al., 1993) and from Bosnia (Smith, Perrin, Yule, Hacam, & Stuvland, 2002).

The literature also suggests that the length of time children are active refugees (thus having no home country) may be related to incidence of PTSD. In a study involving Croatian adolescent refugees, higher incidences of PTSD corresponded to the length of time that the children were active refugee (Ajdukovic, 1998), and this has also been mentioned as a potential factor in other studies (Smith et al., 2002).

Children's type of refugees experience can also affect the incidence of PTSD. Highest levels of PTSD have been found in those who fled from a country, followed by those persons living in refugee camps, with lesser levels occurring for those who have been relocated into a new country (Nader et al., 1993). Even for those children who are resettled, PTSD can still occur and profoundly affect them. In one study of Asian refugee children resettled in the United States, PTSD features prevented successful integration into their new environment (Fox, Cowell, & Montgomery, 1994).

Summary

Children's reaction to trauma can be understood by utilizing an ecological framework. Through such a model, the interactions of children's microsystems, exosystems, and macrosystems can inform what symptoms they may experience and how they recover from trauma.

The symptoms produced from childhood trauma can impact all domains of children's inner worlds, including cognitive, emotional, and behavioral functioning (Pynoos & Nader, 1993). Symptoms the children may experience can range from anxiety, depression, thought disturbances, concentration disruption, hyper-arousal, sleep problems, and beyond (Eth, 2001; Stien & Kendall, 2004). When left untreated, trauma symptoms can impede children's normal development and lead to a negative trajectory into their adult lives (Grych et al., 2000).

Factors identified by the literature that may impact effects of trauma include the type of trauma faced, the level of exposure, and the age and the gender of the children.

Additional factors that have not been explored in as much depth, but also may influence trauma symptoms and recovery, include race, ethnicity, and cultural factors.

Statement of the Problem

Child traumatic stress affects the welfare and healthy development of children from all races, ethnicities, and cultures. The majority of children that experience trauma will not suffer long-term consequences, nor necessarily need treatment. However, some children will suffer effects of trauma exposure, resulting in a variety of physiological, developmental, and psychological consequences (Catherall, 2004). Such effects can range from mild anxiety symptoms to diagnosed PTSD to delayed cognitive development and beyond (Cook-Cottone, 2004). When trauma symptoms are not identified and treated, children's normal developmental trajectories can be profoundly disrupted, possibly leaving them with permanent impairments (Grych et al., 2000).

Despite the importance of the topic, the literature is in the early stages of understanding children's responses to trauma (Balaban, 2009), and in particular whether children of differing races, ethnicities, and cultural factors have different symptoms from trauma and different reactions to treatments (Hinshaw & Nigg, 1999). To date the literature has focused primarily on the effects of variables such as severity of exposure (Goenijian et al., 2001; Lee et al., 2004), age of the child (Green et al., 1991; Scheering et al., 2003), and gender of the child (Breslau et al., 1997; Ostrov & Keating, 2004) in differentiating symptoms. However, race, ethnicity, and cultural factors are variables that may also impact symptoms and recovery. By not taking into account the potential impact of these factors in

children's reactions and treatments, we are doing a disservice to all children impacted by a traumatic event. We also may be missing a critical piece in understanding what symptoms racially, ethnically, and culturally diverse children may show and the extent to which their symptoms respond to treatment.

There is some evidence that race and ethnicity may play a role in trauma symptoms and recovery. Evidence of a potential interaction of race, ethnicity, and trauma includes the possibility that some races and ethnicities may be at a higher risk of experiencing certain types of trauma (Roberts et al., 2011). Additionally, the symptoms experienced after trauma may differ by racial or ethnic group, with some racial or ethnic groups such as Latino and African American children experiencing a different constellation of symptoms, for example more somatic symptoms for Latino children (Choi & Park, 2006; Pina & Silverman, 2004). Furthermore, evidence exists suggesting differences in treatment by race and ethnicity, including differences in treatment retention (Pole et al. 2008) and treatment response (Triffleman & Pole, 2010).

In addition to a potential influence of race and ethnicity on child trauma, there is some evidence that cultural factors may also have an impact. Culture may impact the definition of trauma, interpretation of events, what the culturally acceptable symptoms and syndromes are and the treatment methods. Culture also can influence attachment style, parenting practices, self-control, and other embedded schemas that aid the individual in synthesizing and healing from trauma. Furthermore, for children whose families have moved to a new country, the level of acculturation that children have in relation to their dominant culture can influence how different or overlapping their symptoms and treatment may be from their peer group. Level of acculturation may also add an additional layer of stress that children must deal with when attempting to recover from trauma. Many different elements

can serve to inform elements of acculturation, including country of birth and language choice.

Finally, whether children are refugees can dramatically influence the symptoms they present with and their responses to treatment. Child refugee trauma is a complex mix of experiencing violence, displacement from home, and forced adaptation to a new environment. For these reasons, child refugees suffer in different ways than children experiencing other traumas, sometimes exhibiting PTSD symptoms similar to soldiers of war and grief symptoms comparable to those who have suffered great losses (Masinda & Muhesi, 2004; Nader et al., 1993).

The present study used the NCTSN dataset in an effort to further expand our understanding of the possible roles of race, ethnicity, and cultural factors in order to better diagnose and treat children who have experienced trauma from all backgrounds. This study examined the role of race, ethnicity, and cultural factors in a child trauma population on (1) scores on clinical scales, functional problems, clinical problems, and clinical categorization at baseline; (2) changes in scores on clinical scales and functional problems after a short period of treatment; and (3) the clinical categorization at three month (or first recorded) follow up. The project specifically focused on children who had experienced at least one trauma and who were treated in clinics across the United States.

Hypotheses

The primary hypotheses were:

1) Scores on clinical scales, functional problems, clinical problems, and clinical categorization at baseline will differ by children's age at treatment, gender, number of trauma types, race, ethnicity, and cultural factors, including whether or

not they were born in the United States, used English as the primary language spoken at home, and were refugee/immigrants.

2) Change in scores on clinical scales, functional problems, and the clinical categorization at three month (or first recorded) follow up will differ by children's age at treatment, gender, number of trauma types, race, ethnicity, and cultural factors, including whether or not they were born in the United States, had English as the primary language spoken at home, and were refugee/immigrants.

Method

Participants

Participants were drawn from the National Child Traumatic Stress Network (NCTSN) Core Data Set (CDS). The data were collected as part of a quality improvement initiative. The NCTSN was created through a Congressional initiative in 2000 to respond to the needs of children and their families who have been exposed to trauma. The data for the current study were collected between 2004-2010 and come from the collaborative efforts of 56 research and treatment centers located across the United States. The NCTSN is funded by the Center for Mental Health Services, Substance Abuse and Mental Health Services Administration. The sample includes children and adolescents between the ages of 0-21 who have presented to an NCTSN center for assessment and treatment services. The inclusion criteria for the present study were: children and adolescents between 0-21 years of age, with at least 1 trauma reported, and with complete data on the ten outcome measures examined in this study. Case-wise deletions were performed for participants who fell outside of these parameters.

The sample for this study included 10,115 children and adolescents with Baseline data. Age and gender of participants are reported in Table 1. Approximately 53.1% of the sample were female, and most were between 6-12 years of age.

Table 1.

Age and Gender Characteristics of Full Sample at Baseline

Age Group	Male	Female	Total
0-5	571	581	1152
6-12	2301	2005	4306
13-21	1356	2306	3662

Table 2 shows the racial characteristics of the sample. Over 75% were either White/Caucasian or Black/African American.

Table 2.

Racial Characteristics of Full Sample

Race	N = 10,115	Percentage
White/Caucasian	5620	55.6
Black/African American	2970	29.4
Asian	125	1.2
American Indian/Alaska Native	295	2.9
Unknown	1030	10.2

Furthermore, 30.3% of the sample identified as Latino in ethnicity. The breakdown of the racial groups by ethnicity can be seen in Figure 1.
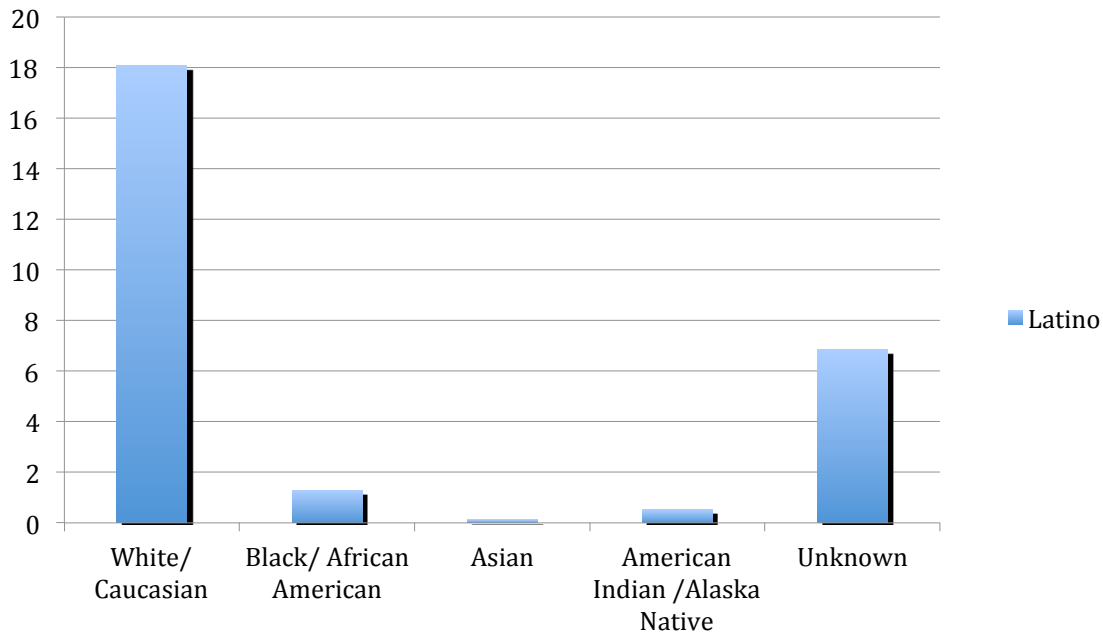
Figure 1. Percentage of Latino Children from Specific Racial Groups of Full Sample, *N* = 10,115

Other demographic characteristics of the sample relevant to this study included birth in the United States, English as the primary language spoken at home, and refugee/immigrant status. Percentages do not always add to 100% due to missing data. As shown in Table 3, few participants were refugee/immigrants or were born outside the United States, but over 15% of participants spoke a language other than English as their primary language at home. These groups were not mutually exclusive.

Table 3.

Additional Demographic Characteristics

Characteristic	Frequency	Percentage
US Born	8225	81.3
Non US Born	593	5.9
English in Home	8561	84.6
Non English in Home	1554	15.4
Refugee/Immigrant	306	3.0
Non Refugee/Immigrant	8365	82.7

Measures

A series of questions and standardized measures were administered to all participants as part of standard clinical practice by clinical staff prior to the start of treatment (baseline). For the purposes of this study, a subset of questions and measures were selected that were relevant to the research questions.

Demographic questionnaire. Demographic information included participant's age, gender, race, and ethnicity, as well as other information.

Cultural factors. The cultural factors used in this study were selected based on the empirical literature and their availability within the dataset and include the following:

Birth in the United States. The dichotomous variable asked whether the children's country of birth was the United States. It was referred to as "U.S. born."

English as the primary language spoken in the home. The dichotomous variable asked whether the children's primary language spoken at home was English. It was referred to as "Primary English in home."

Refugee/Immigrant status. The dichotomous variable asked whether the children were refugee, asylum seekers or immigrants with a history of exposure to community violence. It was referred to as "Refugee/Immigrant."

Trauma type history questionnaire. An adapted version of the UCLA PTSD Reaction Index was used to assess the trauma history profiles of youth in the current sample. Questions included an assessment of whether participants experienced 19 different types of trauma with an additional question to assess any other trauma not previously endorsed. The sum of all trauma types experienced was calculated and then used as an independent variable named "number of trauma types." Specific details about each trauma type endorsed were used in the descriptive analysis section.

Treatment questionnaire. Clinicians were asked to identify which trauma type was the primary reason for treatment service. Additionally, services used 30 days prior to entry as well as during the course of treatment were identified by clinicians in consultation with relevant collaterals. Service utilization included 19 different variables representing an array of child services and systems, including: 1) inpatient psychiatric unit or a hospital for mental health problems; 2) residential treatment center (a self-contained treatment facility where the child lives and goes to school); 3) detention center, training school, jail or prison; 4) group home (a group home residence in a community setting); 5) treatment foster care (placement with foster parents who receive special training and supervision to help children with problems); 6) probation officer or court counselor; 7) day treatment program (a day program that includes a focus on therapy and may also provide education while the child is there); 8) case management or care coordination (someone who helps the child get the kinds of services s/he needs); 9) in-home counseling (services, therapy, or treatment provided in a child's home); 10) outpatient therapy other than at this clinic (from psychologist, social worker,

therapist, or other counselor); 11) outpatient treatment from a psychiatrist; 12) primary care physician/pediatrician for symptoms related to trauma or emotional/behavioral problems (excluding emergency room); 13) school counselor, school psychologist, or school social worker (for behavioral or emotional problems); 14) special class or special school (for all or part of the day); 15) child welfare or department of social services (includes any types of contact); 16) foster care (placement in kinship or non-relative foster care); 17) therapeutic recreation services or mentor; 18) hospital emergency room (for problems related to trauma or emotional or behavioral problems); and 19) self-help groups (e.g., AA, NA).

The Child Behavior Checklist (CBCL). The Child Behavior Checklist (CBCL) 1-5 and 6-18 is completed by a parent or caregiver who knows the child well. The CBCL was developed by Achenbach and colleagues as a dimensional evaluation of psychopathology in order to identify at-risk children (Achenbach, 1992; Achenbach & Rescorla, 2001). The CBCL is used as a screening tool to indicate the likelihood of the presence of a disorder, but does not map onto DSM-IV diagnoses (Hartman et al., 1999). This widely used measure consists of 118 items scored on a 3-point scale ranging from 0 (not true) to 2 (often true) and yields scores on two broad band scales Internalizing and Externalizing , as well as scores on DSM-IV oriented scales, and empirically based syndrome scales that reflect emotional and behavioral problems and symptoms. The reliability and validity of the measure is considered good with internal consistency between .63-.97 and test/re-test reliability over an eight-day period of .80 (Achenbach, 1991). The measure demonstrates strong construct validity and acceptable criterion validity. It is psychometrically mature and has been used in countless peer reviewed articles. The 2001 version is based on new national norms collected between 1999-2000 (Achenbach & Rescorla, 2001).

This study used the Internalizing and Externalizing T-scores as dependent variables that corresponded to children's symptoms; these scores are standardized to the child's gender and age. These variables were called CBCL Externalizing and CBCL Internalizing.

UCLA PTSD Reaction Index (UCLA PTSD RI). The UCLA PTSD RI is a self-report Likert type scale that assesses posttraumatic symptoms and PTSD in children (Pynoos et al., 1998a). It was developed for children of ages 6 to 17 and takes approximately 20-30 minutes to complete. The measure includes 22 statements that directly map onto the DSM-IV PTSD criteria. The children are asked whether they have experienced each of these symptoms "none", "little", "some", "much", or "most" days during the past month. To score the measure, each response receives a value and the total values are added together to create an overall PTSD severity score. A score equaling 38 or more is considered equivalent to a likelihood of having PTSD. For this study, the overall PTSD raw severity score was used as a dependent variable representing some of the participants' symptoms of trauma. The variable was named "PTSD score".

The measure's internal consistency is .69, the inter-rater reliability is 0.88, and the test re-test reliability is .84 over 1 week (Pynoos et al., 1998; Roussos et al., 2005). The UCLA PTSD RI has been shown to have good convergent validity with other measures of PTSD, such as .70 with the Schizophrenia for School-Age Children PTSD module (Steinberg et al., 2004) and .82 with the Child and Adolescent Version of the Clinician Administered PTSD Scale (Rodriguez et al., 2001).

Despite the wide use of the measure, normative data are not available (Steinberg et al., 2004).

Trauma Symptom Checklist for Children-Alternative (TSCC-A). The TSCC-A is a 54 item, Likert type scale that assesses distress and posttraumatic symptoms (Sadowski &

Friedrich, 2000). Children are presented with a variety of different statements and asked to endorse if the statement "never", "sometimes", "lots of times", or "almost all the time" applies to them. The measure was originally developed for children ages seven to sixteen. The overall reliability and consistency is good (Sadowski & Friedrich, 2000). The TSCC-A has demonstrated internal consistency of .77-.90 for its subscales and .89 overall (Briere, 1996). It also has been shown to have convergent validity of .75-.82 with other measures of PTSD (Balaban, 2009). The measure was originally standardized on 3,000 ethnically and economically diverse children ages 7 to 16 with no history of trauma (Ohan et al., 2002). The measure has also been validated for use in children age 17 (Briere, 1996; Sadowski & Friedrich, 2000).

The TSCC- Alternate version, which was used in this study, includes five clinical scales of Anger, Depression, Anxiety, Posttraumatic Stress, and Dissociation. The Dissociation scale is comprised of two subscales: "overt dissociation" and "fantasy dissociation." This study used the five subscales as dependent variables to measure participants' symptoms. These were named TSCC-A Anger, TSCC-A Depression, TSCC-A Anxiety, TSCC-A PTS and TSCC-A Dissociation (this included the Dissociation and Fantasy subscales).

Functional problem score. A measure was developed for the NCTSN to assess commonly reported functional impairments and problems. Clinicians obtained relevant information from caregivers and other collaterals on 14 problem and functional impairments over the past month. These problems included: (1) Academic problems (e.g., problems with school work or grades); (2) Behavior problems in school or daycare (e.g., getting into trouble, detention, suspension, expulsion); (3) Problems with skipping school or daycare (e.g., where he /she skipped at least four days in the past month, or skipped parts of the day

on at least half of the school days); (4) Behavior problems at home or community (e.g., violent or aggressive behavior; breaking rules, fighting, destroying property, or other dangerous or illegal behavior): (5) Suicidality (e.g., thinking about killing himself/herself or attempting to do so); (6) Other self-injurious behaviors (e.g., cutting him/herself, pulling out his/her own hair; (7) Developmentally inappropriate sexualized behaviors (e.g., saying or doing things about sex that children his/her age do not usually know); (8) Alcohol use; (9) Substance use (e.g., use of illicit drugs or misuse of prescription medication); (10) Attachment problems (e.g., difficulty forming and maintaining trusting relationships with other people); (11) Criminal activity (e.g., activities that have resulted in being stopped by the police or arrested); (12) Running away from home (e.g., staying away for at least one night);, (13) Prostitution (e.g., exchanging sex for money, drugs or other resources); and (14) Child has other medical problems or disabilities (e.g., chronic or recurrent condition that affects the child's ability to function).

The clinician rated that each problem as either "not a problem", "somewhat/sometimes a problem", "very much/very often a problem", or "unknown." If the clinician indicated that the problem was either "somewhat/sometimes a problem" or "very much/very often a problem" the response was coded as "1." This study used the total problem score (sum of all 14 problems coded as a "1") as a dependent variable to measure the participant's functioning in multiple domains (home, school and community). The variable was called "Functional problems."

Clinical problem score. A form was developed by the NCTSN to clinically evaluate children and adolescents on an array of common DSM-IV diagnoses, symptoms, and problems. Clinicians rated each client on 20 symptoms, problems, and diagnoses including: (1) Acute stress disorder, (2) Post traumatic stress disorder, (3)

Traumatic/complicated grief, (4) Dissociation, (5) Somatization, (6) Generalized anxiety, (7) Separation disorder, (8) Panic disorder, (9) Phobic disorder, (10) Obsessive compulsive disorder, (11) Depression, (12) Attachment problems, (13) Sexual behavioral problems, (14) Oppositional defiant disorder, (15) Conduct disorder, (16) General behavioral problems, (17) Attention deficit hyperactivity disorder, (18) Suicidality, (19) Substance abuse, and (20) Sleep disorder. For each symptom and disorder the clinician could check either "no", "probable", or "definite" to indicate that the child has or exhibits the problem. If the clinician indicated "probable" or "definite: then the response was coded as "1". The total for all 20 clinical problems were then tallied resulting in the participant's total clinical problem score. This study used the total clinical problem score as a dependent variable to further indicate the participant's level of functioning. The variable was called "Clinical problems."

At three month (or first recorded) follow up. According to the NCTSN protocol, the first follow up measures were to be given after three months of treatment. However, due to unavoidable circumstances, many of the sample did not receive follow up at three months. Some stopped treatment or attended sporadically or in a pattern that led to the first follow up being far later. Thus the follow up point that was used was labeled as three month (or first recorded) follow up.

Procedure

Children and youth who presented for mental health services at one of 56 NCTSN centers were assessed at those sites for participation in the Core Data Set. Criteria for inclusion in the present study included factors such as age, presentation for assessment and treatment services, and exposure to at least one reported lifetime traumatic event. Caregivers

completed the Child Behavior Checklist based on their knowledge and impressions of the child. The child completed the UCLA-PTSD RI and the TSCC-A. If needed, the treating clinician provided additional support for the collection of this information (e.g., clinical interviews for children and caregivers with reading difficulties). The treating clinician also completed the demographic, clinical evaluation, services, treatment, and trauma history profile forms using information collected during the intake and assessment sessions during the course of treatment.

Clinical staff entered the data into a web-based data collection system – Inform. Measures were administered again at the end of treatment and/or every 3 months until the end of treatment. The Core Data Set was used to standardize the process of data collection across all participating NCTSN treatment centers.

Data Analysis

All data analyses were performed using PASW-20 software (SPSS), using hierarchical regression (for both hypothesis 1 and 2), and logistic regression (for both hypothesis 1 and 2). Bonferroni corrections were made to minimize Type I errors; thus, alpha = .005 was necessary to achieve alpha = .05. Descriptive statistics were used to further characterize the participants. Additional details of data analyses are explained in the Results section.

<center>**Results**</center>

Results will be organized in the following way. First, descriptive information about the participants and the traumas they experienced will be presented in a series of Figures and Tables. These will be shown for Baseline and for 3-month (or first recorded) follow-up and, as appropriate, will display findings according to ethnicity, race, US/non US born, language

at home, and refugee/immigrant status. Next correlation tables will be presented for all independent and dependent variables.

The third section will include results from testing hypothesis one. This will include hierarchical regression results on baseline data with predictors: children's age at treatment, gender, number of trauma types, race, ethnicity, and cultural factors, including whether or not they were born in the United States, used English as the primary language spoken at home, and were refugee/immigrants with dependent variables being used from all clinical scales, the functional problems total, and the clinical problem total. Post hoc ANOVA results will be presented where indicated.

The fourth section will include logistic regression results on baseline data, specifically examining whether the above predictors would make children more or less likely to fall into the clinical range for CBCL Externalizing, CBCL Internalizing, and The UCLA PTSD Reaction Index.

The next section of the results will include hierarchical regression results on three month (or first recorded) follow-up data with predictors: children's age at treatment, gender, number of trauma types, race, ethnicity, and cultural factors, including whether or not they were born in the United States, used English as the primary language spoken at home, and were refugee/immigrants with dependent variables being used as the change scores from baseline for all clinical scales and the Functional problems number. Post hoc ANOVA results will be presented where indicated.

The final section will include logistic regression results at the three month (or first recorded) follow up data, specifically examining whether the above predictors would make children more or less likely to fall into the clinical range at three month (or first recorded)

follow up for CBCL Externalizing, CBCL Internalizing, and The UCLA PTSD Reaction Index.

Trauma Characteristics

All children in the study experienced at least one trauma, while 74.3% of the children in the total sample experienced two or more trauma types, with many children experiencing even more as shown in Figure 2.
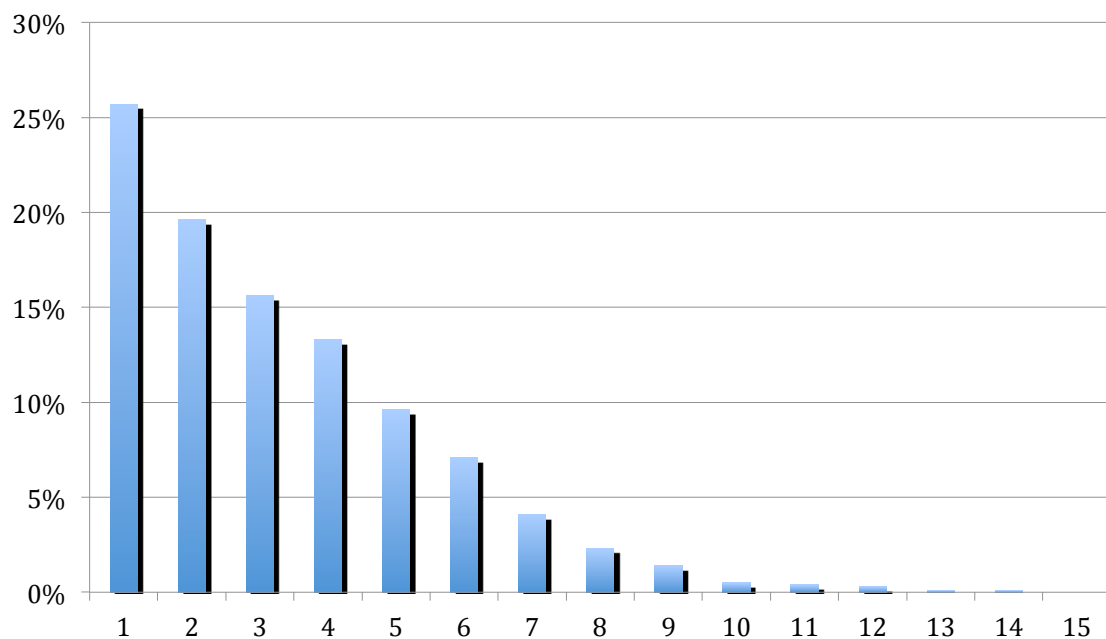
Figure 2. Percentage of Children from Full Sample Presenting with 1-15 Total Trauma Types

These children experienced a wide range of traumas, with the largest percentages experiencing traumatic loss (48.1%), domestic violence (45.6%) or an impaired caregiver (36.5%), as shown in Figure 3. Additionally, traumatic loss (14.6%) and domestic violence (13.1%) were the most often clinician-identified primary trauma being addressed in treatment, as shown in Figure 3.
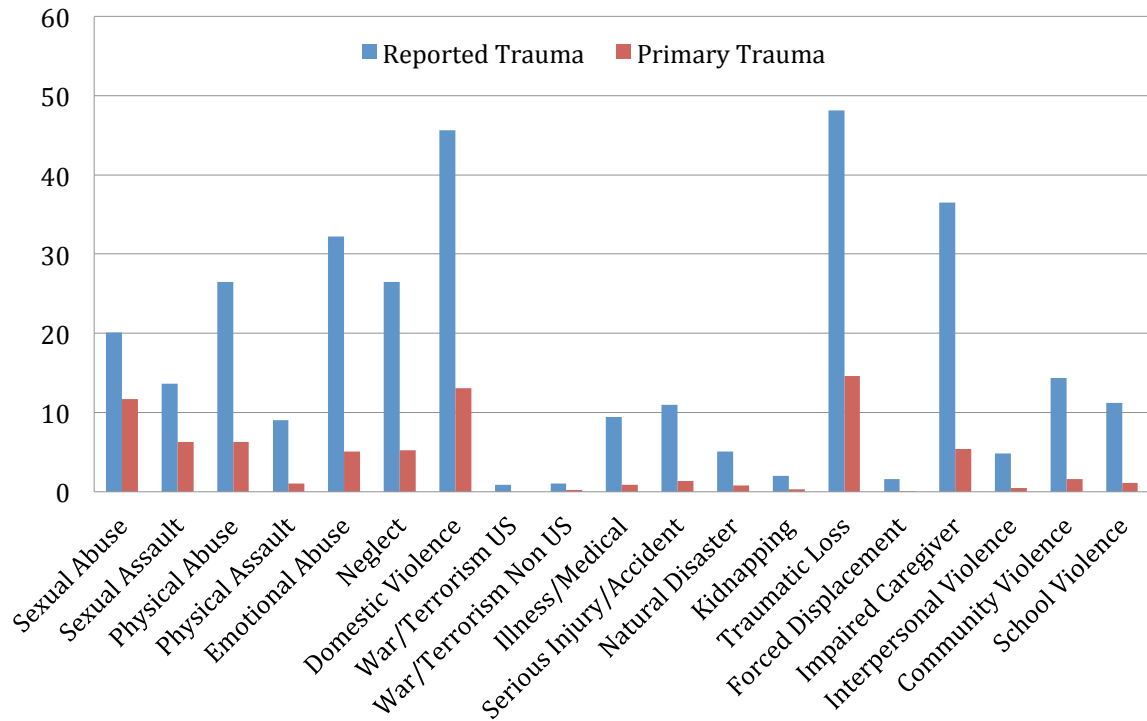
Figure 3. Percentages of Frequency of Reported Trauma and Primary Trauma Focused on in
Treatment

The primary trauma presenting for treatment by children's age group at time of
treatment is shown in Figure 4.
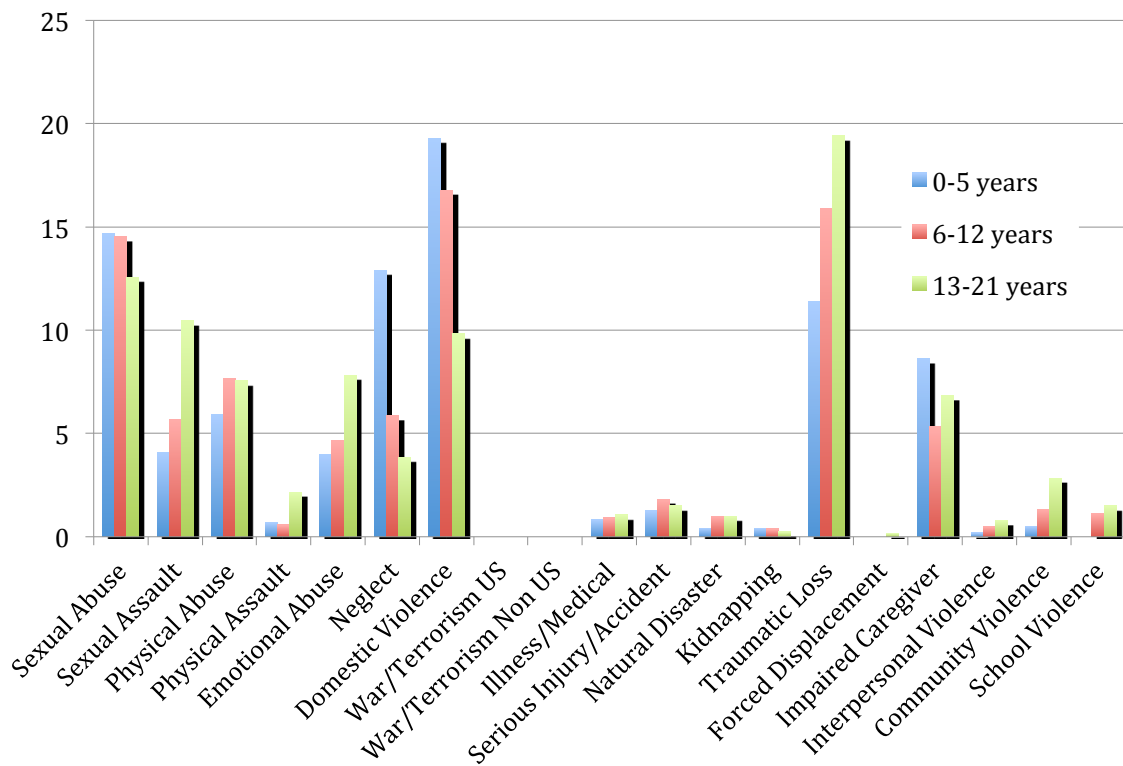
Figure 4. Percentages of Frequency of Trauma Experienced by Age Group at Baseline

Baseline Functioning

　　Outcome measures. The means and standard deviations of the outcome measures at Baseline are shown in Table 4. The differing number of participants for each measure is indicative of numerous participants missing data for various measures.

Table 4.

Means and Standard Deviations of Dependent Variables at Baseline

Variable	*N*	*M*	*SD*
CBCL Externalizing	8047	62.39	11.69
CBCL Internalizing	8047	61.17	11.33
UCLA PTSD RI	7056	26.25	14.90
TSCC-A Anger	5970	50.00	11.13
TSCC-A Depression	5970	50.74	12.09
TSCC-A Anxiety	5970	51.87	12.90
TSCC-A PTS	5970	51.96	11.58
TSCC-A Dissociation	5970	52.00	11.78
Functional problems	7502	3.07	2.20
Clinical problems	10,115	3.89	3.09

Table 5 shows the children who fell into the normal, clinical, and subclinical range on each of the dependent measures at Baseline for which such categories are available.

Table 5.

Percentage of US Born English Speaking, Non-US Born, Non-English Speaking, and Refugee/Immigrant Children at Normal, Subclinical, and Clinical Levels on Dependent Variables at Baseline

	US Born English Speaking	Non-US Born	Non-English Speaking	Refugee/Immigrant
	%	%	%	%
CBCL Externalizing				
Normal	38	43	55	34
Sub-Clinical	12	17	16	19
Clinical	50	40	39	47
CBCL Internalizing				
Normal	42	25	33	25
Sub-Clinical	13	18	12	18
Clinical	45	57	55	57
UCLA PTSD RI				
Normal	51.3	41.3	43.3	45.1
Sub-Clinical	31.1	36.1	38.1	32.4
Clinical	17.6	22.6	18.6	22.5
TSCC-A Anger				
Normal	78.8	82	79	79
Sub-Clinical	7.2	4	6	6
Clinical	14	14	15	15
TSCC-A Depression				
Normal	71	76	79	76
Sub-Clinical	7	7	6	9
Clinical	22	17	15	15
TSCC-A Anxiety				
Normal	74.9	76	75	75
Sub-Clinical	8.1	8	8	9
Clinical	17	16	17	16
TSCC-A Post Traumatic Stress				
Normal	72	74	73	69
Sub-Clinical	12	11	11	15
Clinical	16	15	16	16
TSCC-A Dissociation				
Normal	76	76	79	78
Sub-Clinical	8	10	8	11
Clinical	16	14	13	11

Table 6.

Percentage of US Born English Speaking, Non-US Born, Non-English Speaking, and Refugee/Immigrant Children at Normal, Subclinical, and Clinical Levels on Dependent Variables At Three Months (Or First Recorded) Follow Up

	US Born English Speaking	Non-US Born	Non-English Speaking	Refugee/Immigrant
	%	%	%	%
CBCL Externalizing				
Normal	49.8	53.4	61	48.8
Sub-Clinical	12.6	14.1	11.11	13.8
Clinical	37.6	32.5	27.9	37.5
CBCL Internalizing				
Normal	66.5	60.2	63.8	61.25
Sub-Clinical	16	17.3	15	20
Clinical	17.5	22.5	21.2	18.75
UCLA PTSD RI				
Normal	39.8	45.5	48	45
Sub-Clinical	45.6	40.7	38.5	42.9
Clinical	14.5	13.9	13.6	12.1

Descriptive measures. At baseline, treating clinicians reported and diagnosed a variety of disorders and behavioral problems currently exhibited by the children. The two separate reports included a report of functional problems and a report of clinical problems. The problems included issues such as academic problems, substance abuse, and behavior problems in specific settings.

Report of functional problems. The various percentages of frequency of functional problems at Baseline can be seen in Figure 5 specifically for U.S. born English speakers, and for non U.S. Born, non English speakers at home, and refugee/immigrant subgroups.
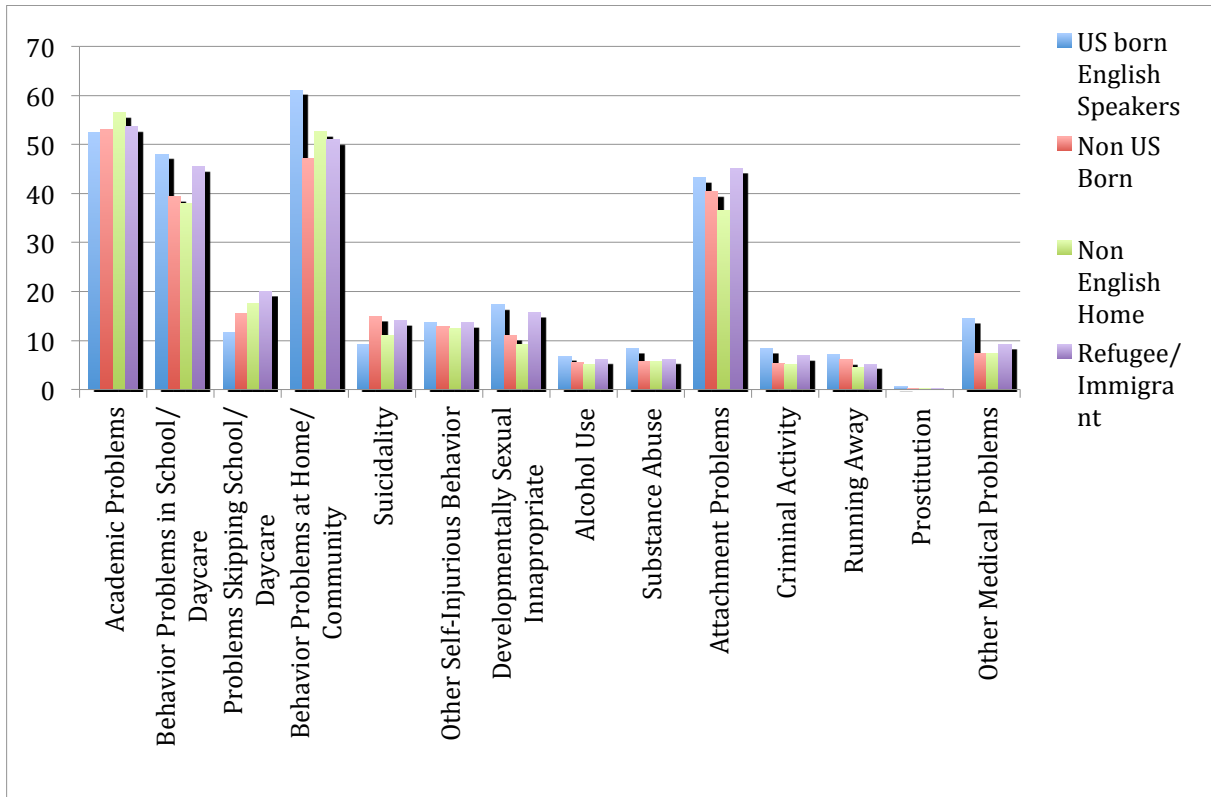
Figure 5. Baseline Percentages of Frequency of Functional Problems for U.S. Born English Speakers, and for Non U.S. Born, Non English Speakers at Home, and Refugee/Immigrant Subgroups

Clinical problems. The various distributions of clinical problems can be seen in

Figure 6 specifically for U.S. Born English Speakers, and for Non U.S. Born, Non English

Speakers at Home, and Refugee/Immigrant Subgroups.
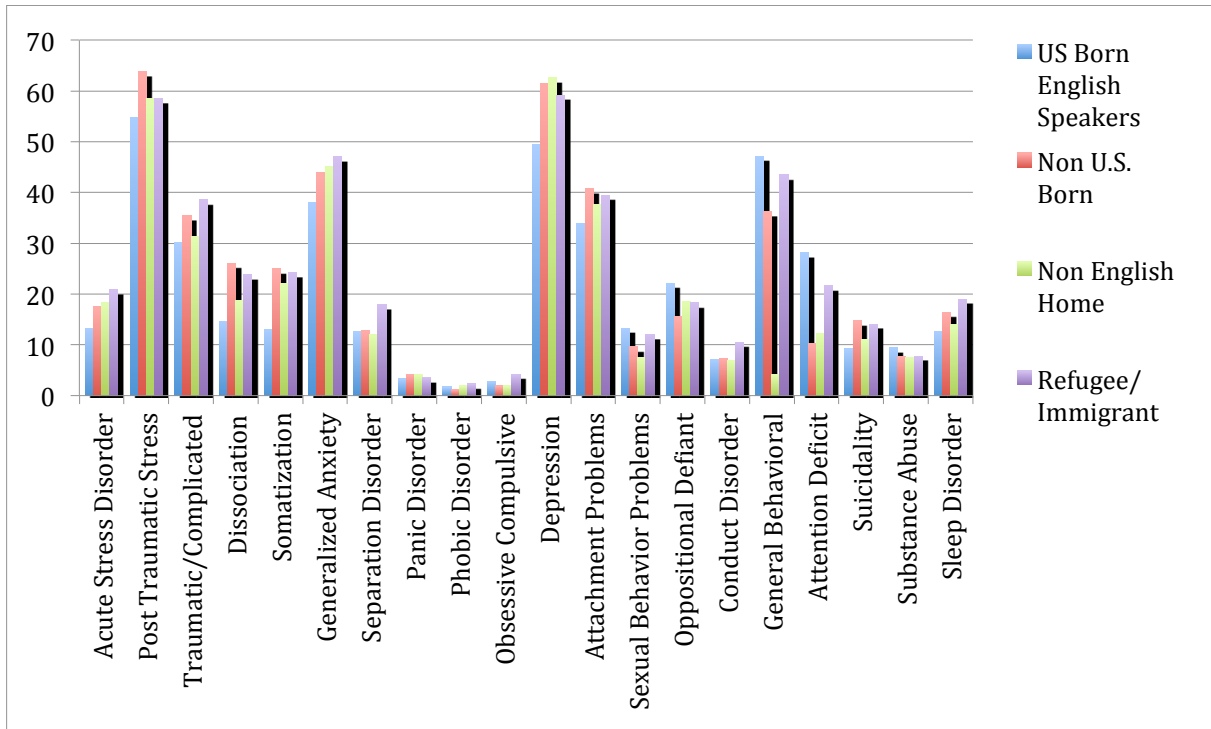
Figure 6. Baseline Percentages of Frequency of Clinical Problems and Symptoms of U.S. Born English Speakers, and for Non U.S. Born, Non English Speakers at Home, and Refugee/Immigrant Subgroups

Hierarchical Linear Regression

Correlation of study variables are seen in Tables 7- 9 .

Table 7.

Correlation of Independent Variables Age, Gender, Number of Trauma Types, Race, and Dependent Variable

	Age	Gender	Trauma Type Number	Indian/ Native American	Asian	Black/ African American	White/ Cauca-sian
Age	1	*					
Gender	.126**	1					
Trauma Type Number	.206**	.060**	1				
Indian/Native American	-.011	.032**	.080**	1			
Asian	.023*	.010	-.004	-.003	1		
Black/African American	-.028**	-.031**	-.065**	-.060**	-.054**	1	
White/Caucasian	.007	.017	.130**	-.089**	-.071**	-.586**	1
Unknown Race	.007	.027**	-.027**	-.054**	-.035**	-.209**	-.364**
Ethnicity	.073**	.016	-.013	-.049**	-.048**	-.377**	.050**
US Born	-.126**	-.030**	-.016	.030**	-.067**	.119**	-.028**
English	-.077**	-.010	.038**	.056**	-.029**	.250**	-.112**
Refugee/Immigrant	.048**	-.006	.051**	-.003	.041**	-.040**	.013
CBCL Externalizing	.031**	-.070**	.145**	-.015	-.023*	.014	.017
CBCL Internalizing	.111**	-.005	.147**	-.019	.008	-.093**	.079**
UCLA PTSD RI	.027*	.157**	.181**	.029*	-.004	-.006	.015
TSCC-A: Anger	.031*	.035**	.132**	.019	-.002	.046**	.002
TSCC-A: Anxiety	-.058**	.018	.126**	.006	.019	-.061**	.063**
TSCC-A: Depression	.055**	.021	.143**	.021	.017	-.034**	.040**
TSCC-A: Dissociation	.009	.032*	.127**	.008	.000	.012	.012
TSCC-A: Post Traumatic Stress	-.015	.023	.158**	.015	.014	-.040**	.046**
Total Functional Problem	.255**	-.042**	.266**	.026*	-.029*	.018	.006
Total Clinical Problem	.197**	.003	.329**	.051**	-.003	-.061**	.082**

** Correlation is significant at the 0.01 level   * Correlation is significant at the 0.05 level

Table 8.

Correlation of Independent Variables Ethnicity, US Born, English Speaking at Home, Refugee/Immigrant, and Dependent Variables

	Ethnicity	US Born	English	Refugee/Immigrant
Age	.073**	-.126**	-.077**	.048**
Gender	.016	-.030**	-.010	-.006
Trauma Number	-.013	-.016	.038**	.051**
Indian/Native American	-.049**	.030**	.056**	-.003
Asian	-.048**	-.067**	-.029**	.041**
Black/African American	-.377**	.119**	.250**	-.040**
White/Caucasian	.050**	-.028**	-.112**	.013
Unknown Race	.286**	-.093**	-.190**	.025*
Ethnicity	1	-.245**	-.576**	.067**
US Born	-.245**	1	.388**	-.260**
English	-.576**	.388**	1	-.137**
Refugee/Immigrant	.067**	-.260**	-.137**	1
CBCL Externalizing	-.086**	.021	.071**	.004
CBCL Internalizing	.069**	-.062**	-.072**	.028*
UCLA PTSD RI	-.013	.022	.037**	.017
TSCC-A: Anger	-.056**	.047**	.060**	.004
TSCC-A: Anxiety	.044**	-.010	-.035**	.019
TSCC-A: Depression	.006	-.018	.001	.021
TSCC-A: Dissociation	-.035*	.022	.035**	-.007
TSCC-A: Post Traumatic Stress	.013	.015	-.004	.025
Total Functional Problems	-.057**	.061**	.094**	-.013
Total Clinical Problems	.063**	-.028**	-.063**	.055**

** Correlation is significant at the 0.01 level   * Correlation is significant at the 0.05 level

Table 9.

Correlation of Dependent Variables

	CBCL Externalizing	CBCL Internalizing	UCLA PTSD RI	TSCC-A: Anger	TSCC-A: Anxiety	TSCC-A: Depression	TSCC-A: Dissociation	TSCC-A: Post Traumatic Stress	Functional Problems	Clinical Problems
CBCL Externalizing	1									
CBCL Internalizing	.543[**]	1								
UCLA PTSD RI	.143[**]	.256[**]	1							
TSCC-A: Anger	.347[**]	.199[**]	.538[**]	1						
TSCC-A: Anxiety	.087[**]	.237[**]	.682[**]	.508[**]	1					
TSCC-A: Depression	.176[**]	.260[**]	.665[**]	.634[**]	.718[**]	1				
TSCC-A: Dissociation	.171[**]	.198[**]	.650[**]	.600[**]	.673[**]	.689[**]	1			
TSCC-A: Post Traumatic Stres	.094[**]	.228[**]	.743[**]	.532[**]	.802[**]	.715[**]	.709[**]	1		
Total Functional Problems	.482[**]	.290[**]	.207[**]	.301[**]	.111[**]	.237[**]	.186[**]	.138[**]	1	
Total Clinical Problems	.229[**]	.253[**]	.208[**]	.192[**]	.173[**]	.223[**]	.167[**]	.192[**]	.417[**]	1

** Correlation is significant at the 0.01 level   * Correlation is significant at the 0.05 level

Hypothesis 1 predicted that scores on clinical scales, functional problems, clinical problems, and clinical categorization at Baseline would differ by children's age at treatment, gender, number of trauma types, race, ethnicity, and cultural factors, including whether or not they were born in the United States, used English as the primary language spoken at home, and were refugee/immigrants. This hypothesis was tested in a series of hierarchical multiple regressions. These regressions were conducted upon the following dependent variables at Baseline: CBCL Externalizing Score, CBCL Internalizing Score, UCLA PTSD RI Severity Raw Total Score, TSCC-A Anger, TSCC-A Depression, TSCC-A Anxiety, TSCC-A Posttraumatic Stress, TSCC-A Dissociation, Total Functional Problem Score, and Total Clinical Problem Score. Ten hierarchical regressions were conducted. For all hierarchical regressions, it was predicted that the outcome scores would differ by the following independent variables: gender, age, number of trauma types, race, ethnicity, U.S. born, English as primary language spoken at home, and refugee/immigrant status. For all regressions the order of the steps was the same. At step one gender-males and age were entered into the model. At step two, number of trauma types was entered into the model. At step three, race was entered. At step four, ethnicity was entered into the model, and finally, at step five the set of U.S. born, English as primary language spoken at home, and refugee/immigrant status were entered into the model. For the race step, the racial group with the highest number of participants was set as the standard against which the other races were compared; the White/Caucasian group was thus the standard. Follow-up post hoc tests were used to further examine race if it was significant in the model. The order of entry was based on the trauma literature. Age, gender, and number of trauma types are well known to influence response to trauma; the race, ethnicity, and cultural factors were held to the end to

see if they added significant variance after these were accounted for. A Bonferroni correction for 10 tests was made at the level of the initial test of the model. Thus, to consider each outcome variable, the *p* level for the full model had to be *p* = .005 or less to proceed with that analysis. The final model is shown for each.

Hierarchical regression CBCL Externalizing. For the model predicting CBCL Externalizing, reported in Table 10, the overall model was significant (F (11, 5931) = 23.889, p < .0001, Adjusted R^2 = .041).

Table 10.

Hierarchical Regression Analysis Summary for Variables Predicting Children's CBCL Externalizing T-Scores

Variable	B	SEB	*B*	Adjusted R^2	Δ R^2	sr^2
Step 1				.005*		
Gender-male	1.631	0.298	0.070			0.005*
Age	0.038	0.036	0.014			0.000
Step 2				.036*	.031*	
Number of trauma types	0.916	0.069	0.174			0.029*
Step 3				.038*	.003*	
Black/African American	-0.172	0.353	-0.007			0.000
Asian	-1.880	1.488	-0.016			0.000
American Indian/Alaskan	-1.754	0.794	-0.028			0.001
Unknown race	-0.727	0.597	-0.017			0.000
Step 4				.041*	.003*	
Ethnicity-Latino	-1.393	0.432	-0.056			0.002*
Step 5				.041*	.000	
U.S. Born	-0.699	0.725	-0.013			0.000
English in home	0.612	0.534	0.019			0.000
Refugee/Immigrant	0.133	0.899	0.002			0.000

*$p < .005$

In the first step the contribution of gender was significant, Adjusted R^2 = .005, $p <$ .0001. In the second step the contribution of number of trauma types was significant, Adjusted R^2 = .036, $p < .0001$, In the third step the addition of the four racial groups Black/African American, Asian, American Indian/Alaskan Native, and unknown race was significant, Adjusted R^2 = .038, $p < .0034$. None of these racial categories individually was significantly different from the standard group (White/Caucasian). Due to the overall significance of the race step we performed a follow up post hoc test. A one way ANOVA was used to test for differences in externalizing T-scores among the racial groups.

Externalizing T-scores did not differ significantly across the five different racial groups, F (5, 8046) = 2.681, p = .020.

In the fourth step Ethnicity/Latino was significant, Adjusted R^2 =.041, p < .0001. In the final step the block of U.S. born, English as primary language spoken at home, and Refugee/Immigrant status did not account for additional variance in the full model. Overall, the full regression equation explained 4.1% of the variance in CBCL Externalizing scores at Baseline.

These results suggest that children's CBCL Externalizing scores are predicted by number of trauma types (more trauma types is associated with higher [worse] externalizing scores), gender (being male is associated with higher externalizing scores), ethnicity (being non-Latino is associated with higher externalizing scores), and finally race. Post hoc examination of race indicated that no significant differences exist between the five racial groups.

Hierarchical regression CBCL Internalizing. For the model predicting CBCL Internalizing, reported in Table 11, the overall model was significant (F (11, 5361) = 31.601, p < .0001, Adjusted R^2 = .059).

Table 11.

Hierarchical Regression Analysis Summary for Variables Predicting Children's CBCL Internalizing T-Scores

Variable	B	SEB	*B*	Adjusted R^2	ΔR^2	sr^2
Step 1				.014*		
Gender-male	0.455	0.289	.020			.000
Age	0.245	0.034	.093			.008*
Step 2				.035*	.021*	
Number of trauma types	0.781	0.067	.153			.023*
Step 3				.044*	.009*	
Black/African American	-1.721	0.342	-.069			.004*
Asian	1.308	1.439	.012			.000
American Indian/Alaskan	-1.903	0.768	-.032			.000
Unknown race	-0.442	0.577	-.011			.000
Step 4				.046*	.002*	
Ethnicity-Latino	0.407	0.418	.017			.000
Step 5				.049*	.004*	
U.S. Born	-1.425	0.701	-.028			.001
English in home	-1.695	0.516	-.054			.002*
Refugee/Immigrant	1.084	0.870	.016			.000

*p < .005

In the first step age alone was significant Adjusted R^2 = .014, *p* < .0001. In the second step the contribution of number of trauma types was significant, Adjusted R^2 =.035, *p* < .0001. In the third step the addition of the four racial groups Black/African American, Asian, American Indian/Alaskan Native, and unknown race was significant, Adjusted R^2 = .044, *p* < .0001. However, only the Black/African American group contributed to the model, accounting for .4% of the variance. Due to the overall significance of the race step we performed a follow up post hoc test. A one way ANOVA was used to test for differences in

internalizing T-scores among the racial groups. Internalizing T-scores did differ significantly across the five different racial groups, F (5, 8041) = 15.410, p = .0001.

Post hoc comparisons revealed significant differences between African American/Blacks and Caucasian/Whites on internalizing T-scores with a mean difference of -2.594, p = .0001 (Caucasian/Whites having higher/worse internalizing scores), and African American/Black and the "race unknown" racial group with a mean difference on internalizing T-scores of -1.941, p =.0001 ("race unknown" racial group having higher/worse internalizing scores).

In the fourth step Ethnicity/Latino was significant, Adjusted R^2 =.046, p < .0002. In the final step the block of U.S. born, English as primary language spoken at home, and refugee/immigrant status was significant, Adjusted R^2 =.049, p < .0001; only English as primary language spoken at home contributed to the model, accounting for .2% of the variance.

These results suggest that children's CBCL Internalizing scores are predicted most strongly by number of trauma types (more trauma types is associated with higher [worse] internalizing scores), age (the older the age the more internalizing), race (being Black/African American is associated with lower internalizing scores than being White/Caucasian or being of unknown race), English as the primary language spoken at home (speaking English at home is associated with lower internalizing scores), and ethnicity (being Latino is associated with higher internalizing scores).

Hierarchical regression UCLA PTSD RI raw score. For the model predicting UCLA PTSD RI Raw score, reported in Table 12, the overall model was significant (F (11, 5361) = 31.601, p < .0001, Adjusted R^2 = .059).

Table 12.

Hierarchical Regression Analysis Summary for Variables Predicting Children's Total UCLA PTSD RI Raw Scores

Variable	B	SEB	B	Adjusted R^2	ΔR^2	sr^2
Step 1				.028*		
Gender-male	-4.679	0.403	-.156			.024*
Age	-0.166	0.065	-.035			.001
Step 2				.057*	.030*	
Number of trauma types	1.098	0.087	.173			.028*
Step 3				.058*	.002	
Black/African American	0.824	0.493	.025			.000
Asian	0.621	1.635	.005			.000
American Indian/Alaskan	0.488	1.129	.006			.000
Unknown race	1.530	0.702	.031			.001
Step 4				.058*	.000	
Ethnicity-Latino	0.004	0.560	.000			.000
Step 5				.059*	.001	
U.S. Born	0.623	0.786	.012			.000
English in home	1.205	0.634	.034			.001
Refugee/Immigrant	1.029	1.037	.014			.000

*$p < .005$.

In the first step gender alone was significant, Adjusted $R^2 = .028$, $p < .0001$. In the second step the contribution of number of trauma types was significant, $\Delta R^2 = .002$, $p < .0001$. In the third step the addition of the four racial groups did not account for additional variance in the full model. In the fourth step Ethnicity/Latino did not account for additional variance in the full model . In the final step, the block of U.S. born, English as primary language spoken at home, and refugee/immigrant status did not account for additional variance in the full model. Overall, the full regression equation explained 5.9% of the variance of Children's Total UCLA PTSD RI scores at Baseline.

These results suggest that children's Total UCLA Post Traumatic Stress RI Raw scores are predicted most strongly by the number of trauma types experienced (more trauma types is associated with higher [worse] scores), and then by gender (being female is associated with higher scores).

Hierarchical regression TSCC-A Anger score. For the model predicting TSCC-A Anger score reported in Table 13, the overall model was significant $(F (11, 4517) = 11.199$, $p < .0001$, Adjusted $R^2 = .024$).

Table 13.

Hierarchical Regression Analysis Summary for Variables Predicting Children's TSCC-A Anger T- Scores

Variable	B	SEB	*B*	Adjusted R^2	Δ R^2	sr^2
Step 1				.001		
Gender-male	-0.818	0.335	-0.036			.001
Age	-0.022	0.066	-0.005			.000
Step 2				.016*	.015*	
Number of trauma types	0.591	0.074	0.121			.014*
Step 3				.021*	.006*	
Black/African American	1.420	0.405	0.057			.003*
Asian	1.873	1.439	0.019			.000
American Indian/Alaskan	0.864	0.975	0.013			.000
Unknown race	-0.063	0.610	-0.002			.000
Step 4				.022*	.001	
Ethnicity-Latino	-0.151	0.469	-0.006			.000
Step 5				.024*	.003	
U.S. Born	1.479	0.695	0.035			.001
English in home	1.112	0.542	0.040			.001
Refugee/Immigrant	0.595	0.920	0.010			.000

*p < .005.

In the first step the block of gender and age was not significant, Adjusted $R^2 = .002$, $p < .0124$. In the second step, the contribution of number of trauma types was significant and explained 1.5% of the variance, Adjusted $R^2 = .016$, $p < .0001$. In the third step the addition of all four racial groups including Black/African American, Asian, American Indian/Alaskan Native, and unknown race was significant, Adjusted $R^2 = .021$, $p < .0001$. However, only the Black/African American group contributed significantly to the model, accounting for .3% of the variance. None of the other racial categories individually were significant. Due to the overall significance of the race step we performed a follow up post hoc test. A one way ANOVA was used to test for differences in Anger T-scores among the racial groups. Anger T-scores did not differ significantly across the five different racial groups, $F(5, 5964) = 2.053$, $p = .06821$.

In the fourth step Ethnicity/Latino did not account for additional variance in the full model, and there was no significant change in R^2. In the final step, the block of U.S. born, English as primary language spoken at home, and refugee/immigrant status did not account for additional variance in the full model and there was no significant change in R^2. Overall, the full regression equation explained 2.4% of the variance of the TSCC-A Anger T- Score.

These results suggest that children's TSCC-A Anger scores are predicted by the number of trauma types the child has experienced (more trauma types is associated with higher TSCC-A Anger scores).

Hierarchical regression TSCC-A Depression score. For the model predicting TSCC-A Depression Scores, reported in Table 14, the overall model was significant ($F(11, 4517) = 9.354$, $p < .0001$, $R^2 = .020$.)

Table 14.

Hierarchical Regression Analysis Summary for Variables Predicting Children's TSCC-A Depression T-Scores

Variable	B	SEB	*B*	Adjusted R^2	ΔR^2	sr^2
Step 1				.003*		
Gender-male	-0.434	0.364	-.018			.000
Age	0.122	0.071	.026			.001
Step 2				.020*	.017*	
Number of trauma types	0.700	.0.080	.132			.017*
Step 3				.020*	.001	
Black/African American	0.003	0.440	.000			.000
Asian	2.814	1.565	.027			.001
American Indian/Alaskan	0.730	1.060	.010			.000
Unknown race	0.650	0.664	.016			.000
Step 4				.020*	.000	
Ethnicity-Latino	-0.156	0.510	-.006			.000
Step 5				.020*	.000	
U.S. Born	-0.749	0.756	-.016			.000
English in home	0.390	0.590	.013			.000
Refugee/Immigrant	0.631	1.001	.010			.000

*$p < .005$.

In the first step the block of gender and age was significant, Adjusted R^2 = .003, $p < .0004$. Neither gender nor age was significant alone, however. In the second step, the contribution of number of trauma types was significant and explained 1.7% of additional variance, Adjusted R^2 =.020, $p < .0001$. In the third, fourth, and fifth steps, the addition of race, ethnicity/Latino, and cultural factors did not account for additional variance in the full model and there was no further significant change in R^2. Overall, the full regression equation explained 2.0% of the variance of the TSCC-A Depression T-scores.

These results suggest that children's TSCC-A Depression T-scores are predicted only by the number of trauma types the child has experienced (more trauma types is associated with higher TSCC-A Depression scores).

Hierarchical regression TSCC-A Anxiety score. For the model predicting TSCC-A Anxiety Scores, reported in Table 15, the overall model was significant $(F (11, 4517) = 11.502, p < .005,$ Adjusted $R^2 = .025$.)

Table 15.

Hierarchical Regression Analysis Summary for Demographic Variables Predicting Children's TSCC-A Anxiety T-Scores

Variable	B	SEB	*B*	Adjusted R^2	Δ R^2	sr^2
Step 1				.007*		
Gender-male	-0.655	0.388	-0.025			.001
Age	-0.545	0.076	-0.108			.011*
Step 2				.023*	.016*	
Number of trauma types	0.731	0.085	0.129			.016*
Step 3				.025*	.003	
Black/African American	-0.822	0.468	-0.029			.001
Asian	2.679	1.667	0.024			.001
American Indian/Alaskan	-0.489	1.129	-0.006			.000
Unknown race	0.600	0.707	0.013			.000
Step 4				.025*	.000	
Ethnicity-Latino	0.347	0.544	0.013			.000
Step 5				.025*	.000	
U.S. Born	0.329	0.805	0.007			.000
English in home	-0.490	0.628	-0.015			.000
Refugee/Immigrant	1.170	1.066	0.017			.000

*$p < .005$.

In the first step the combination of gender and age was significant, Adjusted $R^2 =$ .007, $p < .0001$; age alone accounted for a significant portion of variance. In the second step the contribution of number of trauma types was significant, explaining an additional 1.6% of the variance, Adjusted $R^2 = .023$, $p < .0001$. In the third, fourth, and fifth steps, the addition of the four racial categories, Ethnicity/Latino, and the block of cultural factors—U.S. born, English as primary language spoken at home, and refugee/immigrant status—did not account for additional variance in the full model, and there was no significant change in R^2. Overall, the full regression equation explained 2.5% of the variance of the TSCC-A Anxiety T-scores.

These results suggest that children's TSCC-A Anxiety scores are predicted by the number of trauma types experienced (more trauma types is associated with higher scores) and the children's age (younger age is associated with higher TSCC-A Anxiety scores).

Hierarchical regression TSCC-A Post Traumatic Stress score. For the model predicting TSCC-A Post Traumatic Stress scores reported in Table 16, the overall model was significant, (F (11, 4517) = 12.244, $p < .0001$, Adjusted $R^2 = .027$).

Table 16.

Hierarchical Regression Analysis Summary for Variables Predicting Children's TSCC-A Post Traumatic Stress T-Scores

Variable	B	SEB	*B*	Adjusted R^2	Δ R^2	sr^2
Step 1				.002*		
Gender-male	-0.642	0.347	-0.028			.001
Age	-0.259	0.068	-0.057			.003
Step 2				.027*	.025*	
Number of trauma types	0.821	0.076	0.162			.024*
Step 3				.027*	.001	
Black/African American	0.031	0.420	0.001			.000
Asian	2.639	1.493	0.026			.001
American Indian/Alaskan	0.000	1.012	0.000			.000
Unknown race	0.473	0.633	0.012			.000
Step 4				.026*	.000	
Ethnicity-Latino	0.142	0.487	0.006			.000
Step 5				.027	.001	
U.S. Born	1.077	0.721	0.025			.000
English in home	-0.081	0.563	-0.003			.000
Refugee/Immigrant	1.202	0.955	0.021			.000

*p < .005.

In the first step age and gender were not significant , Adjusted R^2 = .002, p = .0079. In the second step the contribution of number of trauma types was significant, explaining an additional 2.5% of the variance, Adjusted R^2 =.027, p < .0001. In the third, fourth, and fifth steps, the addition of the four racial categories, Ethnicity/Latino, and the block of cultural factors did not account for additional variance in the full model, and there was no significant change in R^2.

Overall, the full regression equation explained 2.7% of the variance of the TSCC-A Post Traumatic Stress T-scores. These results suggest that children's TSCC-A Post Traumatic Stress scores are predicted only by the number of trauma types experienced (more trauma types is associated with higher scores).

Hierarchical regression TSCC-A Dissociation score. For the model predicting TSCC-A Dissociation Scores, reported in Table 17, the overall model was significant (F (11, 4517) = 9,097, p < .0001, Adjusted R^2 = .019).

Table 17.

Hierarchical Regression Analysis Summary for Variables Predicting Children's TSCC-A Dissociation T-Scores

Variable	B	SEB	*B*	*Adjusted R^2*	Δ R^2	sr^2
Step 1				.002*		
Gender-male	-1.019	0.352	-0.043			.002*
Age	-0.088	0.069	-0.019			.000
Step 2				.019*	.017*	
Number of trauma types	0.687	0.077	0.134			.017*
Step 3				.019*	.001	
Black/African American	0.613	0.426	0.023			.000
Asian	0.764	1.515	0.008			.000
American Indian/Alaskan	-0.040	1.026	-0.001			.000
Unknown race	-0.199	0.642	-0.005			.000
Step 4				.019*	.000	
Ethnicity-Latino	0.000	0.494	0.000			.000
Step 5				.019*	.001	
U.S. Born	0.673	0.732	0.015			.000
English in home	0.478	0.571	0.016			.000
Refugee/Immigrant	-0.310	0.969	-0.005			.000

*p < .005.

In the first step the combination of age and gender was significant, Adjusted $R^2 =$ .002, $p = .0033$, with gender-male accounting for the variance. In the second step the contribution of number of trauma types was significant explaining an additional 1.7% of the variance, Adjusted $R^2 = .019$, $p < .0001$. In the third, fourth, and fifth steps, the addition of the four racial categories, Ethnicity/Latino, and the block of U.S. born, English as primary language spoken at home, and refugee/immigrant status did not account for additional variance in the full model, and there was no significant change in R^2.

Overall, the full regression equation explained 1.9% of the variance of the TSCC-A Dissociation T-scores. These results suggest that children's TSCC-A Dissociation T-scores are predicted by the number of trauma types experienced (more trauma types is associated with higher scores) and the children's gender (being female is associated with higher TSCC-A Dissociation scores).

Hierarchical regression total functional problem score. For the model predicting total functional problem scores reported in Table 18, the overall model was significant, (F $(11, 6387) = 97.657$, $p < .005$, *Adjusted $R^2 = .143$*).

Table 18.

Hierarchical Regression Analysis Summary for Demographic Variables Predicting Children's Total Functional Problem Scores

Variable	B	SEB	*B*	Adjusted R^2	ΔR^2	sr^2
Step 1				.073*		
Gender-male	0.309	0.052	0.70			.005*.051*
Age	0.124	0.006	0.236			
Step 2				.131*	.058*	
Number of trauma types	0.231	0.012	0.236			.052*
Step 3				.133*	.003*	
Black/African	0.098	0.063	0.020			.000
American	-0.505	0.220	-0.027			.001
Asian	0.151	0.145	0.012			.000
American	0.208	0.097	0.027			.001
Indian/Alaskan						
Unknown race						
Step 4				.135*	.002*	
Ethnicity-Latino	0.029	0.073	0.006			.000
Step 5				.143*	.008*	
U.S. Born	0.553	0.113	0.064			.003*
English in home	0.342	0.080	0.062			.002*
Refugee/Immigrant	-0.119	0.136	-0.010			.000

*p < .005.

In the first step gender and age were significant, Adjusted R^2 = .073, *p* = .0001. In the second step the contribution of number of trauma types was significant explaining an additional 5.8% of the variance, Adjusted R^2 =.131, *p* < .0001. In the third step the addition of the four racial categories of Black/African American, Asian, American Indian/Alaskan Native, and unknown race was significant, Adjusted R^2 = .133, *p* < .0002. Due to the overall significance of the race step we performed a follow up post hoc test. A one way ANOVA

was used to test for differences in total functional problem scores among the racial groups. Total functional problem scores did not differ significantly across the five different racial groups, $F(5, 7496) = 1.101$, $p = .357$.

In the fourth step Ethnicity/Latino was significant, Adjusted $R^2 = .135$, $p < .0008$. In the final step, the block of U.S. born, English as primary language spoken at home, and refugee/immigrant status was significant, Adjusted $R^2 = .143$, $p < .0001$; being U.S. born and English as primary language spoken at home were significant individually. Overall, the full regression equation explained 14.3% of the variance of the Total Problem scores.

These results suggest that children's Total Functional Problem scores are predicted by the number of trauma types experienced (more trauma types is associated with higher scores), the children's age (older age is associated with more problems), children's gender (being male is associated with more problems), birth in the U.S. (being born in the U.S. is associated with more problems), and English as primary language spoken at home (speaking English as the primary language at home is associated with more problems).

Hierarchical regression total clinical problem score. For the model predicting total clinical problem scores reported in Table 19, the overall model was significant, ($F(11, 7458) = 7.984$, $p < .0001$, *Adjusted $R^2 = .112$*).

Table 19.

Hierarchical Regression Analysis Summary for Variables Predicting Children's Total Clinical Problem Scores

Variable	B	SEB	*B*	Adjusted R^2	Δ R^2	sr^2
Step 1				.027*		
Gender-male	0.063	0.066	0.010			.000
Age	0.078	0.008	0.110			.011*
Step 2				.109*	.081*	
Number of trauma types	0.386	0.015	0.292			.080*
Step 3				.110*	.002	
Black/African American	0.047	0.080	0.007			.000
Asian	-0.217	0.289	-0.008			.000
American Indian/Alaskan	0.594	0.180	0.036			.001
Unknown race	0.249	0.124	0.024			.000
Step 4				.110*	.000	
Ethnicity-Latino	-0.188	0.094	-0.030			.000
Step 5				.112*	.002*	
U.S. Born	0.162	0.145	0.014			.000
English in home	-0.416	0.111	-0.054			.002*
Refugee/Immigrant	0.383	0.178	0.024			.001

*p < .005.

In the first step only age was individually significant, Adjusted R^2 = .027, *p* = .0001. In the second step the contribution of number of trauma types was significant, explaining an additional 8.1% of the variance, Adjusted R^2 =.109, *p* < .0001. In the third step the addition of the four racial categories of Black/African American, Asian, American Indian/Alaskan Native, and unknown race was not significant. In the fourth step Ethnicity/Latino did not account for additional variance in the full model, and there was no significant change in R^2, Adjusted R^2 = .110, *p* < .9480. In the final step, the block of U.S. born, English as primary

language spoken at home, and refugee/immigrant status was significant, Adjusted R^2 =.112, p < .0002; only English as primary language spoken at home was significant individually. Overall, the full regression model explained 11.2% of the variance of the Total Clinical Problems scores.

These results suggest that children's Total Clinical Problems scores are predicted by the number of trauma types experienced (more trauma types is associated with higher scores), the children's age (older age is associated with more disorders), and English as primary language spoken at home (speaking English as the primary language at home is associated with less disorders).

Hierarchical Logistic Regression on Children's Presenting Symptoms Being in Clinical Range

A series of Hierarchical Logistic Regressions were conducted to test the second part of hypothesis one, that children's presenting symptoms would be in the clinical range depending on various ecological and trauma specific factors. We tested whether these factors made the children more or less likely to fall into the clinical range for CBCL Externalizing, CBCL Internalizing, and The UCLA PTSD Reaction Index. These analyses are not performed for the TSCC-A scores, as so few children fell into the clinical range at Baseline.

For these analyses, we used all the predictor variables used in the hierarchical regression analysis.

For race, the contrast is with the named group in comparison with the standard group, or White/Caucasian.

Hierarchical logistic regression: CBCL Externalizing at Baseline. A hierarchical logistic regression model was built using gender, age, number of trauma types, race, ethnicity, U.S. born, English as primary language spoken at home, and refugee/immigrant

status as predictors for being clinical or non-clinical on the CBCL Externalizing measure. The clinical level is defined by Achenbach et al. (1992) as T-scores above 63. At Baseline, 49.37% of the children were in the clinical range for externalizing. A test of the full model, reported in Table 20, was statistically significant, $X^2(11) = 206.278$, $p < .0001$.

Table 20.

Hierarchical Logistic Regression Model predicting children's Clinical/ Non-Clinical Groups from CBCL Externalizing Scores (n =5943)

Prediction of Non-Clinical/Clinical	Chi-square	95% CI for Odds Ratio (OR)	Adjusted OR
Model 1: CBCL Externalizing	206.278***		
Gender (male)		1.059-1.306	1.176**
Age		1.006-1.032	1.019**
Number of trauma types		1.118-1.175	1.146***
Race			
Indian/Native Americans		.641-1.121	.847
Asian		.403-1.169	.686
Black/African American		.851-1.090	.963
Unknown		.714-1.092	.883
Ethnicity		.656-.890	.764**
US Born		.823-1.379	1.066
English as primary language		.934-1.365	1.129
Refugee/Immigrant status		.619-1.171	.852

*$p < .05$, **$p < .001$, ***$p < .0001$.

Gender and age were significant predictors of clinical classification, $X^2(2) = 26.229$, $p < .0022$, with boys more likely to fall within the clinical range and with older age children more likely to fall within the clinical range. Number of trauma types was a significant predictor of clinical classification, $X^2(1) = 135.600$, $p < .0001$ with children who had more trauma types being more likely to fall within the clinical range. Race was not a significant

predictor of clinical classification. Ethnicity was a significant predictor of clinical classification, $X^2(1) = 25.536$, $p < .0001$, with non-Latino children being more likely to fall within the clinical range. The cultural factors were not significant predictors of clinical classification.

The change in odds associated with being in the clinical group for externalizing for males was 1.176, indicating that boys were 18% more likely than girls to be in the clinical range. The change in odds associated with being in the clinical group for externalizing for age was 1.019, indicating that older children were 2% more likely to be in the clinical group than younger children. The change in odds associated with being in the clinical group for externalizing for children with more trauma types was 1.146, indicating that the children with more trauma types were 15% more likely than the children with fewer traumas to be in the clinical externalizing group. The change in odds associated with being in the clinical group for the Latino group was .764, indicating that Latino children were 24% less likely to be in the clinical externalizing group.

Hierarchical logistic regression: CBCL Internalizing at Baseline. A hierarchical logistic regression model was built using gender, age, number of trauma types, race, ethnicity, U.S. born, English as primary language spoken at home, and refugee/immigrant status as predictors for being clinical or non-clinical on the CBCL Internalizing measure.

The clinical level is defined by Achenbach and colleagues (1992) as T-scores above 63. At Baseline, 45.8% of the children were in the clinical range for internalizing. A test of the full model, reported in Table 21, was statistically significant, $X^2(11) = 220.801$, $p < .0001$.

Table 21.

Hierarchical Logistic Regression Model predicting children's Clinical/ Non-Clinical Groups from CBCL Internalizing Scores (n = 5943)

Prediction of Non-Clinical/Clinical	Chi-square	95% CI for Odds Ratio (OR)	Adjusted OR
Model 2: CBCL Internalizing	220.801***		
Gender (male)		1.036-1.279	1.151*
Age		1.025-1.051	1.038***
Number of trauma types		1.104-1.160	1.131***
Race			
Indian/Native Americans		.613-1.079	.813
Asian		.980-2.804	1.658
Black/African American		.708-.909	.802**
Unknown		.808-1.230	.997
Ethnicity		.921-1.248	1.072
US Born		.628-1.049	.812
English as primary language		.609-.886	.735**
Refugee/Immigrant status		.830-1.571	1.142

*$p < .05$, **$p < .001$, ***$p < .0001$.

Age and gender were significant predictors of clinical classification, X^2 (2) = 62.181, p <.0001, with males and older children more likely to fall within the clinical range. Number of trauma types was a significant predictor of clinical classification, X^2 (1) = 91.238, p < .0001, with children who experienced more trauma types being more likely to fall within the clinical range. Race was a significant predictor of clinical classification, X^2 (4) = 37.217, p < .0001, with Black/African-American children being less likely to fall within the clinical range as compared with the standard group (white/Caucasian) for internalizing. English speaking at home was a significant predictor of clinical classification, X^2 (3) = 17.606, p <

.001, with English speaking children at home less likely to fall within the clinical range.

The change in odds associated with being in the clinical group for internalizing for males was 1.151, indicating that male children were 51% more likely than females to be in the clinical group for internalizing. The change in odds associated with being in the clinical group for internalizing for age was 1.038, indicating that older children were 4% more likely to be in the clinical range for internalizing. The change in odds associated with being in the clinical group for internalizing for children with higher number of trauma types was 1.131, indicating that these children were 13% more likely than the children with fewer traumas of being in the clinical internalizing group. The change in odds associated with being in the clinical group for internalizing for children in the Black/African-American group was .802, indicating that the children in the Black/African-American group were 20% less likely to be in the clinical internalizing group as compared with the standard (White/Caucasian) group. The change in odds associated with being in the clinical group for internalizing for children who speak English as the primary language at home was .735, indicating that the children who speak English as the primary language at home were 27% less likely to be in the clinical internalizing group.

Hierarchical logistic regression: UCLA PTSD Reaction Index at Baseline. A hierarchical logistic regression model was built using gender, age, number of trauma types, race, ethnicity, U.S. born, English as primary language spoken at home, and refugee/immigrant status as predictors for being clinical or non-clinical on the UCLA PTSD Reaction Index. The clinical level is defined by Pynoos and colleagues (1998) as being a raw score of 38 or higher. At Baseline, 24.6% of the children fell into the clinical range. A test of the full model, reported in Table 22, was statistically significant, $X^2(11) = 184.369$, $p < .0001$.

Table 22.

Hierarchical Logistic Regression Model predicting children's Clinical/ Non-Clinical Groups

from UCLA PTSD Reaction Index Scores (n = 5373)

Prediction of Non-Clinical/Clinical	Chi-square	95% CI for Odds Ratio (OR)	Adjusted OR
Model 2:UCLA PTSD Reaction Index	184.369***		
Gender (male)		.503-.655	.574***
Age		.966-1.007	.986
Number of trauma types		1.101-1.161	1.131***
Race			
Indian/Native Americans		.743-1.483	1.050
Asian		.707-1.956	1.176
Black/African American		.986-1.341	1.150
Unknown		.934-1.456	1.166
Ethnicity		.818-1.168	.978
US Born		.743-1.233	.957
English as primary language		.960-1.447	1.178
Refugee/Immigrant status		.850-1.612	1.171

Gender was a significant predictor of clinical classification, X^2 (2) = 84.553, $p <$

.0001, with females more likely to fall within the clinical range. Number of trauma types was

a significant predictor of clinical classification, X^2 (1) = 88.566, $p < .0001$, with children with

a high number of trauma types being more likely to fall within the clinical range. None of the

other independent variables were significant predictors of falling into the clinical group for

the UCLA PTSD Reaction Index.

The change in odds associated with being in the clinical group for the UCLA PTSD

RI scores for males was .574, indicating that boys were 43% less likely than girls to be in the clinical range for the UCLA PTSD RI. The change in odds associated with being in the clinical group for UCLA PTSD RI scores for children with more trauma types was 1.131, indicating that children with more trauma types are 13 % more likely than children with fewer traumas to be in the clinical range for the UCLA PTSD RI scores.

Hierarchical Regressions on Change Scores on Clinical Scales and Functional problems between Baseline and At Three Month (Or First Recorded) Follow up

Hypothesis 2 predicted that change in scores on clinical scales and total functional problems, as well as the clinical categorization at three month (or first recorded) follow up, will differ by children's gender, age at treatment, number of trauma types, race, ethnicity, and cultural factors, including whether or not they were born in the United States, had English as the primary language spoken at home, and were refugee/immigrants.

A series of hierarchical regressions were conducted to test this hypothesis using all independent variables as identified as important from the literature. If race was found to be significant in the hierarchical regression, post hoc one-way ANOVAs were conducted to see whether racial groups differed.

The dependent variables in the set of analyses were created by computing the difference between the Baseline scores and the at three month (or first recorded) follow-up scores. These included: CBCL Externalizing Score, CBCL Internalizing Score, UCLA PTSD RI Raw Total Score, TSCC-A Anger Score, TSCC-A Depression Score, TSCC-A Anxiety Score, TSCC-A Posttraumatic Stress Score, TSCC-A Dissociation Score and Total Functional Problem Score. Clinical problems were not examined as this was not measured at follow up. Nine analyses were conducted. To control for multiple tests, each analysis was performed with the Bonferroni correction, at the alpha = 0.05/9 level, or .005.

The independent variables in the regression analyses included all of the following: gender, age at Baseline, number of trauma types, race (Indian/Native American, Asian, Black/African American, unknown) as compared to the standard group (White/Caucasian), ethnicity (Latino), U.S. country of birth, English language spoken at home, and refugee/immigrant status.

At three month (or first recorded) follow-up there was significant improvement on all Dependent variables as reported in Table 23.

Table 23.

One Sample t-Tests of Difference Variables Between Baseline Scores and At Three Month (Or First Recorded) Follow-up Scores

Difference Variable	*n*	Mean Difference	SD	*T*	*p* <
CBCL Externalizing T-score	2786	3.43001	9.0937	19.909	.0001
CBCL Internalizing T-score	2786	3.85930	10.0595	20.250	.0001
UCLA PTSD RI Raw Score	3016	6.32926	13.5959	25.566	.0001
TSCC-A Anger T-score	2359	2.93641	10.3352	13.799	.0001
TSCC-A Depression T-score	2359	4.53201	11.5454	19.065	.0001
TSCC-A Anxiety T-score	2359	4.41501	12.0022	17.866	.0001
TSCC-A Post Traumatic T-score	2359	4.87664	10.9754	21.581	.0001
TSCC-A Dissociation	2358	3.33404	10.7495	15.064	.0001
Total Functional Problems Score	3699	1.06164	3.0556	21.131	.0001

Using all the predictors, the change scores were subjected to hierarchical regressions.

Hierarchical regression Change CBCL Externalizing. For the model predicting

CBCL Change Externalizing, the overall model was not significant (F (11, 2507) = 1.755, p

< .057.

Hierarchical regression CBCL Change Internalizing. For the model predicting

CBCL Change Internalizing, reported in Table 24 , the overall model was significant (F (11,

2496) = 3.019, p < .0001, Adjusted R^2 = .009).

Table 24.

Hierarchical Regression Analysis Summary for Variables Predicting Children's CBCL Change Internalizing T-Scores

Variable	B	SEB	B	Adjusted R^2	ΔR^2	sr^2
Step 1				.004*		
Gender-male	-0.444	0.405	-.022			.000
Age	-.152	0.050	-.062			.004*
Step 2				.004*	.001	
Number of trauma types	-0.089	0.090	-.021			.000
Step 3				.007*	.004	
Black/African American	-.561	0.508	-.023			.000
Asian	-2.262	1.804	-.025			.001
American Indian/Alaskan	-1.113	1.009	-.022			.000
Unknown race	0.461	0.727	.014			.000
Step 4				.009*	.002	
Ethnicity-Latino	0.480	0.569	.023			.000
Step 5				.009*	.001	
U.S. Born	0.246	0.864	.006			.000
English in Home	-1.295	0.676	-.050			.001
Refugee/Immigrant	0.023	1.239	.000			.000

*p < .005

In the first step age alone was significant Adjusted R^2 = .004, p < .0001. In all of the

remaining steps, none of the predictors were significant.

These results suggest that change in children's CBCL Internalizing scores at three month (or first recorded) follow up are predicted only by age (the younger the age, the more improvement over three months in internalizing scores).

Hierarchical regression UCLA PTSD RI change raw score. For the model predicting UCLA PTSD RI change raw score, the overall model was not significant (F (11, 2731) = 1.686, $p < .0701$, Adjusted R^2 = .003).

Hierarchical regression TSCC-A Anger change T- score. For the model predicting TSCC-A Anger change T- score, the overall model was not significant (F (11, 2147) = 1.103, $p = .3551$, Adjusted R^2 = .001).

Hierarchical regression TSCC-A Depression change T- score. For the model predicting TSCC-A Depression change T-score, reported in Table 25, the overall model was significant (F (11, 2136) = 2.451, $p =.0048$, R^2 = .004.)

Table 25.

Hierarchical Regression Analysis Summary for Variables Predicting Children's TSCC-A Depression Change T-Scores

Variable	B	SEB	*B*	Adjusted R^2	Δ R^2	sr^2
Step 1				.002		
Gender-male	-0.008	0.519	.000			.000
Age	-0.289	0.104	-.062			.004*
Step 2				.003	.001	
Number of trauma types	0.226	.0.110	.045			.002
Step 3				.004	.002	
Black/African American	0.633	0.626	.024			.000
Asian	1.874	1.923	.021			.000
American Indian/Alaskan	-0.442	1.429	-.007			.000
Unknown race	1.107	0.934	.028			.001
Step 4				.004	.001	
Ethnicity-Latino	0.213	0.716	.009			.000
Step 5				.009*	.004*	
U.S. Born	1.999	0.997	.050			.002
English in Home	-2.322	0.837	-.082			.004*
Refugee/Immigrant	-.638	1.333	-.011			.000

*$p < .005$.

In the first step four steps none of the variables were significant. This included the block of gender and age, the block of number of trauma types, the block of race, and the block of ethnicity. These factors did not account for variance, and there was no significant changes in R^2. However, the final step of U.S Born, English in Home and refugee/immigrant Status was significant, with English in Home being the only variable within the step that was significant. Children who spoke English at home showed less change. The overall model explained 1.2% of the variance of the TSCC-A Depression change T-scores.

These results suggest that change in children's TSCC-A Depression T-scores at three month (or first recorded) follow up are predicted only by whether the child speaks English in home; children who spoke English at home showed less change in TSCC-A Depression scores.

Hierarchical regression TSCC-A Anxiety change T- scores. For the model predicting TSCC-A Anxiety Scores, reported in Table 26, the overall model was significant $(F (11, 2147) = 2.809, p = .0012$, Adjusted $R^2 = .009$.)

Table 26.

Hierarchical Regression Analysis Summary for Demographic Variables Predicting Children's TSCC-A Anxiety Change T-Scores

Variable	B	SEB	*B*	*Adjusted R^2*	ΔR^2	sr^2
Step 1				.004*	.005*	
Gender-male	.439	.535	.018			.000
Age	-.335	.107	-.069			.004*
Step 2				.004*	.001	
Number of trauma types	.155	.113	.030			.001
Step 3				.008*	.005	
Black/African American	-.174	.645	-.006			.000
Asian	2.135	1.981	.024			.001
American Indian/Alaskan	-2.809	1.472	-.041			.002
Unknown race	1.285	.962	.031			.001
Step 4				.008*	.001	
Ethnicity	.370	.738	.015			.000
Step 5				.009*	.003	
U.S. Born	2.318	1.027	.057			.002
English in Home	-1.444	.862	-.050			.001
Refugee/Immigrant	1.215	1.374	.020			.000

*$p < .005$.

In the first step the combination of gender and age was significant, Adjusted $R^2 =$ .004, $p < .003$; age alone accounted for a significant portion of variance. In the second, the third, fourth, and fifth steps, the addition of number of trauma types, four racial categories, Ethnicity/Latino, and the block of cultural factors—U.S. born, English as primary language spoken at home, and refugee/immigrant status—did not account for additional variance in the full model, and there was no significant change in R^2. Overall, the full regression equation explained .9% of the variance of changes in the TSCC-A Anxiety T-scores.

These results suggest that change in children's TSCC-A Anxiety scores at three month (or first recorded) follow up is predicted by the children's age (younger age is associated with more improvement in TSCC-A Anxiety scores).

Hierarchical regression TSCC-A Post Traumatic Stress Change T- scores. For the model predicting TSCC-A Post Traumatic Change Scores, reported in Table 27, the overall model was significant *(F (11, 2147) = 2.701, p = .002, Adjusted R^2 = .009.)*

Table 27.

Hierarchical Regression Analysis Summary for Demographic Variables Predicting Children's TSCC-A Post Traumatic Stress Change T-Scores

Variable	B	SEB	*B*	Adjusted R^2	Δ R^2	sr^2
Step 1				.000	.001	
Gender-male	-.113	.489	-.005			.000
Age	-.163	.098	-.037			.001
Step 2				.000	.000	
Number of trauma types	.119	.104	.025			.000
Step 3				.006	.008*	
Black/African American	-.282	.591	-.011			.000
Asian	2.590	1.813	.031			.001
American Indian/Alaskan	-3.757	1.348	-.061			.004
Unknown race	1.107	.881	.029			.001
Step 4				.007	.001	
Ethnicity	.765	.675	.033			.001
Step 5				.009	.003	
U.S. Born	2.354	.940	.063			.003
English in Home	-1.134	.789	-.043			.001
Refugee/Immigrant	.422	1.258	.008			.000

*$p < .005$.

In the first step and second steps the addition of age, gender, and number of trauma types was not significant. In the third step the addition of race was significant, Adjusted R^2 = .006 $p < .005$. Due to the overall significance of the race step we performed a follow up post hoc test. A one way ANOVA was used to test for differences in Post Traumatic Stress T-scores among the racial groups. Post Traumatic Stress T-scores did not differ significantly across the five different racial groups, $F (5, 2353) = 1.550, p = .171$.

In the fifth step, the addition of the block of cultural factors—U.S. born, English as primary language spoken at home, and refugee/immigrant status—did not account for

additional variance in the full model, and there was no significant change in R^2. Overall, the full regression equation explained .9% of the variance of changes in the TSCC-A Post Traumatic Stress T-scores.

These results suggest that change in children's TSCC-A Post Traumatic Stress scores at three month (or first recorded) follow up is predicted by the children's race in the full hierarchical model but that racial groups do not differ in their amount of change.

Hierarchical regression TSCC-A Dissociation Change T- scores. For the model predicting TSCC-A Dissociation Change Scores, the overall model was not significant *(F (11, 2147) = 1.610, p =.089, Adjusted R^2 = .003.)*

Hierarchical regression Total Functional Problem Change Score. For the model predicting Total Problem Change Score, reported in Table 28, the overall model was significant (*F* (11, 3423) = 7.784, *p* < .0001, Adjusted R^2 = .021).

Table 28.

Hierarchical Regression Analysis Summary for Demographic Variables Predicting Children's TSCC-A Total Functional Problem Change Scores

Variable	B	SEB	*B*	Adjusted R^2	Δ R^2	sr^2
Step 1				.014	.014*	
Gender-male	.047	.105	.008			.000
Age	.079	.013	.110			.001*
Step 2				.019	.005*	
Number of trauma types	.104	.024	.077			.005*
Step 3				.019	.002	
Black/African American	-.008	.129	-.001			.000
Asian	.248	.415	.010			.000
American Indian/Alaskan	-.096	.299	-.005			.000
Unknown race	.346	.191	.034			.001
Step 4				.019	.000	
Ethnicity	.255	.150	.039			.001
Step 5				.021	.003	
U.S. Born	.519	.206	.049			.002
English in Home	.051	.172	.007			.000
Refugee/Immigrant	-.215	.253	-.015			.000

*p < .005.

In the first step the contribution of gender and age was significant, Adjusted R^2 = .014, *p* < .0001. In the second step the contribution of number of trauma types was significant, Adjusted R^2 =.019, *p* < .0001. In the third, fourth, and fifth steps the addition of the four racial groups Black/African American, Asian, American Indian/Alaskan Native, and unknown race (with all racial groups in comparison to the standard group, Whites/Caucasians), the addition of Ethnicity/Latino, and the addition of English as primary language spoken at home and refugee/immigrant status were all non-significant. Overall, the

full regression equation explained 2.4% of the variance in the Total Functional Problem change score.

These results suggest that change in children's Total Functional Problem Score are predicted by older age (being older is associated with more improvement in number of problems) and number of trauma types (being in the higher trauma group is associated with more improvement in number of problems).

Hierarchical Logistic Regression of Being in the Clinical Range At Three Month (Or First Recorded) Follow Up

A series of Hierarchical Logistic Regressions were conducted to further test the hypothesis that children's post treatment symptoms would differ depending on various ecological and trauma-specific factors. These included gender, age, number of trauma types, race, ethnicity, U.S. born, English as primary language spoken at home, and refugee/immigrant status,

We tested whether the variables identified as significant by the literature made the children more or less likely to fall into the clinical range for externalizing, internalizing, and the UCLA-PTSD RI Scale at three month (or first recorded) follow up. These analyses are not performed for the TSCC-A scores, as so few children fell into the clinical range at Baseline.

Hierarchical logistic regression: Clinical range of CBCL Externalizing at three month (or first recorded) follow up. A hierarchical logistic regression model, reported in Table 29 was built using gender, age, number of trauma types, race, ethnicity, U.S. born, English as primary language spoken at home, and refugee/immigrant status as predictors for being clinical or non-clinical on the CBCL Externalizing measure at three month (or first recorded) follow up. In the follow-up sample 32.32% of the children fell into the clinical

range on externalizing; this compares with 49.7% at baseline. A test of the full model was statistically significant, X^2 (11) = 62.488, $p < .0001$.

Table 29.

Hierarchical Logistic Regression Model Predicting Children's Clinical/ Non-Clinical Groups From Externalizing Change Scores At Three Month (Or First Recorded) Follow Up

Prediction of Non-Clinical/Clinical	Chi-square	95% CI for Odds Ratio (OR)	Adjusted OR
Model 2: CBCL Externalizing	62.488***		
Gender (male)		.919-1.436	1.148
Age		.969-1.024	.996
Number of trauma types		1.108-1.222	1.163***
Race			
Indian/Native Americans		.318-.932	.544
Asian		.146-1.822	.515
Black/African American		.924-1.596	1.214
Unknown		.676-1.524	1.015
Ethnicity		.484-.936	.673
US Born		.496-1.287	.799
English as primary language		.651-1.443	.969
Refugee/Immigrant status		.713-2.554	1.350

Gender and race did not contribute. Number of trauma types was a significant predictor of clinical classification, X^2 (1) = 39.994, $p < .0001$, with the more trauma types a child has experienced the more they are likely to fall within the clinical range at three month (or first recorded) follow up. None of the other predictors including: race, ethnicity, U.S. born, English as primary language spoken at home, and refugee/immigrant status contributed.

The change in odds associated with being in the clinical group at three month (or first

recorded) follow up for externalizing for children with greater number of trauma types was 1.163,

indicating that the children with more trauma types were 16% more likely than children with less traumas to be in the clinical externalizing group.

Hierarchical logistic regression: Clinical range of CBCL Internalizing at three month (or first recorded) follow up. A hierarchical logistic regression model, reported in Table 30, was built using gender, age, number of trauma types, race, ethnicity, U.S. born, English as primary language spoken at home, and refugee/immigrant status as predictors for being clinical or non-clinical on the CBCL Internalizing measure at three month (or first recorded) follow up. At this point, 33.05% of the full sample fell into the clinical range; this compares with 45.8% at baseline. A test of the full model ($n = 1506$) was statistically significant, $X^2 (11) = 50.927$, $p < .0001$.

Table 30.

Hierarchical Logistic Regression Model predicting children's Clinical/ Non-Clinical Groups from Internalizing Change Scores At Three Month (Or First Recorded) Follow Up

Prediction of Non-Clinical/Clinical	Chi-square	95% CI for Odds Ratio (OR)	Adjusted OR
Model 2: CBCL Internalizing	50.927***		
Gender (male)		.999-1.577	1.255
Age		.981-1.038	1.009
Number of trauma types		1.100-1.215	1.156***
Race			
Indian/Native Americans		.388-1.137	.664
Asian		.384-3.227	1.113
Black/African American		.647-1.150	.862
Unknown		.636-1.447	.959
Ethnicity		.523-1.022	.731
US Born		.462-1.193	.742
English as primary language		.620-1.383	.926
Refugee/Immigrant status		.807-2.884	1.525

Gender and race did not contribute. Number of trauma types was a significant predictor of clinical classification, $X^2(1) = 41.229$, $p < .0001$, with the more trauma types a child has experienced the more they are likely to fall within the clinical range at three month (or first recorded) follow up. None of the other predictors including: race, ethnicity, U.S. born, English as primary language spoken at home, and refugee/immigrant status contributed.

The change in odds associated with being in the clinical group at three month (or first recorded) follow up for internalizing for children with greater number of trauma types was 1.156,

indicating that the children with more trauma types were 16% more likely than children with fewer trauma types to be in the clinical internalizing group.

Hierarchical logistic regression: Clinical range UCLA PTSD Reaction Index at three month (or first recorded) follow up. A hierarchical logistic regression model was built using gender, age, number of trauma types, race, ethnicity, U.S. born, English as primary language spoken at home, and refugee/immigrant status as predictors for being clinical or non-clinical on the UCLA PTSD Reaction Index post treatment. At three month (or first recorded) follow up, 14.22% fell into the clinical range for the UCLA PTSD Reaction Index; this compares with 24.6% at baseline. A test of the full model was not statistically significant, X^2 (11) = 24.740, $p < .010$, so the contribution of the predictors could not be reliably tested.

Discussion

Past studies involving childhood trauma have identified important variables affecting children's symptoms. The type and severity of traumas experienced are prototypical causal factors in response to trauma, while children's age and gender are also associated with response to trauma. However, few studies have looked at racial, ethnic, and cultural factors to explore how these may be related to children's symptoms and recovery. Racial, ethnic, and cultural factors are markers of the wide diversity in citizens of the United States; these factors influence how our families are structured and what values we find important. More importantly, all persons use these factors as filters to understand the world and their experiences. We were concerned that the current approach to assessment and treatment may have been formulaic and cookie-cutter—an approach that largely ignores the ecological framework of children—thus doing a disservice to some children. We hoped to shed light on

whether, and how, racial, ethnic, and cultural experiences may lead to different trauma symptoms and responses to treatment and, through the study's findings, provide support for a more ecological and individualized approach to children who have experienced trauma. In order to study these racial, ethnic, and cultural factors, we chose factors about children that were available to us in a large dataset of children across the country who were treated for trauma (Briggs, et al., 2012). These factors included racial group, ethnicity, birth in the United States, English as the primary language spoken in the home, and refugee/immigrant status. We must note from the outset that though many of the statistical models were significant, the predictors accounted for only a small amount of the variance in children's symptoms. Thus, the clinical significance of the models is questionable.

Description of the Children

The children in our study were diverse, but the racial and cultural groups were represented in relatively small numbers. The largest racial group represented was White/Caucasian children, comprising over half of the sample, followed by Black/African American children, comprising a little over one-fourth of the overall sample. Other racial groups were minimally represented, with 1.7% of the children being Native American, and .8% of the children being Asian. Of the entire sample, 4.8% of the children were identified as multiracial. A large number of children's race was coded as "unknown;" thus, it was not possible to understand exactly what racial group they might represent. The ethnicity of the children consisted of almost one-third being Latino/Hispanic; other ethnicities were not coded for in the dataset and so could not be represented in the analyses.

The cultural variables specifically examined in this study were present in relatively small numbers. Just 3% of the children were refugee/immigrants, 5.9% were born in a country other than the United States, and 15.4% did not use English as the primary language

at home. Little information was available regarding their socioeconomic status except that two-thirds of the children had public insurance; with so little information, we elected not to include this in analyses.

The children in the study were highly traumatized. As shown in Figure 2, all the children had experienced at least one type of trauma, with most experiencing more. In the full sample, three-fourths of the children experienced two or more trauma types, over half experienced three or more trauma types, and a little over one percent of the children actually experienced ten to fifteen traumas. The count of "trauma types" cannot give the full story of the amount or chronicity of the trauma in each child's life and so are not a complete measure of the severity of trauma. However, it is apparent that these children were at much higher risk than a typical population of children in the U.S. today. Additionally, the experience of multi and complex trauma can come with its own set of unique constellation of symptoms. Complex trauma can be defined as experiencing multiple and chronic developmentally adverse events early in life that are most often interpersonal in type (Margolin & Vickerman, 2011;Van der Kolk, 2005). Domestic violence, which was experienced by 45% of the children, has also been recognized as falling into this category. Children who experience complex trauma will often exhibit symptoms differently. Typical impairments of functioning for complex trauma survivors include differences or deficits in: (a) affect regulation, (b) information processing, (c) self-concept, (d) behavior control, (e) interpersonal relationships, and (f) biological processes such as somatization and sensorimotor development delays (Margolin & Vickerman, 2011; Van der Kolk, 2005).

Applying Bronfenbrenner's Ecological Model to Better Understand the Study's Children

Understanding the children's trauma. We can use Bronfenbrenner's ecological model when looking at Figure 3 in which the percentages of different types of traumas experienced and the percentages for the primary trauma presenting for treatment are shown. Applying the model to this Figure, we can see the largest numbers of traumas were at the microsystem level, within the family, with almost half of the children experiencing traumatic loss, almost half experiencing domestic violence, and one-third having an impaired caregiver. As further evidence of trauma at the microsystem level, a high number of children experienced abuse, including almost one-third experiencing emotional abuse, over one-fourth experiencing physical abuse, and one-fourth experiencing sexual abuse. Additionally, over one-fourth of children suffered from neglect. The children experienced a higher prevalence of family-level traumas than traumas occurring in outer layers of the ecological model such as in the exosystem or the macrosystem. Fewer children experienced traumas in the exosystem, with less than fifteen percent experiencing community violence and a little over ten percent experiencing school violence. A small percentage of children experienced traumas in the macrosystem level, with five percent experiencing natural disaster and less than two percent experiencing war/terrorism or forced displacement.

Understanding the children's functioning. At baseline the children were shown to be in great distress. As can be seen in Figure 5 "Frequency of Functional Problems" and Figure 6 "Frequency of Clinical Problems," they suffered from PTSD, depression, anxiety, attachment, and behavior problems. Specifically, over half of the children were diagnosed with PTSD, almost half were diagnosed with depression, and about one-fifth had general behavior problems. Over one-third of the children were diagnosed with Generalized Anxiety Disorder and over one-third were diagnosed with Attachment Disorder. The children's symptoms affected their functioning in multiple levels of the ecological system. Also

looking at Figure 5 and Figure 6, at the ontogenic level, almost one-third of the children experienced attention problems.   At the microsystem level, almost two-thirds of the children had behavior problems at home. At the exosystem level, almost half experienced behavior problems at school.

The children's difficulties were also demonstrated on the validated measures. From one-fourth to half of the children were in the clinical ranges on the measures of externalizing, internalizing, and PTSD as seen in Table 5. The large percentages of children in clinical ranges underscores the fact that the children in this study were experiencing high amounts of distress in multiple domains.

Factors Affecting Presenting Scores on Clinical Scales, Functional problems, Clinical problems and Clinical Categorization at Baseline

In hypothesis one we predicted scores on clinical scales, functional problems, clinical problems, and clinical categorization at baseline would differ by children's age at treatment, gender, number of trauma types, race, ethnicity, and cultural factors, including whether or not they were born in the United States, used English as the primary language spoken at home, and were refugee/immigrants.

Our model confirmed the past literature's findings of age, gender, and number of trauma types as contributors to most of the outcome scores (Dyregrov & Yule, 2006; Huemer et al., 2009; Ostrov & Keating, 2004;Littleton et al. 2012). It also provided us some indication of racial, ethnic, and cultural factors playing a small role in outcome. However, though the predictors were statistically significant, they were most often so small as to be clinically non-significant.

Age. The children's age was associated with internalizing, anxiety, functional problems, and clinical problems. We found older age associated with more symptoms

overall, which is consistent with past studies (Dyregrov & Yule, 2006; Green et al., 1991; Scheeringa, Zeanah, Myers, & Putnam, 2003). We also found younger age associated with more anxiety, which is also consistent with past findings that demonstrate higher occurrence of fears and anxiety in younger children (Dyregrov & Yule, 2006). We were surprised that we found no age association for PTSD symptoms or classification. This finding is different than the literature base, which overall suggests older age is associated with more PTSD (Breslau et al., 2001; Eksi et al., 2007; Khamis, 2005; Nooner et al., 2012).

Gender. In our study, children's gender was a significant predictor for externalizing, PTSD, dissociation, functional problems, and clinical classification for externalizing, internalizing, and PTSD. Boys had higher externalizing scores, more functional problems, and more clinical problems, and girls had higher PTSD scores. These findings are consistent with the literature. Boys have been found to externalize their problems more (Ostrov & Keating, 2004) and girls have been found to have higher rates of PTSD (Green et al., 1991, Nooner, 2012). In contrast to the literature that suggests girls tend to have more internalizing symptoms and depression (Kilpatrick et al., 2003; Macdonald et al., 2010; Nooner, 2012), we did not find any of these differences in our study. Interestingly, in our study boys were also found to have more functional problems and clinical problems. This may be an accurate reflection of the impact of trauma on boys vs. girls. Alternately, this may simply be a function of the lists of problems and disorders being more heavily weighted towards externalizing symptoms that are typical of boys rather than the more subtle problems that girls might have.

Number of trauma types. Our study found the number of trauma types children experienced to be a significant predictor of all of our outcome scores. This included externalizing, internalizing, PTSD symptoms, anger, depression, anxiety, dissociation,

functional problems and clinical problems. For predicting clinical classification of externalizing, internalizing, and PTSD, our study found that the more trauma types children experienced, the greater likelihood they were in the clinical range. These findings are important because they identify that tallying the total types of traumas a child has been exposed to is an important predictor in a variety of behavioral outcomes. Past literature has recognized the importance of number of traumas and the cumulative nature of trauma and its relation to more symptoms but has yet to date looked at a tally of trauma *types* as a predictor (Littleton et al. 2012). The literature has many studies that have established that with more trauma, the higher the risk is for externalizing symptoms (Ford et al., 2012; Ruchkin, Henrich, Jones, Vermeiren, & Schwab-Stone, 2007; Finkelhor, Turner, & Ormrod, 2006), internalizing symptoms (Fritch, Mishkind, Reger, & Gahm, 2010; Krupnick et al., 2004; Suliman et al., 2009) and for PTSD (Fritch et al., 2010; Nishith, Mechanic, & Resick, 2000) but fewer studies that examine the cumulative effect of numerous trauma types (Nilsson, Gustafsson, Svedin, & Goran, 2012). Our study extends these findings beyond trauma number to trauma type and suggests that clinicians should look closely at the total types of trauma experienced when evaluating and treating children.

     Racial factors. Overall, we found a very limited amount of evidence that trauma symptoms and recovery differ when comparing racial groups on baseline symptoms. We found that Black/African American children had lower internalizing scores than White/Caucasian children and were 20% less likely to be in the clinical range for internalizing. Additionally, Black/African American children were found to have lower internalizing scores than our unknown racial group. There is limited literature that examines racial differences in response to trauma. A recent study examined trauma-exposed urban adults seeking treatment, with special attention to the association between race and severity

of symptoms of depression, generalized anxiety disorder and PTSD (Ghafoori, Barragan, Tohidian, & Palinkas, 2012). Consistent with our findings, Black/African American adults were found to have lower depression symptom severity when compared to White/Caucasian adults (Ghafoori et al., 2012).

The majority of epidemiological studies have also found Black/African Americans to have lower levels of mood disorders then White/Caucasians (Kessler et al., 1995, 2005; Pole et al., 2008; Woodward, 2012). While some literature has found higher levels of anxiety (such as phobias, etc.) in Black/African Americans, the majority of the literature has found greater levels of PTSD (also classified as anxiety disorder) in Black/African Americans (Asnaani, et al., 2010; Pole et al., 2008).

The overall small effect of race is surprising given the literature that indicates an increased risk of PTSD and symptoms in racial minority persons overall (Pole et. al., 2008). In a review of the literature on PTSD among ethno-racial minorities, Pole et al. (2008) found evidence of higher rates and more severe incidents of PTSD in African Americans, Latino Americans, Pacific Islander Americans, and American Indians. In our study, however, we found no differences on the UCLA PTSD RI scale or on the Briere scale of Post Traumatic Stress. Overall, our results indicate that racial differences play less of a role than we anticipated. Instead, the pivotal factors of number of trauma types, age, and gender carried the usual weight in determining children's symptoms.

Ethnicity. Children's ethnicity was found related to externalizing and internalizing behaviors. Being of Latino ethnicity was found associated with lower externalizing scores and a 24% less likelihood than non Latinos to fall into the clinical range. Latino ethnicity was also associated with higher internalizing, although there was no difference in chance of falling into the clinical range. These findings are consistent with the literature suggesting

Latinos have more internalizing symptoms in response to trauma. For example, in a study examining ethnic differences in response following domestic violence and sexual abuse, it was found that Latinos experienced higher levels of depression (Edelson, Hokoda, & Ramos-Lira, 2007). This effect has also been seen in the non-trauma literature, specifically, that Latinos tend to internalize their symptoms and have higher rates overall of internalizing disorders (Anderson & Mayes, 2010; McLaughlin, Hilt, Nolen-Hoeksema, 2007; Kennard, Stewart, Hughes, Patel, & Emslie, 2006). Latino adolescents were found to have overall higher rates of depression then non Latinos in a longitudinal school-based epidemiological study examining rates of depression (Kennard et al., 2006), and other studies examining Latinos confirm these findings (Anderson & Mayes, 2010; McLaughlin et al., 2007).

We did not find ethnic differences in PTSD symptoms despite the literature suggesting such exists. In a review article examining conditional risk (prevalence, onset, persistence, and severity after trauma) for PTSD, authors found evidence of Latinos having elevated rates of PTSD onset and severity but mixed results for prevalence rate differences and persistence (Alcantara, Casement, Lewis-Fernandez, 2012). Also, in a study of adult physical injury survivors comparing Latino and non Latino PTSD symptoms, Marshall, Grant, Schell, and Miles (2009) found that Latinos tended to report greater PTSD severity but also higher specific symptoms relating to cognition and sensory experience (e.g., hypervigilence and flashbacks) and fewer symptoms relating to functional difficulties (e.g., concentration and sleep problems).

Cultural factors. When examining our cultural factors we found few significant differences when using our standardized measures. Even where findings were statistically significant, the effect size was small, and so we continue to be reminded that these difference

might not be apparent, or important, to families or clinicians. Still, we want to examine and discuss the very interesting findings that emerged.

We found that speaking English as the primary language at home was associated with lower internalizing scores. In fact, children who spoke English as the primary language at home were 27% less likely to fall into the clinical range for internalizing at baseline than their other-language at home speaking counterparts. To some extent, the other-language children were the Latino children (although we did not have data on what foreign language a child used at home). The correlation between ethnicity-Latino and English speaking was -.576. This demonstrates that there is shared variance between the two variables, but that they are also different enough to look at further (Tabachnick & Fidell, 2013). The finding suggests that children who speak a non-English language at home have a greater tendency to internalize symptoms from trauma. The literature has been mixed in relation to this finding. There is some support for it in the non trauma related literature (Bridges, de Arellano, Rheingold, Danielson, & Silcott, 2010). In a study of 2,942 US Hispanic students (6-10th grades) it was found the children who spoke Spanish in the home were more likely to experience negative internalizing symptoms than children who spoke English at home (Yu, Huang, Schwalberg, Overpeck, & Kogan, 2003). This trend was also found for 1st generation immigrants in Switzerland, specifically that the 1st generation youth scored higher on anxiety symptoms (Vazsoni, Trejos-Castillo, & Huang, 2006). However, there also have been studies that have found the opposite result. For example, in a recent study from a nationally representative Canadian sample, language proficiency predicted an increase of depressive symptoms over time (Nguyen, Rawana, & Flora, 2011). Despite the mixed results in the greater literature, it still would be helpful for clinicians when treating such children to understand this potential trend and specifically to assess other-language speaking children for

internalizing disorders. These are particularly hard to detect overall, and may be even harder in a child who speaks a foreign language notwithstanding that in our study we were able to identify them. Being aware of an increased odds could alert clinicians to be more tuned in to these types of symptoms and thereby look deeper for the existence of internalizing symptoms.

We found further differences with our cultural factors when examining the unstandardized measures of functional problems and clinical problems. Interestingly, these differences favored the "culturally different" groups. The categories of being born outside the United States and of speaking something other than English as the primary language at home were associated with children having *fewer* functional problems.

Our list of functional problems are mainly externalizing behaviors, and thus our findings are consistent with the literature that suggests non U.S born children are at a decreased risk for externalizing problems (Hussey et al., 2007). Our findings suggesting that our "culturally different groups" are doing better can also be more fully understand by examining the immigrant literature. While it is true we are unsure of the exact immigrant status of our non U.S. born and other language speaking children, there is likely to be much overlap.

Our findings are consistent with the studies that have suggested that, despite increased risk factors, immigrants do better in a variety of domains (Georgiades et al., 2007). This has been referred to as the "immigrant paradox" in which children in immigrant families tend to demonstrate positive adjustment (doing better academically and having lower levels of delinquency) despite the increased challenges that their immigration status has afforded them (Nyugen, Rawana, & Flora, 2011). For example in one study comparing immigrant children to Canadian born children, the immigrant children were found to have fewer

emotional and behavioral problems despite being twice as likely to live in poverty (Beiser, Hou, & Hyman, 2002). Of note is that the positive outcomes tend to deteriorate over the generations (Georgiades et al., 2007).

We suggest that these findings may indicate additional resiliencies in the non-English speaking and non-US born children who exhibited fewer functional problems. It is possible that the children who had experienced differences of being from another culture, speaking another language, or being born in a different country were able to build upon those challenging experiences to make them more able to handle trauma when it occurred (Crosnoe & Turley, 2011). It is also possible that these children were better able to exhibit posttraumatic growth following the trauma due to the resiliencies they had built previously (Linley & Joseph, 2004). Particularly for children who speak dual languages this ability may also provide them greater access to community resources and more persons whom they can rely on for support (Golash-Boza, 2005).

Questions raised about cultural issues. Overall, this study raises some interesting questions. In order to fully substantiate these findings we would need to be able to confirm that no pre-trauma differences exist between groups on these measures and that other confounding variables such as similar number and severity of traumas are accounted for which is something perhaps a future study could accomplish. Qualitative studies of the children, their families, and their communities could inform us of their own perspectives of how they have handled challenges and trauma.

While it may seem that overall the non-English speaking and non-US born children are functioning better as suggested by having fewer functional problems, they may be struggling in different ways. Some literature has found immigration status

associated with an increase of psychiatric illness (Gonzales, Favbrett & Knight, 2009), lower self esteem (Perez, 2011), and poor social relations (Huang, Calzada, Cheng, Brotman, 2012). However, other studies dispute such differences (Hansson, Tuck, Lurie, &McKenzie, 2012). The lack of clear consensus represents an area that continues to invite more research. Our findings reflect the dual nature of how the literature stands thus far, but we can use this literature to better understand how being a non-English speaker is associated with having fewer functional problems but more clinical problems. It is certainly possible—and perhaps likely—that the higher total clinical problem scores reflect the fact that these children have experienced more negative and life altering experiences in their lives. These children know they are different in many ways from their peers at school. Further, they carry all of the background which led their families to be in the United States (Davies, 2000). The higher number of diagnosed clinical problems also may reflect clinicians' lack of knowledge about the children's culture or language barriers (Lu et al., 2004) Perhaps clinicians are ascribing clinical problems inappropriately to these children because the language or cultural barriers interfere with a proper assessment (Guttfreund, 1990).

 If these children do indeed have more clinical problems, then the post traumatic growth model can be used to understand why they have fewer functional problems. Perhaps they have learned to cope, even with their clinical problems, and are better able to function in their environments, exhibiting fewer functional problems though still having the clinical problems. Additionally, perhaps there is greater parental involvement and higher functioning parents who help. The data available do not allow us to test these intriguing possibilities.

Despite our findings concerning the cultural factors of English speaking at home and US birth, we found no differences when examining refugee/immigrant status. The lack of significant findings concerning the refugee/immigrant group was particularly surprising

given the literature base surrounding the refugee/immigrant experience and the extensive complex trauma this group tends to have experienced (Giaconia et al., 1995; Masinda & Muhesi, 2004; Nader et al., 1993).

We caution against using our lack of findings to conclude that no group differences exist, but instead place these findings in the context of the data available here. First, there were few children classified as refugee/immigrant, just 306 out of the total sample 10,115. We wonder if perhaps the definition of refugee/immigrant in this dataset was too broad. The term "Refugee/Immigrant" may bring to mind families crowded into a small boat, trying to cross the sea. In our study, refugee/immigrant status very likely included a broad range of persons: some who were truly new to the country, some who were second generation immigrants, some who were asylum seekers, and some whose parents had come as college students or professionals and managed to stay. These groups are very different and perhaps far less traumatized than children who had recently experienced displacement as a refugee from their country of origin. Nader et al. (1993) showed us that the highest levels of PTSD have been found in those who fled from a country, followed by those persons living in refugee camps, with lesser levels occurring for those who have been relocated into a new country. Our sample of children were now all in the latter group, relocated into the U.S., though we do not know for how long or how settled they and their families are. Having more information about how recently the family moved and in what capacity (refugee, asylum seeker, immigrant) they were present in the United States would help us better understand whether immigrant children experience trauma in a unique way.

Conclusion hypothesis one. While our models were statistically significant overall, they did not reach a level of clinical significance, and thus, the results of the total models did not strongly support the hypothesis. We were in fact surprised that our predictors accounted for so little in our outcomes, with variance percentages ranging from a little over one percent to five percent for the validated measures. The literature is replete with examples of how at least some of these predictors are related to children's trauma symptoms (such as number of trauma types, age, and gender), yet in this sample, very little of the variance was explained.

We found more support for our hypothesis when looking at our predictors with the non-validated outcome scores of functional problems and clinical problems. Our predictors accounted for thirteen percent of the variance in these other outcomes. The children's symptoms may be most scientifically identified by the validated measures, but these results suggest that another way to describe how children are operating can be seen by looking at their functioning within the various environments in which they participate, e.g., at home, at school, and the community. The simple compilation of number of functional problems and number of clinical problems provide a beginning look into the ecology of the children's lives. These lists look at ontogenic factors of the children themselves (e.g., academic problems, medical problems). They tap into the children's microsystems (e.g., attachment to caregivers, running away) and even look at the exosystem when examining how the children are functioning in their schools (e.g., behavior problems at school, skipping school) and communities (e.g., behavior problems in community, criminal activity).

Factors Affecting Change Scores on Clinical Scales, Functional problems and Clinical Categorization At Three Month (or First Recorded) Follow Up.

In Hypothesis 2 it was predicted that change in scores on clinical scales and functional problems and the clinical categorization at three month (or first recorded) follow up would differ by children's age at treatment, gender, number of trauma types, race, ethnicity, and cultural factors, including whether or not they were born in the United States, had English as the primary language spoken at home, and were refugee/immigrants. This hypothesis was minimally supported. Of our models, prediction of change scores in internalizing, depression, anxiety, and functional problems were significant. The effect sizes were small.

The results from our *t*-tests at three month (or first recorded) follow up indicated there was significant improvement on all the outcome variables from when they first arrived at the clinic for treatment. This was encouraging, as it shows that the children were doing better after receiving even this small amount of treatment. This one set of findings was substantial enough to declare the hoped-for clinical significance.

Age. Children's age was a significant predictor of change in internalizing, anxiety, and functional problems at three month (or first recorded) follow up. The younger the child was, the more improvement in internalizing symptoms and anxiety. The older the child was, the more improvement in total problem scores.

Number of trauma types. The number of trauma types children experienced was a significant predictor of improvement in functional problems. Children with more trauma types had a 16% higher likelihood of falling into the clinical range for externalizing and a 16% higher likelihood of falling into the clinical range for internalizing at three month (or first recorded) follow up.

English as primary language. English as primary language spoken at home was a significant predictor of change in depression scores at three month (or first recorded) follow

up, with those who spoke English at home showing less improvement in their depression scores. This again was an unexpected finding.

Conclusion hypothesis two. The results relating to the follow-up data are particularly important because they demonstrated that the children improved over time. Not only did they improve over time, but they improved quickly, at three month (or first recorded) follow up (i.e., ideally, after three months of treatment). This occurred for all dependent variables tested. Such findings are very encouraging and could mean many things. First and most importantly, it means that these children are functioning better. The symptoms of trauma are dissipating and the problems they are experiencing are lessening. The next step, beyond rejoicing in the improvement, is trying to understand why. The optimistic possibility is that the treatments being used are working. A great many treatments and treatment modalities were used across the 56 centers engaged in the study. To fully understand the changes found here, a next step would be to examine the efficacy of the individual treatments and to determine if indeed all led to improvement, and if so, whether some worked better than others. This could then be focused on treatment efficacy for children of various races, ethnicities, and cultural groups. These massive goals were beyond the scope of the present study. Of course, another possibility for the overall improvement is that children with these symptoms, even untreated, get better over time ((Kronenberg, Hansel, Brennan, Osofsky, Osofsky, & Lawrason, 2010; Smith et al., 2007). Without a treatment versus non-treatment comparison group, there is no way of knowing if the improvements are due to the treatment or if they are just a function of time passing.

Limitations

Limitations of this study include that the data used were collected as part of a quality improvement project and thus were not nationally representative of traumatized children. Instead, the data were representative of a clinical sample that came to a clinic and was treated by the National Center for Traumatic Stress Network Centers across the US.

Another limitation of this study is the operationalization of culture and diversity. Choosing to explore these constructs as part of secondary data analyses placed constraints on the variables of interest. For this reason, the variables of U.S. Born and English as Primary Language Spoken at Home did not fully tap into a cultural construct and may have restricted the ability of our analyses to explore this topic. Furthermore, the variable of refugee status may have been overly broad by including not only refugees but asylum seekers and immigrants. Here, the specific question asked if the child/and or family was a "refugee, asylum seeker, or immigrant with a history or exposure to community violence." While the asylum seeker and the immigrant with a history or exposure to community violence may be similar to a refugee experience, it is important to recognize the possibility of the differences as well.

Notably, this study did not fully examine the severity of trauma. From the available data, we built a straightforward estimate, a count of how many trauma types the child experienced. A more complete picture of the impact of trauma would require examination of each type of trauma in particular, including measures of the frequency, the perceived severity, the age-span, the chronicity, and so on. This was beyond the scope of the present study.

The study was further limited by the lack of having a baseline non traumatized control group. This makes us less able to attribute the children's problems to trauma, as there was no group available that was free of trauma. Finally because the study involved treatment-

seeking participants, the findings may reflect differential access or willingness to seek psychological treatment in the study population as compared to children and families in the general public.

Conclusions and Future Steps

This study's results serve three important functions: (1) Providing further support for the importance of trauma severity, children's age, and their gender in trauma symptoms and treatment; (2) Starting to explore how racial, ethnic, and cultural variables may impact trauma and treatment; and (3) Highlighting the need for an ecological framework when evaluating children's functioning from trauma, and utilizing measures in multiple domains that are consistent with the model.

Support for the importance of trauma severity, child's age, and gender. The results add to the large body of literature that recognizes these three variables as key in trauma symptom presentation and treatment. The findings serve to further highlight that trauma severity—here, measured by the number of types of trauma a child experienced—plays a pivotal role in determining how children will react to traumatic situations, and that it in fact may be the most important factor when projecting trajectory.

Exploration of how racial, ethnic, and cultural variables may impact trauma symptoms and treatment. This study demonstrates that race, ethnicity, and cultural variables play a small but important role in trauma symptoms in children. For example, Black/African American race was associated with lower internalizing scores when compared to White/Caucasian children. These results are a first step in showing that race matters in how children demonstrate their distress. Interestingly, the other racial groups did not differ in their levels of internalizing. These symptoms may be more "universal" than anticipated.

Ethnicity was shown to be related to both externalizing and internalizing scores. Being of Latino ethnicity was associated with lower externalizing scores and higher internalizing scores. However, this difference did not continue at three month (or first recorded) follow up.

Cultural variables were involved in children's trauma symptoms. This study was able to examine only a few cultural variables in a very limited way. We can surmise there are extensive cultural differences for children who were born outside the United States and/or who speak another language at home; these are important, though limited, indicators of culture. Speaking English at home was associated with lower internalizing scores. In fact, children who spoke English as the primary language at home were 27% less likely to fall into the clinical range for internalizing at baseline than their other-language at home speaking counterparts. On the other hand, speaking English at home and being born in the United States were also found to be associated with more functional problems. This suggests that the majority of children (i.e. English speaking, U.S. born children) were faring worse on functional problems than their foreign born or non- English speaking at home counterparts. However, results also demonstrated that being non-English speaking at home was associated with higher clinical problems.

We have no clear explanation for this curious mix of findings—better on this, worse on that. Such a result serves to start the process of exploring how children of different cultures may experience trauma differently, respond to trauma differently, and perhaps respond to treatment differently. Some of these processes may be different than our initial predictions. For example, there may be a protective factor in not being born in this country and in speaking a different language. Perhaps these families have more consistent parenting practices and provide tighter monitoring over their children. It is possible that these families

are more resilient simply because they needed to be resilient in order to be able to emigrate to the United States and, once arrived, to navigate the culture successfully. What this result means and if it can be replicated should be further explored.

Highlighting the need for an ecological framework when evaluating children's functioning from trauma, and utilizing measures in multiple domains that are consistent with the model. Finally, this study underscores the usefulness of using an ecological framework when examining a child's functioning. In this study the validated measures spoke to only one part of the puzzle and showed a less severe example of how these children were doing. However, when we broadened our net (i.e. added outcomes beyond the validated measure scores) to include looking at how children were faring with a tally of functional and clinical problems, a broader understanding of functioning was gained. This included functioning in outer levels of the ecological model such as the school and community, the exosystem, in which problems existed but perhaps were not picked up by the validated measures.

This study adds to the larger literature that is beginning to recognize that issues of culture and diversity are important in trauma diagnosis and treatment. More studies need to be conducted with diverse populations to expand our picture of how such issues affect children who experience trauma. Further, we need to consider how the adults, and the children, in various cultures think about the trauma that children experience, giving a careful consideration of their views of what is trauma and what it means. Clinicians and researchers need to work together in first recognizing and then exploring that diversity and culture matter. Only once this topic is fully embraced can traumatized children from all backgrounds be truly understood and treated.

List of References

Achenbach, T. M. (1992). *Manual for the Child Behavior Checklist/2-3 and 1992 Profile.* Burlington, VT: University of Vermont, Department of Psychiatry.

Achenbach, T. M., & Rescorla, L. A. (2001). *Manual for the ASEBA School-Age Forms & Profiles.* Burlington, VT: University of Vermont, Research Center for Children, Youth, and Families.

Adams, R. E., Boscarino, J. A., & Galea, S. (2006). Social and psychological resources and health outcomes after the World Trade Center disaster. *Social Science & Medicine, Vol 62*, 176-188. doi: 10.1016/j.socscimed.2005.05.008

Ajdukovic, M. & Ajdukovic, D. (1998). Impact of displacement on the psychological well-being of Refugee/Immigrant children. *International Review of Psychiatry, 10,* 186-195. doi: 10.1080/09540269874763

Alcántara, C., Casement, M. D., & Lewis-Fernández, R. (2012). Conditional risk for PTSD among Latinos: A systematic review of racial/ethnic differences and sociocultural explanations. *Clinical Psychology Review, 33*(1), 107-119. doi: 10.1016/j.cpr.2012.10.005

Al-Issa, I. (1997). The psychology of prejudice and discrimination. In: Al-Issa, I. & Tousignant, M. (Eds.), *Ethnicity, Immigration, and Psychopathology* (pp. 17-32). New York, NY: Plenum Press.

Allotey, P. (1998). Traveling with excess baggage: Health problems of Refugee/Immigrant women in Western Australia. *Women & Health, 28*, 63-81. doi: 10.1300/J013v28n01_05

American Psychiatric Association (1994). *Diagnostic and statistical manual of mental disorders*. Fourth edition. Washington, DC: American Psychiatric Association.

Anderson, E. R. & Mayes, L. C. (2010). Race/ethnicity and internalizing disorders in youth: A review. *Clinical Psychology Review, 30*, 338-348. doi 10.1016/j.cpr.2009.12.008

Aptekar, L. & Stocklin, D. (1997). Children in particular different circumstances. In J.W. Berry, Y.H. Poortinga & J. Pandey (Eds.). *Handbook of Cross-Cultural Psychology: Basic processes and human development* (pp. 87-114). Boston, MA: Allyn & Bacon.

Asnaani, A., Richey, J. A., Dimaite, R., Hinton, D. E., & Hofmann, S. G. (2010). A cross-ethnic comparison of lifetime prevalence rates of anxiety disorders. *The Journal of Nervous and Mental Disease*, *198*(8), 551. doi: 10.1097/NMD.0b013e3181ea169f

Baker, A., & Shalhoub-Kevorkian, N. (1999). Effects of political and military traumas on children: the Palestinian case. Clinical psychology review, 19(8), 935-950. doi: 10.1016/S0272-7358(99)00004-5

Bal, A. (2008). Post-traumatic stress disorder in Turkish child and adolescent survivors three years after the Marmara earthquake. *Child and Adolescent Mental Health, 13,* 134-139. doi:10.1111/j.1475-3588.2007.00469.x

Balaban, V. (2009). Assessment of children. In E. B. Foa, T.M. Keane, M. J. Friedman, & J.A. Cohen (Eds.); *Effective treatments for PTSD.* New York: Guilford Press.

Balsam, K. F., Lehavot, K., Beadnell, B., & Circo, E. (2010). Childhood abuse and mental health indicators among ethnically diverse lesbian, gay, and bisexual adults. *Journal of Consulting and Clinical Psychology, 78*, 459-468. doi: 10.1037/a0018661

Beers, S. R., & De Bellis, M. D. (2002). Neuropsychological function in children with maltreatment-related posttraumatic stress disorder. American Journal of Psychiatry, 159(3), 483-486. doi: 10.1176/appi.ajp.159.3.483

Beidel, D. C., Turner, M. W., & Trager, K. N. (1994). Test anxiety and childhood anxiety disorders in African American and White school children. *Journal of Anxiety Disorder*s, *8*, 169-179. doi:10.1016/0887-6185(94)90014-0

Beiser, M., Hou, F., Hyman, I., & Tousignant, M. (2002). Poverty, family process, and the mental health of immigrant children in Canada. *Journal Information*, *92*(2). doi: 10.2105/AJPH.92.2.220

Berk, L. E. (2006). *Development through the lifespan*. (4th ed.). Boston, MA: Allyn & Bacon.

Berry, J. W. (2003). Conceptual approaches to acculturation. In K. M. Chun, P. Balls Organista, & G. Marin (Eds.). *Acculturation: Advances In Theory, Measurement, and Applied Research* (pp. 17-37). Washington DC: American Psychological Association. doi: 10.1037/10472-004

Berry, J. W., Trimble, J. E., & Olmeda, E. L. (1986). Assessment of acculturation. In W. J. Lonner & J. W. Berry (Eds.). *Field Methods in Cross-Cultural Research, Cross-Cultural Research and Methodology Series, Vol. 8* (pp.291-324). Thousand Oaks, CA: Sage Publications, Inc.

Besser, A., & Blatt, S. J. (2007). Identity consolidation and internalizing andexternalizing problem behaviors in early adolescence. *Psychoanalytic Psychology, 24,*126-149. doi: 10.1037/0736-9735.24.1.126

Betancourt, T. S., Agnew-Blais, J., Gilman, S. E., Williams, D. R., & Ellis, B. (2010). Past horrors, present struggles: The role of stigma in the association between war experiences and psychosocial adjustment among former child soldiers in Sierra Leone*, Social Science & Medicine, 70*, 726740.doi:10.1016/j.socscimed.2009.09.038

Betancourt, T. S, Brennan, R. T., Rubin-Smith, J., Fitzmaurice, G. M., & Gilman, S. E. (2010). *Journal of the American Academy of Child & Adolescent Psychiatry, 49*, 606-

615. doi:10.1097/00004583-201006000-00009

Betancourt, T. S. & Khan, K. T. (2008). The mental health of children affected by armed conflict: Protective processes and pathways to resilience. *International Review of Psychiatry, 20,* 317-328. doi:10.1080/09540260802090363

Bird, H. R., & Canino, G. (1982). The Puerto Rican family: Cultural factors and family intervention strategies. *Journal of the American Academy of Psychoanalysis, 10*, 257-268. PMid:7085395

Boehnlein, J.K. (2001). Cultural interpretations of physiological processes in post-traumatic stress disorder and panic disorder. *Transcultural Psychiatry, 38,* 461-467. doi:10.1177/136346150103800403

Bolea, P.S., Grant, G., Burgess, M., Plasa, O. (2003). Trauma of children of the Sudan: A constructivist exploration. *Child Welfare: Journal of Policy, Practice, and Program, 82*, 219-233.

Boothby, N. (2006). What happens when child soldiers grow up? The Mozambique case study. *Intervention: International Journal of Mental Health, Psychosocial Work & Counseling in Areas of Armed Conflict, 4*, 244-259.

Bokszczanin, A. (2007). Parental support, family conflict and overprotectiveness: Predicting PTSD symptom level of adolescents 28 months after a natural disaster. *Anxiety, Stress, & Coping: An International Journal, 21,* 325-335. PMid:9366662

Breslau, N. (2001). Outcomes of posttraumatic stress disorder. *Journal of Clinical Psychiatry*, *62*, 55-59. PMID:11495098

Bridges, A. J., de Arellano, M. A., Rheingold, A. A., Danielson, C. K., & Silcott, L. (2010). Trauma exposure, mental health, and service utilization rates among immigrant and United States-born Hispanic youth: Results from the Hispanic family study. *Psychological Trauma: Theory, Research, Practice, and Policy*, *2*, 40.

Breslau, J., Aguilar-Gaxiola, S., Kendler, K.S., Su, M., Williams, D., & Kessler, R.C. (2006). Specifying race-ethnic differences in risk for psychiatric disorder in a USA national sample. *Psychological Medicine*, *36*, 57–68.doi:10.1017/S0033291705006161

Bradby, H (2012). Race, ethnicity and health: The costs and benefits of conceptualizing racism and ethnicity. *Social Science & Medicine, 75,* 955-958. doi: 10.1016/j.socscimed.2012.03.008

Breslau, N., Davis, G., Andreski, P., Peterson, E., & Schultz, L. (1997). Sex differences in Posttraumatic Stress Disorder. *Archives of General Psychiatry*, *54,* 1044–1048. PMid:9366662

Brewin, C. R., Andrews, B., & Valentine, J. D. Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults (2000). *Journal of Consulting and Clinical Psychology, 68,* 748-766. doi: 10.1037/0022-006X.68.5.748

Briere, J. (1996). Trauma symptom checklist for children. *Odessa, FL: Psychological Assessment Resources*. doi: 10.1016/S0145-2134(01)00253-8

Briggs, E. C., Fairbank, J. A., Greeson, J. K. P., Layne, C. M., Steinberg, A. M., Amaya-Jackson, L. M., Ostrowski, S. A., Gerrity, E. T., Elmore, D. L., Belcher, H. M. E., & Pynoos, R. S. (2012, March 26). Links Between Child and Adolescent Trauma Exposure and Service Use Histories in a National Clinic-Referred Sample. *Psychological Trauma: Theory, Research, Practice, and Policy*. Advance online publication. doi: 10.1037/a0027312

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design.* Cambridge, MA: Harvard University Press.

Bronfenbrenner, U., & Morris, P. (1998). The ecology of developmental processes. In W., Damon (Series Ed.), R. M. Lerner (Vol. Ed.), *Handbook of Child Psychology: Vol. 1. Theoretical models of human development* (5th ed., pp. 993-1028*)*. New York: Wiley.

Brown, E. J., Pearlman, M. Y., & Goodman, R. F. (2004). Facing fears and sadness: Cognitive-behavioral therapy for childhood traumatic grief. *Harvard Review of Psychiatry, 12,* 187-198. doi: 10.1080/10673220490509516

Brown, L. S. (2008). *Cultural competence in trauma therapy: Beyond the flashback*, (pp. 153-167). Washington DC: American Psychological Association. doi: 10.1037/11752-007

Burke, J. D. , Borus, J. F., Burnes, B. J., Millstein, K. H., & Beasley, M.C. (1982). Changes in children's behavior after a natural disaster. *American Journal of Psychiatry, 139:* 1010-1014. PMid:7091422

Carswell, S. B. & Carswell, M. A. (2008). Meeting the physical, psychological, and social needs of African Americans following a disaster. In A. J. Marsella, J. L. Johnson, P. Watson & J. Gryczynski, (Eds.). *Ethnocultural Perspectives on Disaster and Trauma: Foundations, Issues, and Applications, International and Cultural Psychology* (pp. 39-71). New York: Springer Science and Business Media. doi: 10.1007/978-0-387-73285-5_3

Castro, R. & Eroza, E. (1998). Research notes on social order and subjectivity. Individual's experience of susto and fallen fontanelle in a rural community in central Mexico. *Culture, Medicine, and Psychiatry, 22,* 203-230. doi:10.1023/A:1005365004836

Catani, C., Schauer, E., Elbert, T., Missmahl, I., Bette, J.P., Neuner, F. (2009). War trauma, child labor, and family violence: Life adversities and PTSD in a sample of school children in Kabul. *Journal of Traumatic Stress, 22,* 163-171. doi:10.1002/jts.20415

Catherall, D. R. (2004). *Handbook of Stress, Trauma and the Family*. New York. Taylor & Francis Group. PMid:18456241

Chaffin, M., Wherry, J.N., & Dykman, R. (1997). School age children's coping with sexual abuse: Abuse stresses and symptoms associated with four coping strategies. *Child Abuse and Neglect, 21,* 227-40. doi:10.1016/S0145-2134(96)00148-2

Chen, Xinyin (1998). The changing Chinese family: Resources, parenting practices, and children's socioemotional problems. In U. P. Gielen & A. L. Comunian (Eds). *The family and family therapy in international perspective*, (pp. 150-167). Edizioni Lint Trieste, Trieste, Italy.

Chipman, K. J., Palmieri, P. A., & Hobfoll, S. E. (2011). The impact of posttraumatic stress disorder symptoms on women's safer sex negotiation: Influence of ethnicity. *Psychological Trauma: Theory, Research, Practice, and Policy*. doi: 10.1037/a0020589

Choi, H., & Park, C. G. (2006). Understanding adolescent depression in an ethnocultural context: Updated with empirical findings. *Advances in Nursing Science, 29*, 1-12. PMid:16495683

Cohen, J., Mannarino, A., Deblinger, E., & Berliner, L.(2009). Cognitive behavioral therapy for children and adolescents. In E. B. Foa, T. M. Keane, M. J. Friedman, & J.A. Cohen (Eds.). *Effective treatments for PTSD*. New York, Guilford Press.

Cook-Cottone, C. (2004). Childhood posttraumatic stress disorder: Diagnosis, treatment and school reintegration. *School Psychology Review, 33*, 127-139. PMid:19379027

Crosnoe, R., & Turley, R. N. L. (2011). K-12 educational outcomes of immigrant youth. *The Future of Children*, *21*(1), 129-152. doi:10.1353/foc.2011.0008

Crouch, J. L., Hanson, R. F., Saunders, B. E., Kilpatrick, D. G., & Resnick, H. S. (2000). Income, race/ethnicity, and exposure to violence in youth: Results from theNational Survey of Adolescents. *Journal of Community Psychology, 28*, 625−641. doi:10.1002/1520-6629(200011)28:6<625::AID-JCOP6>3.0.CO;2-R

Cuéllar, I., Arnold, B. &, González, G. (1995). Cognitive referents of acculturation: Assessment of cultural constructs in Mexican Americans. *Journal of Community Psychology, 23*, 339-356. doi:10.1002/1520-6629(199510)23:4<339::AID-JCOP2290230406>3.0.CO;2-7

Dalgleish, Meiser-Stedman, & Smith (2005). Cognitive aspects of posttraumatic stress reactions and their treatment in children and adolescents: An empirical review and some recommendations. *Behavioral and Cognitive Psychotherapy, 33,* 459-486. doi:10.1017/S1352465805002389

Davies, M., & Webb, E. (2000). Promoting the psychological well-being of refugeechildren. *Clinical Child Psychology and Psychiatry*, *5*(4), 541-554. doi: 10.1177/1359104500005004008

Deyoung, Y. & Zigler, E. F. (1994). Machismo in two cultures: Relation to punitive child-rearing practices. *American Journal of Orthopsychiatry, 64,* 386-395. doi: 10.1037/h0079532

Duraković-Belko, E., Kulenović, A., Đapić, R. (2003). Determinants of posttraumatic adjustment in adolescents from Sarajevo who experienced war. *Journal of Clinical Psychology, 59*, 27-40. doi:10.1002/jclp.10115

Dyregrov, A. & Yule, W. (2006). A review of PTSD in children. *Child and Adolescent Mental Health, 11,* 176-184. doi:10.1111/j.1475-3588.2005.00384.x

Dyregrov, A., Gupta, L., Gjestad, R., & Mukanoheli, E. (2000). Trauma exposure and psychological reactions to genocide among Rwandan children. *Journal of Traumatic Stress, 13*, 3–21. doi:10.1023/A:1007759112499

Edelson, M. G., Hokoda, A., & Ramos-Lira, L. (2007). Differences in effects ofdomestic violence between Latina and non-Latina women. *Journal of Family Violence*, *22*(1), 1-10. doi:10.1007/s10896-006-9051-1

Ehntholt, K.A. & Yule, W. (2006). Practitioner review: Assessment and treatment of Refugee/Immigrant children and adolescents who have experienced war-related trauma. *Journal of Child Psychology and Psychiatry 47*, 1197–1210. doi:10.1111/j.1469-   7610.2006.01638.x

Eisenbruch, M. (1991). From post-traumatic stress disorder to cultural bereavement: Diagnosis of Southeast Asian Refugee/Immigrants. *Social Science Medicien, 3:*673-680. doi: 10.1016/0277-9536(91)90021

Eksi, A., Braun, K. L., Ertem-Vehid, H., Peykerli, G., Saydam, R., Toparlak, D., & Alyanak, B. (2007). Risk factors for the development of PTSD and depression among child and adolescent victims following a 7.4 magnitude earthquake. *International Journal of Psychiatry in Clinical Practice*, *11*(3), 190-199. doi: 10.1080/13651500601017548

Endo, T., Shioiri, T., & Someya, T. (2009). Post-traumatic symptoms among the children and adolescents 2 years after the 2004 Nigata-Chuetsu earthquake in Japan. *Psychiatry and Clinical Neurosciences, 63*, 253-263. doi:10.1111/j.1440-1819.2008.01914.x

Eth, S. (2001). *PTSD in Children and Adolescents*. Washington DC: American Psychiatric Publishing Inc.

Eth, S. & Pynoos, R. (1985). Children traumatized by Central American warfare. In: S. Eth and R. Pynoos (Eds.), *Postraumatic Stress Disorder in Children*. Washington DC: American Psychiatric Press.

Fan, F., Liu, W., Zheng, Y., & Cui, M.(2010). Mental health problems and correlates among adolescents 6 months after exposure to the Wenchuan earthquake. *Chinese Journal of Clinical Psychology, 18,* 56-59.

Fantuzzo, J. and W. Mohr (1999). Prevalence and effects of child exposure to domestic violence. *The Future of Children: Domestic Violence and Children, 9,* 21-32.

Felsman**,** J. K., Leong, F. T., Johnson, M. C., Felsman**,** I. C. (1990). Estimates of psychological distress among Vietnamese Refugee/Immigrants: Adolescents, unaccompanied minors and young adults. *Social Science & Medicine, 31*, 1251-1256. doi:10.1016/0277-9536(90)90132-C

Fergus**,** S., & Zimmerman**,** M. A. (2005). Adolescent resilience: A framework for understanding healthy development in the face of risk. *Annual Review of Public Health, 26*, 399-419. doi:10.1146/annurev.publhealth.26.021304.144357

Ferrari, A. M. (2002). The impact of culture upon child rearing practices and definitions of maltreatment. *Child Abuse & Neglect, 26*, 793-813. doi: 10.1016/S0145-2134(02)00345-9

Finkelhor, D. & Browne, A. (1985). The traumatic impact of child sexual abuse: A conceptualization. *American Journal of Orthopsychiatry, 55*, 530-541. doi:10.1111/j.1939-0025.1985.tb02703.x

Finkelhor, D., Turner, H., & Ormrod, R. (2006). Kid's stuff: The nature and impact of peer and sibling violence on younger and older children. *Child Abuse & Neglect*, *30*(12), 1401-1421. doi:10.1016/j.chiabu.2006.06.006

Flannery, D. J., Wester, K. L., & Singer, M. I. (2004). Impact of exposure to violence in school on child and adolescent mental health and behavior. *Journal of Community Psychology, 32,* 559-573. doi: 10.1002/jcop.20019

Fletcher, K.E. (1996). Childhood posttraumatic stress disorder. In E.J. Mash & R.A. Barkley (Eds.), *Child psychopathology* (pp.242-276). New York: Guilford Press.

Ford, J. D., Chapman, J., Connor, D. F., & Cruise, K. R. (2012). Complex trauma and aggression in secure juvenile justice settings. *Criminal Justice and Behavior*, *39*(6), 694-724. doi:10.1177/0093854812436957

Ford, J. D., Stockton, P., Kaltman, S., & Green, B. L. (2006). Disorders of extreme stress (DESNOS) symptoms are associated with type and severity of interpersonal trauma exposure in a sample of healthy young women. *Journal of Interpersonal Violence, 21,* 1399-1416. doi: 10.1177/0886260506292992

Fox, P.G., Cowell, J.M., & Montgomery, A.C. (1994). The effects of violence on health   and adjustment of Southeast Asian Refugee/Immigrant children: An integrative review. *Public Health Nursing, 11*, 195–201. doi:10.1111/j.1525-1446.1994.tb00401.x

Friedman, M., & Keane, T. (Eds.). (2007). *Handbook of PTSD: Science and Practice*. *Guilford Press.*

Fritch, A. M., Mishkind, M., Reger, M. A., & Gahm, G. A. (2010). The impact of childhood abuse and combat-related trauma on postdeployment adjustment. *Journal of Traumatic Stress*, *23*(2), 248-254. doi: 10.1002/jts.20520

Georgiades, K., Boyle, M. H., & Duku, E. (2007). Contextual influences on children's mental health and school performance: The moderating effects of family immigrant sstatus. *Child Development*, *78*(5), 1572-1591. doi:10.1111/j.1467-8624.2007.01084.x

Ghafoori, B., Barragan, B., Tohidian, N., & Palinkas, L. (2012). Racial and ethnic differences in symptom severity of PTSD, GAD, and depression in trauma-exposed, urban, treatment-seeking adults. *Journal of Traumatic Stress*, *25*(1), 106-110. doi: 10.1002/jts.21663

Giaconia, R. M., Reinherz, H. Z., Silverman, A. B., Pakiz, B., Frost, A.K., & Cohen, E. (1995). Traumas and posttraumatic stress disorder in a community population of older adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 34,* 1369-1380. doi:10.1097/00004583-199510000-00023

Gil, A. G., Vega, W. A. & Dimas, J. M. (1994). Acculturative stress and personal adjustment among Hispanic adolescent boys. *Journal of Community Psychology, 22*, 43-54. doi: 10.1002/1520-6629(199401)22:1<43::AID-JCOP2290220106>3.0.CO;2-T

Gleser, G., Green, B. L., & Winget, C. (1981). *Prolonged psychosocial effects of disaster A Study of Buffalo Creek*. New York: Academic Press.

Glod, C.A. & Teicher, M.H. (1996). Relationship between early abuse, posttraumatic stress disorder and activity levels in pre-puberty children. *Journal of the American Academy of Child and Adolescent Psychiatry, 34,* 1384-1393. doi:10.1097/00004583-199610000-00026

Goenijian, A.K., Molina, L., Steinberg, A.M., Fairbanks, L.A., Alvarez, M.L., Goenijian, H.A., & Pynoos, R.S. (2001). Postraumatic stress and depressive reactions among Nicaraguan adolescents alter hurricane Match. *American Journal of Psychiatry, 158,* 788-794. doi:10.1176/appi.ajp.158.5.788

Golash-Boza, T. (2005). Assessing the Advantages of Bilingualism for the Children of Immigrants. *International Migration Review*, *39*(3), 721-753.

Gonzales, N.A., Fabrett, F.C., & Knight, G.P. (2009). Psychological Impact of Latino Youth Acculturation and Enculturation. In F. A. Villaruel, G. Carlo, M. Azmitia, J. Grau, N. Cabrera, & J. Chahin (Eds.) *Handbook of U.S. Latino Psychology*. Sage.

Green, B.L., Korol, M., Grace, M.C., Bary, M.G., Leonard, A.C., Gleser, G.C., & Smitson-Cohen, M.A. (1991). Children and disaster: Age, gender, and parentaleffects on

PTSD symptoms, *Journal of the American Academy Child Adolescent Psychiatry,* 30:945-9. doi: 10.1097/00004583-199111000-00012.

Grych, J. H., Jouriles, E. N., Swank, P. R., McDonald, R., & Norwood, W. D. (2000).Patterns of adjustment among children of battered women. *Journal of Consulting and Clinical Psychology, 68,* 84-94. doi:10.1037/0022-006X.68.1.84

Guarnaccia, P.J. (1993). Ataques de nervios in Puerto Rico: Culture-bound syndrome or popular illness? *Medical Anthropology, 15*, 157-170.doi:10.1080/01459740.1993.9966087

Guarnaccia, P. J., Rivera, M., Franco, F., & Neighbors, C. (1996). The experiences of ataques de nervios: Towards an anthropology of emotions in Puerto Rico. *Culture, Medicine and Psychiatry, 20,* 343-367. doi: 10.1007/BF00113824

Guttfreund, D. G. (1990). Effects of language usage on the emotional experience of Spanish-English and English-Spanish bilinguals. *Journal of Consulting and Clinical Psychology*, *58*(5), 604-607. doi:10.1037//0022-006X.58.5.604

Handford, H., Mayes, S., Mattison, R. et al. (1986). Child and parent reactions to the Three Mile Island nuclear accident. *Journal of the American Academy of Child & Adolescent Psychiatry, 25,* 346-356. doi:10.1016/S0002-7138(09)60256-9

Hansson, E. K., Tuck, A., Lurie, S., & McKenzie, K. (2012). Rates of mental illness and suicidality in immigrant, refugee, ethnocultural, and racialized groups in Canada: a review of the literature. *Canadian Journal of Psychiatry*, *57*(2), 111-121.

Harrington, E. F., Crowther, J. H., & Shipherd, J. C. (2010). Trauma, binge eating, and the "strong Black woman". *Journal of Consulting and Clinical Psychology, 78*, 469-479. doi: 10.1037/a0019174

Hartman, C. A., Hox, J., Auerbach, J., Erol, N., Fonseca, A. C., Mellenbergh, G. J., Novik, T. S., Oosterlaan, J., Roussos, A. C., Shalev, R. S., Zilber, N., & Sergeant, J. A. (1999). Syndrome dimensions of the Child Behavior Checklist and the Teacher Report Form: A critical empirical evaluation. *Journal of Child Psychology and Psychiatry, 40*, 1095-1116. doi: 10.1111/1469-7610.00527

Harvey, A. G., & Bryant, R.A. (1999). The relationship between acute stress disorder and posttraumatic stress disorder: A 2-year prospective evaluation. *Journal of Consulting and Clinical Psychology, 67*, 985-988. doi:10.1037/0022-006X.67.6.985

Harvey, M. R (2007). Towards an ecological understanding of resilience in trauma survivors. *Journal of Aggression, Maltreatment and Trauma, 14: 1, 9-32.* doi:10.1300/J146v14n01_01

Hatchett, S. J., Cochran, D. L., Jackson, J. S. (1991). Family life. In Jackson, J. S. (Ed). Life in Black America, (pp. 46-83). Sage Publications, Inc., Thousand Oaks, CA.

Herman, J. (1992). *Trauma and recovery.* New York: Basic Books.

Himle, J. A., Baser, R. E., Taylor, R. J., Campbell, R. D., & Jackson, J. S. (2009). Anxiety disorders among African Americans, Blacks of Caribbean descent, and non-Hispanic Whites in the United States. *Journal of Anxiety Disorders*, *23*, 578-590. doi: 10.1016/j.janxdis.2009.01.002

Hodes, M. (2002). Three key issues for young Refugee/Immigrants' mental health. *Transcultural Psychiatry, 39*, 196-213. doi:10.1177/136346150203900206

Huang, K. Y., Calzada, E., Cheng, S., & Brotman, L. M. (2012). Physical and mental health disparities among young children of Asian immigrants. *The Journal of Pediatrics*, *160*(2), 331-336. doi: 10.1016/j.jpeds.2011.08.005

Huemer, J., Karnik, N., Voelkl-Kernstock, S., Granditsch, E., Dervic, K., Friedrich, M.H., & Steiner, H. (2009). Mental health issues in unaccompanied Refugee/Immigrant minors. *Child and Adolescent Psychiatry and Mental Health, 3,* 18-34. doi:10.1186/1753-2000-3-13

Hussey, J. M., Hallfors, D. D., Waller, M. W., Iritani, B. J., Halpern, C. T., & Bauer, D. J. (2007). Sexual behavior and drug use among Asian and Latino adolescents: association with immigrant status. *Journal of Immigrant and Minority Health*, *9*(2), 85-94. Pmid:17111214

Hyder, T. (2005). *War, conflict and play.* Maidenhead, UK, Open University Press.

Jackson, A., Frederico, M., Tanti, C., & Black, C. (2009). Exploring outcomes in a therapeutic service response to the emotional and mental health needs of children who have experienced abuse and neglect in Victoria, Australia. *Child & Family Social Work, 14*, 198-212. doi:10.1111/j.1365-2206.2009.00624.x

Jackson, H., Nuttall, R. L. (2001). Risk for preadolescent suicidal behavior: An ecological model. *Child & Adolescent Social Work Journal, 18*, 189-203. doi:10.1023/A:1011058419113

Kar N. (2009). Psychological impact of disasters on children: review of assessment and interventions. *World Journal of Pediatrics, 5*, 5–11. doi:10.1007/s12519-009-0001-x

Katsuragi, S., Kunugi, H., Sano, A., Tsutsumi, T., Isogawa, K., Nanko, S., & Akiyoshi, J. (1999). Association between serotonin transporter gene polymorphism and anxiety-related traits. *Biological Psychiatry, 45*, 368−370. doi:10.1016/S0006-3223(98)00090-0

Kennard, B. D., Stewart, S. M., Hughes, J. L., Patel, P. G., & Emslie, G. J. (2006). Cognitions and depressive symptoms among ethnic minority adolescents. *Cultural Diversity and Ethnic Minority Psychology*, *12*(3), 578. doi:10.1037/1099-9809.12.3.578

Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of General Psychiatry*, *52*(12), 1048. doi:10.1001/archpsyc.1995.03950240066012

Khamis, V. (2005). Post-traumatic stress disorder among school age Palestinian children. *Child Abuse & Neglect*, *29*(1), 81-95. doi: 10.1016/j.chiabu.2004.06013

Kilpatrick, D. G., Ruggiero, K. J., Acierno, R., Saunders, B. E., Resnick, H. S., & Best, C. L. (2003). Violence and risk of PTSD, major depression, substance abuse/dependence, and comorbidity: Results from the National Survey of Adolescents. *Journal of Consulting and Clinical Psychology*, *71*(4), 692-699. doi: 10.1037/0022-006X.71.4.692

Kinzie, J. D., Sack W., Angell, R. , Clarke G., & Ben, R. (1989). A three-year follow-upof Cambodian young people traumatized as children. *Journal of American Academy of Child and Adolescent Psychiatry, 28,* 501-504. doi:10.1097/00004583-198907000-00006

Kronenberg, M. E., Hansel, T. C., Brennan, A. M., Osofsky, H. J., Osofsky, J. D., & Lawson, B. (2010). Children of Katrina: Lessons learned about post-disaster symptoms and recovery patterns. *Child Development*, *81*(4), 1241-1259. doi:10.1111/j.1467-8624.2010.01465.x

Krupnick, J. L., Green, B. L., Stockton, P., Goodman, L., Corcoran, C., & Petty, R. (2004). Mental health effects of adolescent trauma exposure in a female college sample: Exploring differential outcomes based on experiences of unique trauma types and dimensions. *Psychiatry: Interpersonal and Biological Processes*, *67*(3), 264-279. doi: 10.1521/psyc.67.3.264.48986

Kulka, R. A., Schlesenger, W. E., Fairbank, J. A., Hough, R. L., Jordan, B. K., & Marmar, C. R. (1990). *Trauma and the Vietnam War generation: Report of findings from the National Vietnam Veterans Readjustment Study.* New York: Brunner/ Mazel.

Lambert, M. C., Weisz, J. R., Knight, F. (1989). Over - and undercontrolled clinic referral problems of Jamaican and American children and adolescents: The culture general and the culture specific. *Journal of Consulting and Clinical Psychology, 57*, 467-472. doi: 10.1037/0022-006X.57.4.467

Laria, A.J., & Lewis-Fernandez, R. (2006). Latino patients. In R.F. Lim (Ed.). *Clinical manual of cultural psychiatry.* (pp. 119-173). Arlington, VA: American Psychiatric Publishing, Inc.

Lau, A. & Takeuchi, D. (2001). *Journal of Community Psychology, 29*, 675-692. doi:10.1002/jcop.1042

Lee, J., Ha, Y.S., Kim, Y.A., & Kwon, Y.H. (2004). PTSD symptoms in elementary school children after Typhoon Rusa. *Taehan Kanho Hakhoe Chi, 34,* 636-45.PMid:15502429

Lester, K., Artz, C., Resick, P. A., & Young-Xu, Y. (2010). Impact of race on early treatment termination and outcomes in posttraumatic stress disorder treatment. *Journal of Consulting and Clinical Psychology,78*, 480-489. doi: 10.1037/a0019551

Levendosky, A. A.,Graham-Bermann, S. A (2000). Trauma and parenting in battered women: An addition to an ecological model of parenting. *Journal of Aggression, Maltreatment & Trauma, 3,* 12-16.

Lewis, M., & Ippin, C.G. (2004). Rainbows of tears, souls full of hope: Cultural issues related to young children and trauma. In (Eds.). *Young children and trauma: intervention and treatment* (pp. 11-47). New York, Guilford Press. 11-47.

Lewis, M.L., (1996). Trauma reverberates: Psychosocial evaluation of the caregiving environment of young children exposed to violence and traumatic loss. In J.D. Osofsky & .E. Fenichel (Eds.) *Islands of safety: Assessing and treating young victims of violence* (pp. 21-18). Washington, DC: Zero to Three.

Lieberman, A.F., & Van Horn, P. (2004). Assessment and treatment of young children exposed to traumatic events. In J.D. Osofsky & K.D. Pruett (Eds.); *Young children and trauma, intervention and treatment.* New York, Guilford Press.

Linley, P. A., & Joseph, S. (2004). Positive change following trauma and adversity: A review. *Journal of Traumatic Stress*, *17*(1), 11-21. doi: 10.1023/B:JOTS.0000014671.27856.7e

Littleton, H. L., Grills-Taquechel, A. E., Axsom, D., Bye, K., & Buck, K. S. (2012). Prior sexual trauma and adjustment following the Virginia Tech campus shootings: Examination of the mediating role of schemas and social support. *Psychological Trauma: Theory, Research, Practice, and Policy, 4*(6), 578-586. doi: 10.1037/a0025270

Lu, Y. E., Landsverk, J., Ellis-Macleod, E., Newton, R., Ganger, W., & Johnson, I. (2004). Race, ethnicity, and case outcomes in child protective services. *Children and Youth Services Review*, *26*(5), 447-461. doi:10.1016/j.childyouth.2004.02.002

Macksoud, M., & Aber, J. (1996). The war experience and psychosocial developmentof children in Lebanon. *Child Development, 67,* 70-88. doi:10.2307/1131687

Margolin, G. & Gordis, E. B. (2000). The effects of family and community violence on children. *Annual Review of Psychology, 51,* 445-479. doi:10.1146/annurev.psych.51.1.445

Margolin, G., & Vickerman, K. A. (2011). Posttraumatic Stress in Children and Adolescents Exposed to Family Violence. *Couple and Family Psychology: Research and Practice, 1*, 63-73. doi: 10.1037/0735-7028.38.6.613

Marín, G. & Gamba, R. J. (1996). A new measurement of acculturation for Hispanics: The Bidimensional Acculturation Scale for Hispanics (BAS). *Hispanic Journal of Behavioral Sciences, 18*, 297-316. doi: 10.1177/07399863960183002

Marshall, G. N., Schell, T. L., & Miles, J. N. V. (2009). Ethnic differences in posttraumatic distress: Hispanics' symptoms differ in kind and degree. *Journal of Consulting and Clinical Psychology, 77,* 1169-1178. doi: 10.1037/a0017721

Mash, E.J., & Dozois, D (2003). Child psychopathology: A developmental systems perspective. In E.J. Mash & R.A. Barkley (Eds.), *Child psychopathology* (2nd ed. pp.3-71). New York: Guilford Press.

Masinda, M. T. & Muhesi, M. (2004). Trauma in children/adolescents: A special focus on Third World countries. *Journal of Child and Adolescent Mental Health,* 69-76. doi:10.2989/17280580409486572

McCart, M., Sawyer, G. K., Smith, D. W. (2008). Developmental issues in diagnosing PTSD. In D. Delahanty (Ed.). *The psychobiology of trauma and resilience across the lifespan* (pp. 5-6). Lanham, MD: Rowman & Littlefield Publishers, Inc.

McDermott, B. M., Lee, E. M., Judd, M., Gibbon, P. (2005). Posttraumatic stress disorder and general psychopathology in children and adolescents following a wildlife disaster. *The Canadian Journal of Psychiatry, 50*, 137-143. PMid:15830823

McDonald, K. L., Bowker, J. C., Rubin, K. H., Laursen, B., & Duchene, M. S. (2010). Interactions between rejection sensitivity and supportive relationships in the prediction of adolescents' internalizing difficulties. *Journal of Youth and Adolescence*, *39*(5), 563-574. doi:10.1007/s10964-010-9519-4

McFarlane, A., Clark, C. R., Bryant, R. A., Williams, L. M., Niaura, R., Paul, R. H., Hitsman, B. L., Stroud, L., Alexander, D. M., & Gordon (2005). The impact of early life stress on psychophysiological, personality and behavioral measures in 740 non-clinical subjects. *Journal of Integrative Neuroscience, 4,* 27-40. doi:10.1142/S0219635205000689

McLaughlin, K. A., Hilt, L. M., & Nolen-Hoeksema, S. (2007). Racial/ethnic differences in internalizing and externalizing symptoms in adolescence. *Journal of Abnormal Child Psychology, 35,* 801−816. doi:10.1007/s10802-007-9128-1

Meesters, C., Merckelbach, H., Muris, P., Wessel, I. (2000). Autobiographical memory and trauma in adolescents. *Journal of Behavior Therapy and Experimental Psychiatry, 31*, 29-39. doi:10.1016/S0005-7916(00)00006-9

Mena, F. J., Padilla, A. M., & Maldonado, M. (1987). Acculturative stress and specific coping strategies among immigrant and later generation college students. *Hispanic Journal of Behavioral Sciences, 9,* 207-225. doi: 10.1177/07399863870092006

Merriam-Webster's Collegiate Dictionary (11th ed.). (2010). Springfield, MA: Merriam-Webster.

Mezulis, A.H., Abramson, L.Y., Hyde, J. S., & Hankin, B. L. (2004). Is there a universal positivity bias in attributions? A meta-analytic review of individual, developmental, and cultural differences in the self-serving bias. *Psychological Bulletin, 130,* 711-747. doi:10.1037/0033-2909.130.5.711

Milgram, N. A. , Toubiana, Y. H. , Klingman, A. , Raviv, A., & Goldstein, I. (1988). Situational exposure and personal loss in children's acute and chronic stress reactions to a school bus disaster. *Journal of Traumatic Stress, 1*, 339-352. doi:10.1002/jts.2490010306

Miller, K.E. (1996). The effects of state terrorism and exile on indigenous Guatemalan Refugee/Immigrant children: A mental health assessment and an analysis of children's narratives. *Child Development, 67,* 89-106. doi:10.2307/1131688

Moos, R.H. (2002). The mystery of human context and coping: An unraveling of clues. *American Journal of Community Psychology, 30*, 67-88. doi:10.1023/A:1014372101550

Moroz, K.J. (2005). *Understanding the current mental health needs of children experiencing domestic violence in Vermont: Recommendations for enhancing and improving responses*. Vermont Domestic Violence Network and Vermont Rural Domestic Violence Project (Federal Grant).

Moradi, A. R., Doost, H. T. Neshat; T., Mohammad, R., Yule, W., & Dalgleish, T. (1999). Everyday memory deficits in children and adolescents with PTSD: Performance on the Rivermead Behavioural Memory Test. *Journal of Child Psychology and Psychiatry, 40,* 357-361. doi: 10.1111/1469-7610.00453

Murakami, F., Shimomura, T., Kotani, K., Ikawa, S., Nanba, E., & Adachi, K. (1999). Anxiety traits associated with a polymorphism in the serotonin transporter gene regulatory region in the Japanese. *Journal of Human Genetics, 44,* 15-17. doi:10.1007/s100380050098

Nader, K. (2009). Culture and the assessment of trauma in youths. In Wilson, J.P., & So-Kum Tang (Eds.) *Cross-cultural assessment of psychological trauma and PTSD*, New York: Springer Science & Business Media.

Nader, K., Pynoos, R.S., Fairbanks, L., Al-Ajeel, M., & Al-Asfour, A. (1993). A preliminary study of PTSD and grief among the children of Kuwait following the Gulf crisis. *British Journal of Clinical Psychology, 32*, 407– 416. PMid:8298537

Nader, K. (2007). Culture and assessment of trauma in youths, international and cultural psychology. In J. P. Wilson & C. S. Tang (Eds.). *Cross-Cultural assessment of psychological trauma and PTSD, international and cultural psychology* (pp. 169-196). New York, NY, Springer Science & Business Media. doi: 10.1007/978-0-387-70990-1_8

Nadeem, E. & Graham, S. (2005). Early puberty, peer victimization, and internalizing symptoms in ethnic minority adolescents. *The Journal of Early Adolescence*, *25*, 197-222. doi: 10.1177/0272431604274177

Newcomb, M. D., Munoz, D. T., & Carmona, J. V. (2009). Child sexual abuse consequences in community samples of Latino and European American adolescents. *Child Abuse & Neglect, 33*, 533-544. doi: 10.1016/j.chiabu.2008.09.014

Nguyen, H., Rawana, J. S., & Flora, D. B. (2011). Risk and protective predictors of trajectories of depressive symptoms among adolescents from immigrant backgrounds. *Journal of Youth and Adolescence*, *40*(11), 1544-1558. doi:10.1007/s10964-011-9636-8

Nilsson, D., Gustaffson, P., Svedin, C. (2012). Polytraumatization and trauma symptoms in adolescent boys and girls: Interpersonal and noninterpersonal events and moderating effects of adverse family circumstances. *Journal of Interpersonal Violence*, 27 (13), 2645-2664. doi: 10.1177/0886260512436386

Nishith, P., Mechanic, M. B., & Resick, P. A. (2000). Prior interpersonal trauma: The contribution to current PTSD symptoms in female rape victims. *Journal of Abnormal Psychology*, *109*(1), 20. doi:10.1037//0021-843X.109.1.20

Nooner, K. B., Linares, L. O., Batinjane, J., Kramer, R. A., Silva, R., & Cloitre, M. (2012). Factors related to posttraumatic stress disorder in adolescence. *Trauma, Violence, & Abuse*, *13*(3), 153-166. doi: 10.1177/1524838012447698

Norris, F. H. & Alegria, M. (2005). Mental health care for ethnic minority individuals and communities in the aftermath of disasters and mass violence. *CNS Spectrums, Vol 10,* 132-140. PMid:15685124

Ohan, J. L., Myers, K., & Collett, B. R. (2002). Ten-year review of rating scales. IV: Scales assessing trauma and its effects. *Journal of the American Academy of Child & Adolescent Psychiatry, 41*, 1401-1422. doi: 10.1097/00004583-200212000-00012

Ornitz, E.M., & Pynoos, R.S. (1989). Startle modulation in children with post-traumatic stress disorder. *American Journal of Psychiatry, 146*, 866-870. PMid:2742011

Organista, P. B., Marín, G., Chun, K. M. (2010). *The psychology of ethnic groups in the United States.* Thousand Oaks, CA: Sage Publications, Inc.

Ostrov, J. M., & Keating, C. F. (2004). Gender differences in preschool aggression during free play and structured interactions: An observational study. *Social Development, 13,* 255–277. doi:10.1111/j.1467-9507.2004.000266.x

Papageorgiou, V., Frangou-Garunovic, A., Iordanidou, R., Yule, W., Smith, P., & Vostanis, P. (2000). War trauma and psychopathology in Bosnian Refugee/Immigrant children.

European Child and Adolescent Psychiatry, 9, 84–90. doi:10.1007/s007870050002

Pearlman, M. Y., Schwalbe, K. D., & Cloitre, M. (2010). *Grief in childhood: Fundamentals of treatment in clinical practice.* Washington, DC: American Psychological Association. doi: 10.1037/12131-000

Peltone, K. & Punamaki, R. (2010). Preventive interventions among children exposed to trauma of armed conflict: A literature review. *Aggressive Behavior, 36,* 95-116. doi:10.1002/ab.20334

Perilla, J. L., Norris, F. H., & Lavizzo, E. A. (2002). Ethnicity, culture, and disaster response: Identifying and explaining ethnic differences in PTSD six months after Hurricane Andrew. *Journal of Social and Clinical Psychology, 21*, 20-45. doi: 10.1521/jscp.21.1.20.22404

Perry, B.D. (1994). Neurobiological sequalae of childhood trauma: PTSD in children. In M.M Murberg (Ed.) *Catecholamine Function in Postraumatic Stress Disorder: Emerging concepts* (pp. 233-255). Washington DC: American Psychiatric Press.

Perry, B.D., Pollard, R.A., Blakley, T.L., Baker, W.L., & Vigilante, D. (1995). Childhood trauma, the neurobiology of adaptation and use dependent development of the brain: how states become traits. *Infant Mental Health Journal, 16,* 271-291. doi:10.1002/1097-0355(199524)16:4<271::AID-IMHJ2280160404>3.0.CO;2B

Perez, R. M. (2011). Linguistic acculturation and context on self-esteem: Hispanic youth between cultures. *Child and Adolescent Social Work Journal*, *28*(3), 203-228. doi: 10.1007/s10560-011-0228-y

Pfefferbaum, B. (1997). Post-traumatic stress disorder in children: A review of the past 10 years. *Journal of the American Academy of Child and Adolescent Psychiatry, 36,* 1503-1511. doi:10.1097/00004583-199711000-00011

Phinney, J. S. (1996). Understanding ethnic diversity: The role of ethnic identity. *American Behavioral Scientist, 40*, 143-152. doi: 10.1177/0002764296040002005

Pina, A. A. & Silverman, W. K. (2004). Clinical phenomenology, somatic symptoms, and distress in Hispanic/Latino and European American youths with anxiety disorders. *Journal of Clinical Child and Adolescent Psychology, 33,* 227-236. doi: 10.1207/s15374424jccp3302_3

Pole, N., Gone, J. P., & Kulkarni, M. (2008). Posttraumatic stress disorder amongethnoracial minorities in the United States. *Clinical Psychology: Science and Practice, 15*, 35–61. doi:10.1111/j.1468-2850.2008.00109.x

Pole, N., Best, S. R., Metzler, T., & Marmar, C. R. (2005). Why are Hispanics at greater risk for PTSD? *Cultural Diversity and Ethnic Minority Psychology, 11*, 144-161. doi: 10.1037/1099-9809.11.2.144

Prelow, H. M., Danoff-Burg, S., Swenson, R. R., & Pulgiano, D. (2004). The impact of ecological risk and perceived discrimination on the psychological adjustment of African American and European American youth. Journal of Community Psychology, 32(4), 375-389. doi: 10.1002/jcop.20007

Putnam, F. W. (1997). *Dissociation in children and adolescents: A developmental perspective.* New York: Guilford Press.

Putnam, F. W., Hornstein, N., & Peterson, G. (1996). Clinical Phenomenology of Child and *Adolescent Dissociative Disorders: Gender and Age Effects. Child and Adolescent Psychiatric Clinics of North America.*

Pynoos, R., Rodriguez, N., Steinberg, A., Stuber, M., & Frederick, C. (1998).*UCLA PTSD Reaction Index for DSM-IV* (Rev. 1). Los Angeles: UCLA Trauma Psychiatric Program.

Pynoos, R.S. & Nader, K. (1993). Issues in the treatment of posttraumatic stress in children and adolescents. In J. Wilson & B. Raphael (Eds.), *International handbook of traumatic stress syndromes.* New York: Plenum Press.

Rigger, S. (2001). Transforming community psychology. *American Journal of Community Psychology, 29,* 69-81. doi:10.1023/A:1005293228252

Roberts, A. L., Gilman, S. E., Breslau, J., Breslau, N. & Koenen, K. C. (2011). Race/ethnic differences in exposure to traumatic events, development of post-traumatic stress disorder, and treatment-seeking for post-traumatic stress disorder in the United States. *Psychological Medicine: A Journal of Research in Psychiatry and the Allied Sciences,41*, 71-83. doi: 10.1017/S0033291710000401

Rodriguez, N., Myers, H. F., Mira, C. B., Flores, T., Garcia-Hernandez, L. (2002). Development of the Multidimensional Acculturative Stress Inventory for adults of Mexican origin. *Psychological Assessment,14*, 451-461. doi: 10.1037/1040-3590.14.4.451

Rodriguez, N., Steinberg, A. S., Saltzman, W. S., & Pynoos, R. S. (2001a). *PTSD Index: psychometric analyses of the adolescent version.* Symposium conducted at the Annual Meeting of the International Society for Traumatic Stress Studies, New Orleans: LA.

Roussos, A., Goenjian, A. K., Steinberg, A. M., Sotiropoulou, C., Kakaki, M., Kabakos, C., Karagianni, S., & Manouras, V. (2005). Posttraumatic stress and depressive reactions among children and adolescents after the 1999 earthquake in Ano Liosia, Greece. *The American Journal of Psychiatry, 162*, 530-537. doi: 10.1176/appi.ajp.162.3.530

Ruchkin, V., Henrich, C. C., Jones, S. M., Vermeiren, R., & Schwab-Stone, M. (2007). Violence exposure and psychopathology in urban youth: The mediating role of posttraumatic stress. *Journal of Abnormal Child Psychology*, *35*(4), 578-593. doi: 10.1007/s10802-007-9114-7

Russell, D. E. H. (1986). *The secret trauma: Incest in the lives of girls and women (rev. ed.).* New York, NY, US: Basic Books.

Sack, W.H., Seeley, J.R., & Clarke, G.N. (1997). Does PTSD transcend cultural barriers? A study from the Khmer Adolescent Refugee/Immigrant project, *Journal of the American Academy of Child and Adolescent Psychiatry, 36,* 49-54. doi:10.1097/00004583-199701000-00017

Sadowski, C. M., & Friedrich, W. N. (2000). Psychometric properties of the Trauma Symptom Checklist for Children (TSCC-A) with psychiatrically hospitalized adolescents. *Child Maltreatment, 5*, 364-372. doi: 10.1177/1077559500005004008

Saigh, P.A. (1991). The development of posttraumatic stress disorder following four different types of traumatization. *Behaviour Research and Therapy, 29,* 213–216. doi:10.1016/0005-7967(91)90110-O

Salloum, A., Garside, L.W., Irwin, C.L., Anderson, A. D., & Francois, A. H. (2009). Grief and trauma group therapy for children after Hurricane Katrina. *Social Work with Groups: A Journal of Community and Clinical Practice, 32*(1-2), 64-79. doi:10.1080/01609510802290958

Scheeringa, M.S., Zeannah, C.H., Drell, M.J., & Larrieu, J. (1995). Two approaches to the diagnosis of posttraumatic stress disorder in infancy and early childhood. *Journal of the American Academy of Child & Adolescent Psychiatry, 34,* 191- 200. doi:10.1097/00004583-199502000-00014

Schraufnagel, T. J., Wagner, A.W., Miranda, J., and Roy-Byrne, P.P. (2006). Treating minority patients with depression and anxiety: what does the evidence tell us? *General Hospital Psychiatry*, *28*, 27-36. doi:10.1016/j.genhosppsych.2005.07.002

Schwartz, S. J., Unger, J. B., Zamboanga, B. L., Szapocznik, J. (2010). Rethinking the concept of acculturation: Implications for theory and research. *American Psychologist, 65*, 237-251. doi: 10.1037/a0019330

Servan-Schreiber, D., Lin, B.L., & Birmaher, B. (1998). Prevalence of posttraumatic stress disorder in Tibetan Refugee/Immigrant children. *Journal of the American Academy ofChild and Adolescent Psychiatry, 37*, 874–879. doi:10.1097/00004583-199808000-00018

Shaw, J. A. (2003). Children exposed to war/terrorism. *Clinical Child and Family Psychology Review, 6*, 237-246. doi: 10.1023/B:CCFP.0000006291.10180.bd

Shiang, J. (2000). Considering cultural beliefs and behaviors in the study of suicide. In R. Maris, S. Canneto, J., McIntosh, & M. Silverman (Eds.), *Review of suicidology* (pp. 226-241). New York: Guilford Press.

Shore, B. (2002). Taking culture seriously. *Human Development, 45*, 226-228. doi: 10.1159/000064982

Silove, D. & Bryant, R. (2006). Rapid assessments of mental health needs after disasters. *JAMA: Journal of the American Medical Association, 296*, 576-578. doi:10.1001/jama.296.5.576

Smith, B. D., Sabin, M., Berlin, E. A., Nackerud, L. (2009). Ethnomedical syndromes and treatment-seeking behavior among Mayan Refugee/Immigrants in Chiapas, Mexico. *Culture, Medicine and Psychiatry, 33*, 366-381. doi: 10.1007/s11013-009-9145-3.

Smith, P., Perrin, S., Yule, W., Hacam, B., & Stuvland, R. (2002). War exposure among children from Bosnia-Hercegovina: Psychological adjustment in a community sample. *Journal of Traumatic Stress, 15*, 147–156. doi:10.1023/A:1014812209051

Smith, P., Perrin, S., & Yule, W. (1999). Cognitive behavior therapy for post traumatic stress disorder. *Child Psychology and Psychiatry Review, 4*, 177–182. doi:10.1017/S1360641799002087

Smith, P., Yule, W., Perrin, S., Tranah, T., Dalgleish, T., & Clark, D. M. (2007). Cognitive-behavioral therapy for PTSD in children and adolescents: a preliminary randomized controlled trial. *Journal of the American Academy of Child and Adolescent Psychiatry*, *46*(8), 1051-1061. doi:10.1097/CHI.0b013e318067e288

Steinberg, M. (2004). Systematic assessment of Posttraumatic Dissociation: The Structured Clinical Interview for DSM-IV Dissociative Disorders. In J. P. Wilson & T. M. Keane (Eds.). *Assessing psychological trauma and PTSD* (2nd ed.) (pp. 122-143). New York, NY: Guilford Press.

Stien, P.T., & Kendall, J. (2004). *Psychological trauma and the developing brain: Neurologically based interventions for troubled children.* Binghamton, NY: The Haworth Maltreatment and Trauma Press.

Stuber, J., Fairbrother, G., Galea, S., Pfefferbaum, B., Wilson- Genderson, M., & Vlahov, D. (2002). Determinants of counseling for children in Manhattan after the September 11 attacks. *Psychiatric Services, 53*, 815–821. doi:10.1176/appi.ps.53.7.815

Sue, D. W., & Sue, S. (2003). *Counseling the culturally diverse: Theory and practice*. New York: Wiley.

Suliman, S., Mkabile, S. G., Fincham, D. S., Ahmed, R., Stein, D. J., & Seedat, S. (2009). Cumulative effect of multiple trauma on symptoms of posttraumatic stress disorder, anxiety, and depression in adolescents. *Comprehensive Psychiatry*, *50*(2), 121-127. doi:10.1016/j.comppsych.2008.06.006

Tabachnick, B. G., and Fidell, L. S. (2013). *Using Multivariate Statistics , 6th ed.* Boston: Allyn and Bacon.

Terr, L.C. (1991). Childhood traumas: an outline and overview. *American Journal of Psychiatry, 148,* 10-20. PMid:19541752

Tharinger, D. (1990). Impact of child sexual abuse on developing sexuality. *Professional Psychology: Research and Practice, 21*, 331-337. doi: 10.1037/0735-7028.21.5.331

The National Child Traumatic Stress Network (n. d.). Retrieved May 15, 2011 from http://www.nctsn.org/trauma-types

Tobin, J. J., & Friedman, J. (1984). Intercultural and developmental stresses confronting Southeast Asian Refugee/Immigrant adolescents. *Journal of Operational Psychiatry, 15*, 39- 45. PMid:17166946

Torres, J. B. (1998). Masculinity and gender roles among Puerto Rican men: Machismo on the U.S. mainland. *American Journal of Orthopsychiatry, 68*, 16-26. doi: 10.1037/h0080266

Triffleman, E. G., & Pole, N. (2010). Future directions in studies of trauma among ethnoracial and sexual minority samples: Commentary. *Journal of Consulting and Clinical Psychology, 78,* 490-497 (2010). doi: 10.1037/a0020225

Tseng, W. (2006). From peculiar psychiatric disorders through culture- bound syndromes to culture related specific syndromes. *Transcultural Psychiatry, 43*, 554-576. doi: 10.1177/1363461506070781

Van der Kolk, B. (2007). New frontiers in trauma treatment. *Institute for the Advancement of Human Behavior, Seattle, WA*.

Van der Kolk, B., Roth, S., Pelcovitz, D., Sunday, S., & Spinazzola, J. (2005). Disorders of extreme stress: The empirical foundation of a complex adaptation to trauma. *Journal of Traumatic Stress*, *18*(5), 389-399. doi: 10.1002/jts.20047

Vazsonyi, A. T., Trejos-Castillo, E., & Huang, L. (2006). Are developmental processes affected by immigration? Family processes, internalizing behaviors, and externalizing behaviors. *Journal of Youth and Adolescence*, *35*(5), 795-809. doi:10.1007/s10964-006-9104-z

Vijayakumar, L., Kannan, G., & Kumar, B.G. (2006). Do all children need intervention after exposure to tsunami? *International Review of Psychiatry, 18,* 515-522. doi:10.1080/09540260601039876

Webster, R. A., McDonald, R., Lewin, T. J., Carr, V. J. (1995). Effects of a natural disaster on immigrants and host population. *Journal of Nervous and Mental Disease, 183,* 390-397. doi: 10.1097/00005053-199506000-00007

Weisz, J.R., Sigman, M., Weiss, B., & Mosk, J. (1993). Parent reports of behavioral l and emotional problems among children in Kenya, Thailand, and the United States. *Child

Development, 64. 98-109. doi:10.2307/1131439

Weller, S. C., Baer, R. D., de Alba Garcia, J. G., & Rocha, A.L. (2008). Susto and nervios: Expressions for stress and depresión. *Culture, Medicine and Psychiatry, 32,* 406-420. doi:10.1007/s11013-008-9101-7

Wilson, J.P., & So-Kum Tang, C.C. (2007). *Cross-cultural assessment of psychological trauma and PTSD.* New York: Springer Science & Business Media. doi:10.1007/978-0-387-70990-1

Wolf, D. A., & Nayak, M. B. (2003). Child abuse in peacetime. In P. P. Schnurr & B. L. Green (Eds.), *Trauma interventions in war and peace: Prevention, practice and policy* (pp. 75-104). New York: Kluwer Academic/Plenum.

Woodward, A., Taylor, R.J., Bullard, K.M., Aranda, M.P., Lincoln, K.D., Chatters, L.M. (2012). Prevalence of lifetime DSM-IV affective disorders among older African Americans, Black Carribbeans, Latinos, Asians and non‐Hispanic White people, *International Journal of Geriatric Psychiatry, 27,* 816-827. doi: 10.1002/gps.2790

Yu, S. M., Huang, Z. J., Schwalberg, R. H., Overpeck, M., & Kogan, M. D. (2003). Acculturation and the health and well-being of US immigrant adolescents. *Journal of Adolescent Health*, *33*(6), 479-488.

Yule, W., Perrin, S., & Smith, P. (1999). Post–traumatic stress reactions in children and adolescents. In W. Yule (Ed.). *Posttraumatic stress disorders: Concepts and therapy.* Chichester: John Wiley & Sons. PMid:16882965

Yule, W. (2001). Post-traumatic stress disorder in children and adolescents. *International Review of Psychiatry, 13,* 194-200.   doi:10.1080/09540260120074064

Zane, N. & Mak, W. (2003). Major approaches to the measurement of acculturation among ethnic minority populations: A content analysis and an alternative empirical strategy. In K. M. Chun, P. Balls Organista & G. Marín (Eds.). *Acculturation: Advances in theory, measurement, and applied research* (pp. 39-60). Washington, DC: American Psychological Association. doi: 10.1037/10472-00

Zayfert, C. (2008). Culturally competent treatment of posttraumatic stress disorder in clinical practice: An ideographic, transcultural approach. *Clinical Psychology: Science and Practice, 15*, 68-73. doi: 10.1111/j.1468-2850.2008.00111.x

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