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Examining the Factor Structures of the ERQ-CA, RCADS, and RSCA to Identify Unique Predictors of PTSD Symptom Clusters in Maltreated Youth

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ABSTRACT

EXAMINING THE FACTOR STRUCTURES OF THE ERQ-CA, RCADS, AND RSCA TO IDENTIFY UNIQUE PREDICTORS OF PTSD SYMPTOM CLUSTERS IN MALTREATED YOUTH

by

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Youth who have experienced maltreatment have a higher risk of developing posttraumatic disorder (PTSD), which is associated with poorer mental and behavioral health outcomes including emotion dysregulation, anxiety, depression, and lower resiliency. At present, the literature largely focuses on youth who have experienced general trauma or PTSD symptoms, while maltreated youth are vastly understudied. The present investigation was the first study to date to examine the factor structures of the Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA), the Revised Child Anxiety and Depression Scale (RCADS), and the Resiliency Scale for Children and Adolescents (RSCA) in a sample of maltreated youth. The present study used confirmatory factor analyses (CFA) to identify predictive factors in the ERQ-CA, RCADS, and RSCA. Predictors of PTSD symptom clusters were identified and compared to the factors found in the original normative sample and the existing literature. Findings revealed novel insights into understanding traumatic stress in maltreated youth.

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CHAPTER 1

REVIEW OF LITERATURE

Child Maltreatment

Child maltreatment is a global public health epidemic and a widespread social and public health problem (Al Midfa et al., 2019; Leeb et al., 2008; Millett, 2019). Effects of childhood abuse and neglect can inflict lifelong damage on a child's health and well-being, even resulting in death or traumatic brain injury (Leeb et al., 2008). Nevertheless, child maltreatment remains vastly understudied. Much of the literature to date has focused on non-interpersonal trauma (e.g., community violence or natural disaster). The detrimental effects of maltreatment make it crucial to study this vulnerable population and better understand the impact of childhood abuse and neglect.

Unfortunately, it was not until recently that an operational definition of child maltreatment existed. A uniform definition is crucial to developing a methodology to study and understand maltreatment (e.g., type, severity, chronicity, age at first report, frequency) (English et al., 2005). Definitions of child maltreatment vary, but it is generally defined as harmful acts committed against children by parents or caregivers that result in harm, the potential for harm, or threat of harm to a child (Kosher & Ben-Arieh, 2020; Leeb et al., 2008). Maltreatment of persons 18 years or older is not considered child maltreatment, regardless of the victim's cognitive or developmental age. Additionally, a caregiver's intent to harm, legal liability, economic means, and religious or cultural norms are also considered irrelevant by the CDC when determining whether an act of child maltreatment has occurred (Leeb et al., 2008).

Child maltreatment includes two types of events: child abuse (acts of commission) and child neglect (acts of omission). The Centers for Disease Control and Prevention (CDC, 2022) acknowledges four types of abuse and neglect:

- Physical abuse. Physical abuse is the intentional use of physical force with the potential to result in physical injury. Physical abuse includes physical acts committed against a child but does not include physical injuries to the anal, genital, or surrounding areas.
- Sexual abuse. Sexual abuse is pressuring or forcing a child to engage in sexual acts or exposing a child to sexual activities. Sexual abuse may include completed or attempted sexual acts, contact, or noncontact exploitation. Physical acts to the anal, genital, or surrounding areas also constitute sexual abuse.
- Emotional abuse. Emotional abuse is any behavior that harms a child's self-worth or emotional well-being. Emotional abuse includes intentional behavior that has the potential to damage a child's psychological or emotional well-being. Physical acts of restraining and confining qualify as emotional abuse, although they may result in physical abuse and neglect.
- Neglect. Neglect is the failure to meet a child's basic physical and emotional needs). Failure to provide and failure to supervise are also forms of neglect. Failure to provide includes physical, emotional, medical, dental, and educational neglect. Failure to supervise includes inadequate supervision and exposure to violent or harmful environments. Neglect may include exposure to violence between caregivers. However, the caregiver is not considered a perpetrator of maltreatment if the caregiver is also victimized and unaware of alternatives to protect the child.

In addition to establishing a uniform definition of maltreatment, another primary goal in the field is early identification and prevention of maltreatment. An essential first step to preventing maltreatment is identifying the variables that place children at risk of being maltreated. The following section outlines the prevalence, risk factors, and effects of child maltreatment.

Prevalence

Census statistics indicate a steady increase in the number of children being maltreated over time. Recent data on child maltreatment rates in the United States is based on National Child Abuse and Neglect Data System (NCANDS) data collected in 2019. Nearly 3.5 million reports of child maltreatment were made in 2019, and approximately 656,000 children were maltreated (United States Department of Health and Human Services [USDHHS], 2021). Most children experienced a single type of maltreatment (84.5 percent), with 61 percent of victims suffering neglect, 10.3 percent physical abuse, and 7.2 percent sexual abuse. The remaining 15.5 percent of victims suffered two or more maltreatment types. Prevalence also varies based on the type of maltreatment, with neglect being the most frequently reported. Of all child maltreatment victims in 2019, 74.9 percent were neglected, 17.5 percent were physically abused, 9.3 percent were sexually abused, and 6.8 percent were classified as “other” and included threatened abuse or neglect, drug or alcohol addiction, and lack of supervision. Child maltreatment fatalities have also risen compared to previous years. In 2019, 1,840 children died from abuse and neglect compared to 1,780 in 2018.

Risk Factors

Bronfenbrenner's socio-ecological model (1979) groups maltreatment risk factors into ten domains: area characteristics, family background/structure, parent stressors, exposure to family violence, parent–child relationships, education, peer relationships, adolescent stressors, antisocial behaviors, and precocious transitions. NCANDS officially recognizes 21 risk factors, including six child risk factors and 12 caregiver risk factors. A summary of the risk factors identified in the current literature is detailed in the following sections and is grouped into individual, family or caregivers, and community-related risk factors, based on the above models.

Individual

Several individual characteristics identified in the literature may increase a child's risk of being victimized. Age and gender play a substantial role in estimating the risk of maltreatment. However, this varies depending on the type of maltreatment. In general, children under three years of age are at greatest risk of being maltreated, with children under one year exhibiting the highest victimization rate at more than double the rate of any other age (Office of Children and Family Services [OCFS], 2019; USDHHS, 2021). Boys generally experience higher rates of neglect, physical abuse, and emotional abuse than girls (Lee et al., 2021). However, being female and being an adolescent are both individual risk factors for sexual abuse (Finkelhor et al., 2014). In fact, age plays a significant role in the relationship between gender and maltreatment risk. Mothers are more likely to physically abuse older boys than younger children or girls (Lo et al., 2017), and interestingly, the differences in maltreatment risk by gender disappear as age increases (Lee et al., 2021).

Academic and behavioral problems are also common risk factors for maltreatment. Lack of engagement in school, poor school performance, and more behavioral problems all increase a

child's risk of being maltreated (Lo et al., 2017; Thornberry et al., 2014). Antisocial or violent behavior is associated with maltreatment risk as well. Specifically, early adolescent antisocial behavior, including delinquency, conduct disorder, and drug or alcohol use, dramatically increases a child's risk of experiencing maltreatment (Thornberry et al., 2014). Academic and behavioral risk factors are also linked to gender. Boys tend to have lower levels of school engagement and higher levels of delinquency, which may partially explain boys' heightened risk of maltreatment (Lee et al., 2021).

Illness and disability are also notable risk factors for child maltreatment. Children with disabilities make up approximately one in four maltreatment allegations and one in three substantiated cases of child abuse and neglect (Maclean et al., 2017). The risk of child maltreatment is over six times higher for children with a disability compared to typically developing children (Karni-Visel et al., 2020). However, the risk of maltreatment also depends on the type of disability. Children with autism and Down syndrome experience maltreatment at the same rate as children without a disability, while children with an intellectual disability are up to three times more likely to be maltreated (Brendli et al., 2021; Maclean et al., 2017). Children suffering from chronic illness are more likely to experience physical maltreatment and neglect (Yang & Maguire-Jack, 2018). Mental illness is another critical variable increasing the risk of child maltreatment. Children with a psychological disorder are three times more likely to be maltreated than children without mental illness (Maclean et al., 2017).

Family or Caregiver

Children without a stable family, such as those in the foster system, are particularly vulnerable to child maltreatment. From 2011 to 2016, the rate of child maltreatment in the US among children in foster care was roughly 11.7 percent (Yi et al., 2020). NCANDS recognizes

12 family and caregiver factors that impact rates of child maltreatment. Twelve characteristics of a caregiver were found to increase the likelihood of child maltreatment, regardless of whether they are the perpetrator. Six of these risk factors are categorized as “any caregiver disability” and include Intellectual Disability, Emotional Disturbance, Visual or Hearing Impairment, Learning Disability, Physical Disability, and Other Medical Conditions (USDHHS, 2021). The remaining six risk factors are alcohol abuse (chronic and compulsive), domestic violence (caregiver as perpetrator or victim), drug abuse (chronic and compulsive), financial problems, inadequate housing (including overcrowded or substandard), and public assistance (participation in social services programs) (USDHHS, 2021).

Recently, several additional family factors have been linked to maltreatment risk. Intergenerational maltreatment is perhaps one of the most well-known predictors of future maltreatment. Parents who were maltreated are more likely to maltreat their own children compared to parents who did not experience childhood maltreatment (Thornberry et al., 2014; Vial et al., 2020; Warminham et al., 2020). Larger family sizes and poor family cohesion also increase the risk of child maltreatment (Baldwin et al., 2020; Lo et al., 2017). Family violence plays a crucial role in maltreatment risk as well. Domestic violence is strongly associated with an increased risk of maltreatment (Thornberry et al., 2014; Vial et al., 2020; Yang & Maguire-Jack, 2018).

As mentioned, a family's financial status significantly impacts the likelihood of maltreatment. Children in low-income families have a substantially higher risk of neglect, physical maltreatment, and emotional maltreatment than children of higher socioeconomic status (Maguire-Jack & Font, 2017). Lack of childcare may be one explanation for the link between neglect and income. Caregivers without access to emergency childcare are investigated for child

neglect more often than families with this resource (Yang & Maguire-Jack, 2018), and mothers who neglect their children are more likely to be divorced or single (Baldwin et al., 2020; Lo et al., 2017). Parents who report experiencing any form of financial hardship are more likely to physically abuse their child than parents who do not report such hardship (Yang & Maguire-Jack, 2018). Unemployment is also associated with neglect (Yang & Maguire-Jack, 2018), with differences between maternal and paternal employment status. Children whose father is unemployed are more likely to be maltreated than children whose mother is unemployed (Baldwin et al., 2020).

Caregiver health and well-being also impact maltreatment likelihood. Caregivers' physical and emotional health is even more strongly associated with parenting and maltreatment than financial stress (Yang & Maguire-Jack, 2018). Maternal well-being, specifically, is closely linked to the risk of maltreatment. Mothers suffering from depression, anxiety, stress, lack of social support, substance use, or intimate partner violence are more likely to be investigated for both physical maltreatment and neglect (Baldwin et al., 2020; Lo et al., 2017; Yang & Maguire-Jack, 2018). The heightened risk of maltreatment among mothers with mental illness may be explained by the link between emotionally absent caregivers and increased rates of child maltreatment (Vial et al., 2020). Maternal age is also relevant. Younger mothers are also more likely to maltreat their children (Baldwin et al., 2020). Lower maternal education level, more common among younger mothers, is also associated with higher maltreatment rates (Baldwin et al., 2020).

Certain parenting practices may also be associated with the risk of maltreatment. Corporal punishment is often associated with an increased risk of maltreatment. Merely condoning the idea of corporal punishment has been shown to increase a father’s risk of

maltreating his child, whether or not he actually uses this form of punishment (Burnette et al., 2017). This finding may result from desensitization toward more aggressive and violent parenting approaches. Similarly, parents who spank their children are more likely to be investigated for neglect than parents who do not spank their children (Yang & Maguire-Jack, 2018). Some argue that this may be associated with a lack of understanding or respect for cultural differences in parenting styles. Researchers and clinicians must maintain cultural humility when evaluating discipline strategies and assessing the risk of child maltreatment.

Community

As mentioned, low-income status increases the likelihood of maltreatment, which remains true for the socioeconomic status of the child's community. Children in both low-income families and high-poverty neighborhoods are between three and four times more likely to experience neglect (Maguire-Jack & Font, 2017). Children who are not poor but live in high-poverty neighborhoods are also at higher risk of neglect, but not physical abuse (Maguire-Jack & Font, 2017). One explanation for the link between community socioeconomic status and maltreatment is the higher crime rates in disadvantaged neighborhoods. Community violence, particularly the presence of gangs, significantly increases the risk of child maltreatment (Thornberry et al., 2014).

Research on community risk factors for maltreatment is lacking, perhaps because community factors have less impact on maltreatment rates than individual or family risk factors. Community factors linked to maltreatment tend to hold weaker risk than other factors (Coulton et al., 1999). A more recent study found that neighborhood characteristics were not associated with subsequent maltreatment, and only one related factor (neighborhood drug use) increased a child's

risk of maltreatment (Thornberry et al., 2014). Child maltreatment risk may best be conceptualized as the interplay of several individual, family, and community risk factors.

Effects

Maltreatment history is consistently linked to adverse childhood outcomes that often persist into adulthood. Most of the literature on the effects of maltreatment focuses on the adverse behavioral and emotional outcomes of maltreatment survivors (English et al., 2005). Common psychological effects of maltreatment include major depressive disorder, dysthymia, posttraumatic stress disorder, dissociation, suicidal ideation, and suicide attempts (Brown et al., 1999; Davis & Siegel, 2000; Hulette et al., 2011; Nanni et al., 2012; Young & Widom, 2014). Behavioral effects include aggression, theft, substance use, cheating, rule-breaking, risky sexual behaviors, and increased risk of committing a violent crime (Avery et al., 2000; Cicchetti & Toth, 2005; Linning & Kearney, 2004; Malvaso et al., 2018). Negative behaviors also impact social skills. Maltreated children are more likely to experience increased conflict and trouble maintaining friendships (Ethier et al., 2004; Kaplan et al., 1999).

Biological effects are a less-studied consequence of maltreatment despite their prevalence and severity. Child maltreatment adversely affects global brain development and structures of the brain, including negative structural changes in the amygdala, cerebellum, cerebral cortex, corpus callosum, and hippocampus (De Bellis et al., 2001; De Bellis et al., 1999; De Bellis et al., 2002; De Bellis & Kuchibhatla, 2006; McCrory et al., 2010; Teicher et al., 2002; Teicher et al., 2004; Teicher & Samson; 2016). These effects may also cause cognitive deficits. Children who have experienced maltreatment are more likely to have delayed expressive and receptive language development, poor academic performance, and deficits in working memory, inhibition, auditory

attention, and processing speed (Coohey et al., 2011; DePrince et al., 2009; Veltman & Brown, 2001).

The present study focuses on four specific effects of child maltreatment: decreased ability to regulate emotion, increased anxiety, increased depression, and the importance of resiliency in response to interpersonal trauma. These topics are detailed in the following sections.

Emotion Regulation

Child maltreatment is linked to emotion dysregulation in youth. Maltreatment adversely affects a child's ability to regulate emotions (Burns et al., 2010; John et al., 2017; Lavi et al., 2019; Maughan & Cicchetti, 2002). A history of child maltreatment has been linked to worse emotion regulation scores regardless of PTSD symptoms and adult trauma, suggesting a unique effect of maltreatment on emotion regulation in youth (Powers et al., 2015). Child sexual abuse, in particular, is related to higher levels of negative emotions and maladaptive emotion regulation skills (Coyle et al., 2014). Identifying emotion regulation abilities in maltreated youth may be an essential first step in treatment to mitigate the poor behavioral and psychological consequences of maltreatment.

Furthermore, well-developed emotion regulation skills may decrease the harmful effects of maltreatment on a child's well-being (Cloitre et al., 2005). Emotion regulation skills may also mitigate the effects of child maltreatment, particularly concerning PTSD (Knefel et al., 2019). These findings further support the importance of identifying a child's emotion regulation abilities, as emotion regulation may serve as a protective factor against the harmful effects of child maltreatment.

Anxiety and Depression

Another consequence of child maltreatment is increased anxiety and depression, two psychiatric disorders that are often comorbid. Depression is associated with behavioral and emotional impairments, including PTSD, suicide, aggression, impulsivity, destructiveness, and comorbid psychopathology (Ariga et al., 2008). Children who experience maltreatment are at greater risk of developing symptoms of depression and anxiety (Cao et al., 2016; Gardner et al., 2019; Moylan et al., 2010; Sunley et al., 2020), and these effects often persist through adulthood (Li et al., 2016; Pompili et al., 2014). Specifically, youth who have experienced child maltreatment are three times more likely to develop depression than youth without a history of maltreatment (Brown et al., 1999). Youth who experienced maltreatment also tend to have more severe depression and more frequent depressive episodes (Schierholz et al., 2016). Child maltreatment is also linked to specific anxiety disorders. Survivors of child maltreatment who report depressive symptoms are at greater risk of developing comorbid social anxiety disorder (Brühl et al., 2019).

Interestingly, emotion regulation also appears to mediate the relationships between child maltreatment, depression, and anxiety. One study found that emotion regulation mediated the relationship between maltreatment and depression (Schierholz et al., 2016). Another study revealed that alexithymia, the inability to identify and express emotion, mediates the link between child maltreatment and consequential depression and anxiety (Brown et al., 2016). As mentioned in the previous section, these findings further support the relationship between emotion regulation and psychological conditions.

Resiliency

Resilience has become a hot topic in recent years. Resilience in child maltreatment research has also gained attention. Despite these advancements, several gaps in resiliency research remain, particularly concerning assessing and defining resiliency and understanding the effects of maltreatment on resiliency (Yoon et al., 2019). Resiliency is generally understood as proficiency in multiple domains, though the exact domains of resilience are not readily agreed on. Resiliency is sometimes defined as competency in developmental, behavioral, and social domains (Dubowitz et al., 2016). However, others view resiliency through different domains, including surviving, thriving, perseverance, reconciling and integrating experiences, and advocating for self (Yoon et al., 2020). Regardless of the definition, resiliency is consistently linked to maltreatment. Maltreated children are less likely to possess individual, relationship, and community resilience traits, significantly impacting resilience in social domains (Collin-Vézina et al., 2011; Dubowitz et al., 2016). Resilience is even lower among youth who experience more than one type of maltreatment than those who report experiencing a single maltreatment type (Collin-Vézina et al., 2011). Overall, the detrimental effects of a lack of resilience are apparent. Low resilience has been linked to poorer mental health outcomes following a natural disaster (Brown et al., 2019).

Resiliency may also play a role in mitigating the effects of child maltreatment. Youth with more resiliency traits or domains, especially those with more future orientation traits, are less likely to be affected by adverse outcomes associated with maltreatment, including substance use, delinquency, and social incompetency (Cui et al., 2020). Tlapek et al. (2017) showed a similar effect, with high resilience as a protective factor against revictimization among girls who experienced sexual abuse. However, maltreated youth who possess resiliency traits continue to

experience adverse effects of maltreatment despite the protective capabilities of resiliency (Dubowitz et al., 2016). More research is necessary to understand the link between maltreatment and resiliency in youth.

Posttraumatic Stress Disorder

Posttraumatic stress disorder (PTSD) is a trauma- and stress-related disorder that may be diagnosed following exposure to actual or threatened death, serious injury, or sexual violence (American Psychological Association [APA], 2022). A diagnosis of PTSD may be given to individuals who show symptoms of traumatic stress following exposure to one or more traumatic events. The exposure must occur through directly experiencing the event, witnessing the event, learning about a traumatic event that happened to a family or friend, or repeated or extreme exposure to details of the event. A diagnosis of PTSD also requires that symptoms have been present for more than one month and cause significant distress or impairment in one or more areas of functioning. A diagnosis of PTSD may be specified as "with delayed expression" if full diagnostic criteria are not met within six months after exposure.

Symptoms Clusters

PTSD symptoms are grouped into four symptom clusters: intrusion, avoidance, negative alterations in cognition and mood, and alterations in arousal and reactivity (APA, 2022). A diagnosis of PTSD requires the presence of at least one intrusion symptom, one avoidance symptom, two symptoms in the cognition and mood cluster, and two in the arousal and reactivity cluster. Diagnostic criteria within each cluster are defined in the following subsections, as well as information about how each cluster uniquely presents within youth.

Intrusion

Intrusion symptoms include recurrent, involuntary, and distressing episodes of re-experiencing the trauma through memories, dreams, dissociative reactions, and prolonged psychological distress and physiological reactions to stimuli that remind the individual of the trauma (APA, 2022). Dreams may resemble the trauma in the actual dream content or simply

resemble the emotional response felt by an individual at the time of the trauma. One example of this is experiencing intense fear and shame after a nightmare but not remembering the dream itself. Dissociative reactions, typically described as "flashbacks," cause the individual to feel or behave like the event was happening again. Dissociative reactions may be so extreme that the individual loses all awareness of the present moment. Intrusion symptoms may also present as obsessive thoughts about the trauma, triggers that cause heartache, fear, and nervousness, and hallucinations of smells or people associated with the trauma (Boston Children's Hospital, 2019; CDC, 2019; Carrion et al., 2002; Hasan, 2018).

Youth experience intrusion symptoms similar to adults, with some unique features. Youth with PTSD often experience intrusion through engaging in traumatic reenactment within their daily lives (Hamblen & Barnett, 2018). For example, youth that engage in play behavior may exhibit repetitive play that "acts out" the traumatic event and may include general themes or specific details of the trauma (McLaughlin et al., 2018). They are also more prone to dreams and nightmares. Interestingly, youth with PTSD often have nightmares not directly associated with the traumatic event, whereas adults' nightmares typically involve replaying some aspect of the event (McLaughlin et al., 2018). Youth with PTSD may be more prone to sleep impairment due to chronic nightmares.

Avoidance

The second symptom cluster is characterized by a persistent avoidance of or efforts to avoid stimuli associated with the traumatic event (APA, 2022). Symptoms in this cluster may include avoidance of memories, thoughts, feelings, or external reminders associated with the event. External reminders include people, places, conversations, activities, objections, and situations that could be related to the traumatic event that the individual experienced. Youth with

PTSD will often experience avoidance symptoms in response to the distressing symptoms of intrusion.

Youth with PTSD also experience symptoms of avoidance. Avoidance symptoms in youth may present as reduced participation in activities and decreased interest in pursuing common developmental activities, such as driving or dating (APA, 2022). It can also resemble emotional numbness or apathy (Boston Children's Hospital, 2019). The avoidance of thoughts and feelings is a maladaptive cycle, as avoidance often exasperates the symptoms within other clusters.

Negative Alterations in Cognition and Mood

Negative changes in cognition and mood include difficulty remembering details of the event, persistent and distorted thoughts, persistent negative emotional state, diminished interest or participation in activities, feelings of detachment from others, and inability to experience positive emotions (APA, 2022). Cognitive distortions often include persistent and exaggerated negative beliefs or expectations about oneself, others, or the world. Individuals with PTSD may also report negative thoughts about the cause or consequences of the traumatic event, often leading to self-blame and intense guilt.

Changes in emotions and thoughts are widespread in youth. Not only do youth experience an increase in negative emotions, but they also experience a decrease in positive emotions (McLaughlin et al., 2018). As a result, they also report less interest in engaging in activities they used to enjoy prior to experiencing the traumatic event. Youth also have difficulty with attachment and often feel estranged and detached from others. Negative beliefs are also common, particularly blaming themselves or having a negative attitude toward themselves. They are less

likely to trust others and more likely to blame people close to them or blame themselves for the event.

Alterations in Arousal and Reactivity

The fourth and final symptom cluster includes alterations in arousal and reactivity associated with the traumatic event (APA, 2022). Symptoms in this cluster include irritability, impulsivity, hypervigilance, exaggerated startle response, difficulties concentrating, and sleep impairment. On the extreme end, irritability may present as unprovoked angry outbursts that result in acts of verbal or physical aggression. Impulsivity can cause reckless or self-destructive behavior, such as self-harm or substance use. Physiological arousal may manifest as trouble falling or staying asleep, inattention, always looking for danger, and social withdrawal or detachment (Boston Children's Hospital, 2019; CDC, 2019; Carrion et al., 2002; Hasan, 2018).

Youth with PTSD also experience symptoms of arousal and reactivity. They tend to experience more significant fluctuation in aggression, impulsivity, risk-taking, and destructiveness than adults with PTSD (APA, 2022; Dyregrov & Yule, 2006; Hamblen & Barnett, 2018; McLaughlin et al., 2018). Even within other samples of children, adolescents are more likely than younger children with PTSD to exhibit impulsive and aggressive behaviors (Hamblen & Barnett, 2018). These symptoms create difficulty for youth, particularly in peer relationships and academic performance (McLaughlin et al., 2018).

Dissociative Specifier

A diagnosis of PTSD may also be specified as "with dissociative symptoms" if symptoms of depersonalization and derealization are present in addition to the full diagnostic criteria for PTSD (APA, 2022). The dissociative symptoms must not be better explained by the effects of substance use or another medical condition. The dissociative symptoms must also be persistent

and recurrent, including depersonalization, derealization, or both. Depersonalization is characterized by persistent, recurrent episodes of detachment from mental processes or detachment from the body (APA, 2022). Examples of depersonalization include feeling a sense of unreality of oneself, feeling like an outside observer from oneself, or feeling like time is moving slowly. Derealization is characterized by persistent, recurrent episodes of a sense of unreality in one's surroundings (APA, 2022). Examples of derealization include feeling as though the world is unreal, dreamlike, distant, or distorted.

Prevalence

Youths have a high likelihood of developing PTSD following a traumatic event. A 2014 study found that roughly 36 percent of children exposed to a traumatic event developed PTSD (Alisic et al., 2014). The National Comorbidity Study for Adolescents reported that 5 percent of youth met the criteria for PTSD in their lifetime, and 1.5 percent met the criteria for PTSD with severe impairment (Merikangas et al., 2010; Shenk et al., 2014). Older adolescents may also be at greater risk of developing PTSD compared to younger children. Specifically, the lifetime prevalence of PTSD is 0.1 percent in children aged 3-12, 3.7 percent in youth aged 13-14, 5.1 percent in youth aged 15-16, and 7 percent in youth aged 17-18 (Merikangas et al., 2010; Scheeringa et al., 2011).

Rates of PTSD also differ based on one’s racial and ethnic identity. American Indian and Alaska Native children have the highest risk of developing PTSD, with approximately 22 percent developing PTSD in their lifetime (Office of Juvenile Justice Delinquency Prevention, 2014). One possible explanation for this alarming statistic is the higher rates of violent crimes in indigenous populations, thereby exposing youth to potentially traumatic situations at higher rates. Another explanation is the overrepresentation of American Indian and Alaska Native youth

in the juvenile justice system. Youth in the juvenile justice system exposed to violence have a lifetime PTSD prevalence of 73 – 95 percent, a rate comparable to combat veterans, thereby putting American Indian and Alaska Native youth at higher risk of PTSD (Office of Juvenile Justice Delinquency Prevention, 2014). Hispanic youth have the second highest rate of PTSD at 9.5 percent, followed by White (8.2 percent) and Black (7.5 percent) children (López et al., 2017).

The lifetime prevalence of PTSD varies widely based on the type of traumatic event or events the child has experienced. As previously mentioned, youth who have experienced child maltreatment are at an increased risk of developing PTSD. Among youth exposed to traumatic events, those who report experiencing interpersonal violence (maltreatment, kidnapping, stalking, assault) experience PTSD at significantly higher rates compared to youth who report experiencing accidents, illnesses, natural disasters, and other non-interpersonal traumatic events (McLaughlin et al., 2013).

Effects of PTSD in Youth

Research on PTSD during adolescence is exceptionally scarce compared to the literature on PTSD in adulthood. PTSD has detrimental effects on the developing adolescent brain, including adverse effects on brain structure and development. Youth with PTSD have been shown to exhibit abnormal amygdala connectivity and diminished grey matter volume within the amygdala (Aghajani et al., 2016). PTSD during the adolescent period also impacts youth self-esteem. Youth who developed PTSD following a natural disaster had significantly diminished self-esteem (Brown et al., 2019). Youth with PTSD are also more likely to experience comorbid psychological disorders, including depression and anxiety, described in greater detail in the following section.

The present study focuses on four consequences of PTSD during adolescence: decreased ability to regulate emotion, increased anxiety, increased depression, and the importance of resiliency in response to interpersonal trauma. These effects are detailed in the following sections.

Emotion Regulation

Deficits in emotion regulation, a facet of higher-order executive functioning, have been linked to more severe PTSD symptoms (Ehring & Quack, 2010). The ability to regulate emotions may also serve as a protective factor against PTSD in traumatized youth. Individuals with PTSD with better affect regulation abilities had better treatment outcomes than individuals with poor emotion regulation skills due to the negative mood state encountered during PTSD interventions (Cloitre et al., 2004). Similarly, cognitive reappraisal is associated with less severe PTSD symptoms for foster and non-foster youth (Hobbs et al., 2019). Other investigations have emphasized emotion dysregulation as a risk factor for PTSD. Emotion regulation difficulties have been associated with greater severity of PTSD, suggesting that emotion dysregulation may be a risk factor for PTSD (Chang et al., 2018).

Furthermore, John et al. (2017) found that emotion regulation mediated the relationship between abuse and PTSD in maltreated youth. Interestingly, not all studies have found a link between emotion regulation and PTSD. Powers et al. (2015) argued that emotion regulation is only affected by maltreatment trauma and is not impacted by PTSD symptoms. More research is needed to fully understand the relationship between these variables, especially within maltreated youth.

Anxiety and Depression

PTSD in adolescence may also play a crucial role in the development of anxiety and depression. PTSD seems to increase the likelihood of depression and anxiety. Adolescents with PTSD are at greater risk of developing depression- and anxiety-based disorders, including Major Depressive Disorder, Generalized Anxiety Disorder, and Panic Disorder (Brown et al., 2019; Geng et al., 2019). Conversely, anxiety and depression also appear to increase the likelihood of PTSD. As previously mentioned, depression is associated with several behavioral and emotional impairments, including PTSD (Ariga et al., 2008). The same is true of anxiety, as separation anxiety has been associated with more symptoms of PTSD (Udwin et al., 2000). Similarly, children with higher levels of trait anxiety are up to nine times more likely to develop PTSD than children with lower levels of trait anxiety (Lonigan et al., 1994). These findings highlight the link between PTSD, anxiety, and depression in youth.

Research on the prevalence and impact of anxiety and depression on traumatized youth further underscores the importance of assessing these disorders. A study by Lai et al. (2015) suggests that anxiety and depression may be even more likely to occur than PTSD after a traumatic event, making it especially important to assess after maltreatment trauma. Maltreated youth with comorbid PTSD, depression, and anxiety may also have worse behavioral health outcomes. For example, maltreated youth with comorbid PTSD and depression or separation anxiety disorder are less likely to improve over time (Geng et al., 2019). Again, research on PTSD during adolescence is limited, and the relationship between PTSD and depression and anxiety in youth is not fully understood.

Resiliency

Resilience and PTSD research is scarce, outdated, and rarely based on a maltreated sample. Among the existing research, most studies of resilience and PTSD in youth center on resilience as a protective factor against PTSD. The impact of PTSD on resilience is an important interaction to investigate, given the negative impact of trauma on resilience. PTSD in youth following a natural disaster was negatively associated with resilience in youth (Heetkamp & De Terte, 2015). This research was correlational, however, so the effect of PTSD on resilience in youth remains unknown. Gender may impact resilience among youth with PTSD. Girls with PTSD tend to exhibit more resiliency than boys with PTSD (Thabet & Thabet, 2015). Again, a maltreated sample was not used, so it remains unknown how gender impacts resilience among maltreated youth with posttraumatic stress symptoms.

To date, much of the literature on childhood PTSD has been focused on children who experienced general traumatic events as opposed to maltreatment-specific trauma. Limited research exists on child maltreatment and its effect on PTSD in adolescents. The following section reviews the available literature on the interplay between child maltreatment and PTSD, including the impact of maltreatment on rates of PTSD and symptom presentation.

Child Maltreatment and PTSD

Child maltreatment plays a crucial role in understanding the development of PTSD in youth. As previously mentioned, youth who have experienced child maltreatment are at an increased risk of developing PTSD. Maltreatment trauma has consistently been shown to significantly increase the risk of PTSD in youth (Davis & Siegel, 2000; Udwin et al., 2000; Widom, 1999). Experts disagree on the exact prevalence of PTSD among maltreated youth. Rates of PTSD diagnosis among maltreated youth range from 42 to 90 percent in the literature (Davis & Siegel, 2000; Dubner & Motta, 1999; McLeer et al., 1994). Prevalence rates may vary by maltreatment type. About 36 percent of youth who experienced sexual maltreatment met the criteria for PTSD, whereas those who experienced physical maltreatment reported PTSD rates as high as 50 percent (Dubner & Motta, 1999; McLeer et al., 1994). Adolescent girls exhibit higher rates of PTSD across all maltreatment types and are more than four times more likely to develop PTSD following sexual maltreatment compared to adolescent boys (Koenen & Widom, 2009)

As outlined above, youth with PTSD often have unique presentations of PTSD symptom clusters. There is also a difference in PTSD presentation in maltreated youth compared to youth who have experienced non-maltreatment-related trauma. Child maltreatment has been found to be related to higher levels of avoidance and intrusion symptoms, such as nightmares (Shenk et al., 2012). Furthermore, maltreatment trauma is associated with increased dissociation and memory impairment (Duggal & Sroufe, 1998). Maltreated youth with PTSD may also suffer from anhedonia, hypervigilance, aggression, impulsivity, hyperactivity, inattention, inappropriate affect, social deficits, rumination, somatic complaints, and sleep disturbances (Ackerman et al., 1998; Avery et al., 2000; Copeland et al., 2007; Saigh et al., 2002; van der Kolk, 2005). PTSD symptom presentations among maltreated youth also appear to vary based on the age of onset

and chronicity of maltreatment. Earlier onset and longer duration of maltreatment may lead to worse outcomes due to stunted brain development (De Bellis et al., 1999).

Comorbid maltreatment trauma and PTSD in adolescence are associated with poorer mental health outcomes. Maltreated youth with PTSD are more likely to be diagnosed with ADHD, obsessive-compulsive disorder, conduct disorder, substance use disorders, anxiety disorders, mood disorders, psychotic disorders, and adjustment disorders (Ariga et al., 2008; Dixon et al., 2005; Ford et al., 2000; McLeer et al., 1994; Saigh et al., 2002; Schumacher et al., 2006; Stevens et al., 2003; Titus et al., 2003; Weinstein et al., 2000).

Literature on child maltreatment and PTSD literature have expanded in recent years. Several gaps remain despite these advancements. Research on childhood PTSD is scarce, and even fewer studies include samples of maltreated youth. Research evaluating maltreatment and PTSD in youth simultaneously is incredibly sparse. Despite these gaps, existing literature continuously suggests an interplay between child maltreatment, adolescent PTSD, emotion regulation, resiliency, depression, and anxiety. The following section reviews the existing literature on assessing emotion regulation, resiliency, depression, and anxiety in the context of adolescent PTSD.

Assessment of PTSD in Youth

Several measures have been developed to assess PTSD and related clinical conditions resulting from trauma. The following section highlights three measures used in trauma assessment: one measure assessing emotional regulation, one measuring anxiety and depression, and a third measure evaluating resiliency in youth. A description of each assessment and a review of the factorial structures are provided according to all available factor analyses in the literature.

Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA; Gullone & Taffe, 2011)

As mentioned, child maltreatment and PTSD adversely affect a child's ability to regulate and manage their emotions (Burns et al., 2010; Cloitre et al., 2004; Ehring & Quack, 2010; Lavi et al., 2019; Maughan & Cicchetti, 2002). The ERQ-CA (Appendix A; Gullone & Taffe, 2011) is a 10-item self-report measure assessing emotion regulation strategies in youth aged 9 to 18. Items are rated on a five-point Likert-type scale ranging from "strongly disagree" to "strongly agree." The ERQ-CA takes approximately 10 minutes to administer. The ERQ-CA assesses two emotion regulation strategies: cognitive reappraisal (CR) and expressive suppression (ES). CR is the cognitive restructuring of a potentially emotion-eliciting situation to alter its emotional impact. ES is a response modulation strategy that inhibits the expression of emotions.

To date, 18[1] studies have examined the factor structure of the ERQ-CA. None of the 18 studies examined a sample of maltreated youth.

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[1] One article was excluded from the present study because only the abstract was accessible in English. Lofti et al. (2019) examined the ERQ-CA in a sample of children from local schools in Iran.

In fact, not a single study used a trauma sample. Maltreated youth's ability to regulate their emotions is a crucial component of PTSD assessment, given consistent findings of detrimental effects of trauma on emotion regulation. Of the 18 previous studies, 16 validated the original two-factor structure with the same items in each factor as proposed by the developers (Chen et al., 2023; Enebrink et al., 2013; Fathalla & Ibrahim, 2020; Gómez-Ortiz et al., 2016; Gosling et al., 2018; Gullone & Taffe, 2011; Ling et al., 2019; Liu et al., 2017; Martín-Albo et al., 2020; Mohd et al., 2022; Namatame et al., 2020; Ng et al., 2019; Pastor et al., 2019; Teixeira et al., 2015; Teuber et al., 2022; Villacura-Herrera et al., 2022). One study supported a two-factor model with items one and three removed (Gong et al., 2022), and one study supported a two-factor model with items one, two, and three removed (Kim & Tamminem, 2022).

Table 1

Summary of ERQ-CA Models and Factor Solutions

Model	Author(s)	Factor 1 Cognitive Reappraisal (items)	Factor 2 Expressive Suppression (items)
2-Factor Model	Chen et al. (2023)	1, 3, 5, 7, 8, 10	2, 4, 6, 9
	Enebrink et al. (2013)	1, 3, 5, 7, 8, 10	2, 4, 6, 9
	Fathalla & Ibrahim (2020)	1, 3, 5, 7, 8, 10	2, 4, 6, 9
	Gómez-Ortiz et al. (2016)	1, 3, 5, 7, 8, 10	2, 4, 6, 9
	Gosling et al. (2018)	1, 3, 5, 7, 8, 10	2, 4, 6, 9
	Gullone & Taffe (2011)	1, 3, 5, 7, 8, 10	2, 4, 6, 9
	Ling et al. (2019)	1, 3, 5, 7, 8, 10	2, 4, 6, 9
	Liu et al. (2017)	1, 3, 5, 7, 8, 10	2, 4, 6, 9
	Martín-Albo et al. (2020)	1, 3, 5, 7, 8, 10	2, 4, 6, 9
	Mohd et al. (2022)	1, 3, 5, 7, 8, 10	2, 4, 6, 9
	Namatame et al. (2020)	1, 3, 5, 7, 8, 10	2, 4, 6, 9
	Ng et al. (2019)	1, 3, 5, 7, 8, 10	2, 4, 6, 9
	Pastor et al. (2019)	1, 3, 5, 7, 8, 10	2, 4, 6, 9
	Teixeira et al. (2015)	1, 3, 5, 7, 8, 10	2, 4, 6, 9
	Teuber et al. (2022)	1, 3, 5, 7, 8, 10	2, 4, 6, 9
	Villacura-Herrera et al. (2022)	1, 3, 5, 7, 8, 10	2, 4, 6, 9
2-Factor, 8-Item Model	Gong et al. (2022)	5, 7, 8, 10	2, 4, 6, 9
2-Factor, 7-Item Model	Kim & Tamminem (2022)	5, 7, 8, 10	4, 6, 9

The Revised Child Anxiety and Depression Scale (RCADS; Chorpita et al., 2000)

The RCADS (Appendix B; Chorpita et al., 2000) is a 47-item self-report measure of depression and anxiety in children (Chorpita et al., 2000). The measure has six subscales: separation anxiety (SA), social phobia (SOC), generalized anxiety (GA), panic disorder (PD), obsessive-compulsive (OC), and major depression (MD). Scores are aggregated into the Total Anxiety Scale (the sum of the five anxiety subscales) and the Total Anxiety and Depression Scale (the sum of all six subscales). Respondents rate how often each item applies to them using a four-point Likert-type scale ranging from "never" to "always." Higher scores indicate more anxiety and depression. The RCADS takes approximately 10 minutes to administer.

To date, 17 studies have examined the factor structure of the RCADS. None of the 17 studies utilized a sample of maltreated youth, and, like the ERQ-CA, no study used a trauma sample of any kind. Depression and anxiety should be carefully assessed in maltreated youth, given the link between anxiety, depression, and child maltreatment. All 17 previous confirmatory factor analysis studies of the RCADS support the original six-factor structure proposed by the developers (Becker et al., 2019; Brown et al., 2013; Chorpita et al., 2000; Chorpita et al., 2005; de la Torre-Luque et al., 2019; de Ross et al., 2002; Donnelly et al., 2018; Esbjørn et al., 2012; Fontana et al., 2019; Gormez et al., 2017; Kösters et al., 2015; McKenzie et al., 2019; Okamura et al., 2016; Skoczeń et al., 2019; Stahlschmidt et al., 2019; Stevanovic et al., 2017; Trent et al., 2013). However, two of these studies (de Ross et al., 2002; Okamura et al., 2016) moved item 45 ("I worry when I go to bed at night") from the fourth factor (SA) to the first factor (GA).

Table 2

Summary of RCADS Models and Factor Solutions

Model	Author(s)	Factor 1 GA (items)	Factor 2 PD (items)	Factor 3 SOC (items)	Factor 4 SA (items)	Factor 5 OC (items)	Factor 6 MD (items)
6-Factor Model	Becker et al. (2019)	1, 13, 22, 27, 35, 37	3, 14, 24, 26, 28, 34, 36, 39, 41	4, 7, 8, 12, 20, 30, 32, 38, 43	5, 9, 17, 18, 33, 45, 46	10, 16, 23, 31, 42, 44	2, 6, 11, 15, 19, 21, 25, 29, 40, 47
	Brown et al. (2013)	1, 13, 22, 27, 35, 37	3, 14, 24, 26, 28, 34, 36, 39, 41	4, 7, 8, 12, 20, 30, 32, 38, 43	5, 9, 17, 18, 33, 45, 46	10, 16, 23, 31, 42, 44	2, 6, 11, 15, 19, 21, 25, 29, 40, 47
	Chorpita et al. (2000)	1, 13, 22, 27, 35, 37 1, 13, 22, 27, 35, 37	3, 14, 24, 26, 28, 34, 36, 39, 41	4, 7, 8, 12, 20, 30, 32, 38, 43	5, 9, 17, 18, 33, 45, 46	10, 16, 23, 31, 42, 44	2, 6, 11, 15, 19, 21, 25, 29, 40, 47
	Chorpita et al. (2005)	1, 13, 22, 27, 35, 37 1, 13, 22, 27, 35, 37	3, 14, 24, 26, 28, 34, 36, 39, 41	4, 7, 8, 12, 20, 30, 32, 38, 43	5, 9, 17, 18, 33, 45, 46	10, 16, 23, 31, 42, 44	2, 6, 11, 15, 19, 21, 25, 29, 40, 47

de la Torre-Luque et al. (2019)	1, 13, 22, 27, 35, 37 1, 13, 22, 27, 35, 37	3, 14, 24, 26, 28, 34, 36, 39, 41	4, 7, 8, 12, 20, 30, 32, 38, 43	5, 9, 17, 18, 33, 45, 46	10, 16, 23, 31, 42, 44	2, 6, 11, 15, 19, 21, 25, 29, 40, 47
de Ross et al. (2002)	1, 13, 22, 27, 35, 37, **45***	3, 14, 24, 26, 28, 34, 36, 39, 41	4, 7, 8, 12, 20, 30, 32, 38, 43	5, 9, 17, 18, 33, 46	10, 16, 23, 31, 42, 44	2, 6, 11, 15, 19, 21, 25, 29, 40, 47
Donnelly et al. (2018)	1, 13, 22, 27, 35, 37 1, 13, 22, 27, 35, 37	3, 14, 24, 26, 28, 34, 36, 39, 41	4, 7, 8, 12, 20, 30, 32, 38, 43	5, 9, 17, 18, 33, 45, 46	10, 16, 23, 31, 42, 44	2, 6, 11, 15, 19, 21, 25, 29, 40, 47
Esbjørn et al. (2012)	1, 13, 22, 27, 35, 37 1, 13, 22, 27, 35, 37	3, 14, 24, 26, 28, 34, 36, 39, 41	4, 7, 8, 12, 20, 30, 32, 38, 43	5, 9, 17, 18, 33, 45, 46	10, 16, 23, 31, 42, 44	2, 6, 11, 15, 19, 21, 25, 29, 40, 47
Fontana et al. (2019)	1, 13, 22, 27, 35, 37	3, 14, 24, 26, 28, 34,	4, 7, 8, 12, 20,	5, 9, 17, 18, 33, 45, 46	10, 16, 23, 31, 42, 44	2, 6, 11, 15, 19, 21, 25,

	1, 13, 22, 27, 35, 37	36, 39, 41	30, 32, 38, 43			29, 40, 47
Gormez et al. (2017)	1, 13, 22, 27, 35, 37	3, 14, 24, 26, 28, 34, 36, 39, 41	4, 7, 8, 12, 20, 30, 32, 38, 43	5, 9, 17, 18, 33, 45, 46	10, 16, 23, 31, 42, 44	2, 6, 11, 15, 19, 21, 25, 29, 40, 47
Kösters et al. (2015)	1, 13, 22, 27, 35, 37	3, 14, 24, 26, 28, 34, 36, 39, 41	4, 7, 8, 12, 20, 30, 32, 38, 43	5, 9, 17, 18, 33, 45, 46	10, 16, 23, 31, 42, 44	2, 6, 11, 15, 19, 21, 25, 29, 40, 47
Okamura et al. (2016)	1,13, 22, 27, 35, 37, **45***	3, 14, 24, 26, 28, 34, 36, 39, 41	4, 7, 8, 12, 20, 30, 32, 38, 43	5, 9, 17, 18, 33, 46	10, 16, 23, 31, 42, 44	2, 6, 11, 15, 19, 21, 25, 29, 40, 47
McKenzie et al. (2019)	1, 13, 22, 27, 35, 37	3, 14, 24, 26, 28, 34, 36, 39, 41	4, 7, 8, 12, 20, 30, 32, 38, 43	5, 9, 17, 18, 33, 45, 46	10, 16, 23, 31, 42, 44	2, 6, 11, 15, 19, 21, 25, 29, 40, 47
	1, 13, 22, 27, 35, 37					

Skoczeń et al. (2019)	1, 13, 22, 27, 35, 37	3, 14, 24, 26, 28, 34, 36, 39, 41	4, 7, 8, 12, 20, 30, 32, 38, 43	5, 9, 17, 18, 33, 45, 46	10, 16, 23, 31, 42, 44	2, 6, 11, 15, 19, 21, 25, 29, 40, 47
	1, 13, 22, 27, 35, 37					
Stahlschmidt et al. (2019)	1, 13, 22, 27, 35, 37	3, 14, 24, 26, 28, 34, 36, 39, 41	4, 7, 8, 12, 20, 30, 32, 38, 43	5, 9, 17, 18, 33, 45, 46	10, 16, 23, 31, 42, 44	2, 6, 11, 15, 19, 21, 25, 29, 40, 47
	1, 13, 22, 27, 35, 37					
Stevanovic et al. (2017)	1, 13, 22, 27, 35, 37	3, 14, 24, 26, 28, 34, 36, 39, 41	4, 7, 8, 12, 20, 30, 32, 38, 43	5, 9, 17, 18, 33, 45, 46	10, 16, 23, 31, 42, 44	2, 6, 11, 15, 19, 21, 25, 29, 40, 47
	1, 13, 22, 27, 35, 37					
Trent et al. (2013)	1, 13, 22, 27, 35, 37	3, 14, 24, 26, 28, 34, 36, 39, 41	4, 7, 8, 12, 20, 30, 32, 38, 43	5, 9, 17, 18, 33, 45, 46	10, 16, 23, 31, 42, 44	2, 6, 11, 15, 19, 21, 25, 29, 40, 47
	1, 13, 22, 27, 35, 37					

Note. GAD = generalized anxiety; PD = panic disorder; SOC = social anxiety, SA = separation anxiety; OCD = obsessive-compulsive; MDD = major depression. Asterisk and bold font indicate an item that moved from its original factor based on the original normative sample.

The Resiliency Scales for Children and Adolescents (RSCA; Prince-Embury, 2006, 2007)

The RSCA (Prince-Embury, 2006, 2007) is a 64-item self-report measure of resiliency in children and adolescents ages 9 to 18. The RSCA measures three domains of resiliency: Sense of Mastery (MAS), Sense of Relatedness (REL), and Emotional Reactivity (REA). The measure also contains two indexes: The Resource Index (RES) and the Vulnerability Index (VUL).

To date, six studies have examined the factor structure of the RSCA. None of the six studies utilized a sample of maltreated youth, and, like the ERQ-CA and RCADS, not a single study used a trauma sample of any kind. Assessment of maltreated youth should closely examine resilience given the impact of maltreatment on resiliency as well as the possible protective influence of resilience. Most factorial studies of the RSCA support the original three-factor structure proposed by the developers (Gibson & Clarbour, 2017; Prince-Embury & Courville, 2008a; Prince-Embury & Courville, 2008b; Sætren et al., 2019; Saklofske et al., 2013). Each of these CFAs revealed the same items in each factor as the original model proposed by the developers. One study suggested a two-factor structure of the RSCA in a sample of Spanish students (Villasana et al., 2017); however, specific items were not listed and thus were not examined in the present study.

Table 3

Summary of RSCA Models and Factor Solutions

Model	Author(s)	Factor 1 MAS (items)	Factor 2 REL (items)	Factor 3 REA (items)
2-Factor Model	Villasana et al. (2017)	Specific items not listed	Specific items not listed	--
3-Factor Model	Gibson & Clarbour (2017)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20	21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44	45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 50, 61, 62, 63, 64
	Prince-Embury & Courville (2008a)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20	21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44	45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 56, 57, 58, 59, 50, 61, 62, 63, 64
	Prince-Embury & Courville (2008b)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20	21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44	45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 50, 61, 62, 63, 64
	Sætren et al. (2019)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10,	21, 22, 23, 24, 25, 26, 27, 28,	45, 46, 47, 48, 49, 50, 51, 52,

	11, 12, 13, 14, 15, 16, 17, 18, 19, 20	29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44	53, 54, 55, 56, 57, 58, 59, 50, 61, 62, 63, 64
Saklofske et al. (2013)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20	21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44	45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 50, 61, 62, 63, 64

Note. MAS = Sense of Mastery; REL = Sense of Relatedness; REA = Emotional Reactivity.

Purpose of the Present Study

Research on child maltreatment and childhood PTSD has increased over the past decade. The connection between maltreatment history and PTSD symptomology, however, remains vastly understudied. Howard et al. (2021) was the first study to examine the psychometric properties of the Adolescent Dissociative Experiences Scale (A-DES) and the Posttraumatic Cognitions Inventory (PTCI) in a sample of maltreated youth. Howard et al. (2021) provided new factorial models based on a maltreated sample, with the new PTCI model as a better predictor of re-experiencing and avoidance symptoms in maltreated youth (Howard et al., 2021). The study also revealed gender differences, with maltreated girls reporting more negative cognitions about themselves following a traumatic event than maltreated boys (Howard et al., 2021). The investigation provided a crucial introduction to the predictors of PTSD symptomology among maltreated youth.

Despite recent advancements, little is known about the unique facets of childhood PTSD among maltreated youth. Significant predictors of PTSD among this vulnerable population remain unknown. As mentioned, the ERQ-CA, RCADS, and RSCA have never been validated in a sample of maltreated youth. These assessments' psychometrics and factorial structures must be examined using a maltreated sample to determine predictors of PTSD symptom clusters unique to maltreated youth. The present study added to the findings of Howard et al. (2021) by further examining novel predictors of PTSD in a new sample of maltreated youth. The present study aimed to (a) examine the factor structures of the ERQ-CA, RCADS, and RSCA using a sample of maltreated youth; and (b) identify novel predictors of PTSD symptom clusters in maltreated youth. These aims served to answer two key research questions: (a) are there similar factor structures of the ERQ-CA, RCADS, and RSCA in a maltreated sample as compared to the

original normative sample; and (b) do the same factors emerge as significant predictors of PTSD symptom clusters in the present sample of maltreated youth as compared to the existing literature. The present study was the first to examine the ERQ-CA, RCADS, and RSCA factor structures in a sample of maltreated youth.

Addressing Previous Limitations

Despite the critical findings of the Howard et al. (2021) study, some limitations remained. One of the limitations was that the measures were based on DSM-IV symptom criteria. DSM-IV PTSD symptom criteria were composed of hyperarousal, re-experiencing, and avoidance. In comparison, the DSM-5 PTSD symptom criteria added the cluster "negative alterations in cognition and mood." They made significant changes to the symptom cluster names and diagnostic criteria within each cluster, adding and removing various specifiers and subtypes. These changes impact the conceptualization of the course, etiology, and taxonomy of PTSD. The present study addressed this limitation by utilizing the UCLA PTSD Reaction Index (PTSD-RI) to investigate data based on DSM-5 PTSD symptom clusters. The PTSD-RI is described in greater detail in Chapter 2.

Another limitation of the Howard et al. (2021) study was that it only assessed two trauma-related phenomena: trauma-related thoughts and posttraumatic dissociation. Posttraumatic stress cannot be understood solely based on cognitions and dissociation, given the interplay of posttraumatic stress and other psychological challenges. Other variables, such as emotion regulation or resilience, may better predict PTSD symptoms in maltreated youth. Similarly, assessments measuring more diverse variables may serve as better diagnostic tools to assess PTSD in maltreated youth than those used by Howard et al. (2021). The present study addressed this limitation by expanding the previous examination to include emotion regulation,

anxiety, depression, and resilience, four facets of mental health that have consistently been linked to maltreatment and PTSD.

Finally, another limitation of the Howard et al. (2021) study was that the measures' language focused exclusively on symptoms experienced after a specific traumatic event. Consequently, both measures assumed that a sudden shift in functioning occurs following an isolated traumatic event. For example, the instructions in the PTCI specifically request that the examinee responds to items based on how they felt after "the" traumatic experience. This language should be avoided because it assumes one traumatic event altered the individual's well-being and functioning. Instead, the chronicity of maltreatment and other adverse early life experiences should also be considered. The measures used in the present study were not specific to trauma or maltreatment. Instead, the present study addressed this limitation by broadly assessing emotion regulation, anxiety, depression, and resilience, four conditions often impacted by traumatic experiences.

Addressing these limitations is crucial to understand better how trauma and posttraumatic stress manifest in maltreated youth. The present study addressed these limitations while simultaneously investigating four hypotheses regarding latent variables used to predict PTSD in maltreated youth. The following section outlines each hypothesis tested in the present study.

Hypotheses

The present study investigated four hypotheses supported by the literature on child maltreatment and PTSD. Hypotheses examined factor analytic structures of the ERQ-CA, RCADS, and RSCA to identify predictors of PTSD in maltreated youth. The factor structure of each measure in the present maltreated sample was compared with the factorial structures proposed by the original developers and models identified in previous literature with non-maltreated samples. Examination of these hypotheses revealed the latent variables associated with PTSD in maltreated youth and facilitate early identification of posttraumatic stress symptomology within this population. Each hypothesis is detailed in the following subsections.

Hypothesis One

The ERQ-CA must be validated using a maltreated sample, given consistent findings that child maltreatment negatively impacts a youth's ability to regulate their emotions (Burns et al., 2010; John et al., 2017; Lavi et al., 2019; Maughan & Cicchetti, 2002; McLaughlin et al., 2018). All factor analytic studies to date support a two-factor structure of the ERQ-CA composed of Cognitive Reappraisal (CR) and Expressive Suppression (ES) (Chen et al., 2023; Enebrink et al., 2013; Fathalla & Ibrahim, 2020; Gómez-Ortiz et al., 2016; Gosling et al., 2018; Gullone & Taffe, 2011; Ling et al., 2019; Liu et al., 2017; Martín-Albo et al., 2020; Mohd et al., 2022; Namatame et al., 2020; Ng et al., 2019; Pastor et al., 2019; Teixeira et al., 2015; Teuber et al., 2022; Villacura-Herrera et al., 2022), although some studies removed some items to improve reliability (Gong et al., 2022; Kim & Tamminem, 2022). However, no existing validation studies of the ERQ-CA utilized a sample of maltreated youth. This population must be examined closely, given that the factor structures of latent variables used in PTSD assessment differ

significantly among maltreated youth compared to non-traumatized youth and youth who experience non-maltreatment-related trauma (Howard et al., 2021).

Furthermore, confirmatory factor analyses conducted by Howard et al. (2021) revealed that items assessing one's perception of their ability to control their emotions or cope with difficult situations were not good predictors of PTSD in maltreated youth. Results also showed that maltreated girls report more negative thoughts about themselves than maltreated boys (Howard et al., 2021). Therefore, hypothesis one predicted that the factor structure of the ERQ-CA in the present sample of maltreated youth would differ from factors found in models based on the original normative sample and samples from related studies, such that CR items would be removed given CR items' reliance on youth's perception of their ability to regulate their thoughts and feelings. Consequently, a one-factor structure of the ERQ-CA, composed solely of items measuring ES, may better fit maltreated youth. In summary, hypothesis one was that the factor structure of the ERQ-CA in the present sample of maltreated youth would be composed of a single factor, Expressive Suppression.

Hypothesis Two

The RCADS must be validated using a maltreated sample, given consistent findings that child maltreatment increases the risk of developing symptoms of depression and anxiety (Cao et al., 2016; Gardner et al., 2019; Moylan et al., 2010). All factor analytic studies to date have supported a six-factor solution of the RCADS composed of Generalized Anxiety Disorder, Panic Disorder, Social Anxiety, Separation Anxiety, Obsessive Compulsive Disorder, and Major Depressive Disorder (Becker et al., 2018; Brown et al., 2013; Chorpita et al., 2000; Chorpita et al., 2005; de la Torre-Luque et al., 2019; de Ross et al., 2002; Donnelly et al., 2018; Esbjørn et al., 2012; Fontana et al., 2019; Gormez et al., 2017; Kösters et al., 2015; McKenzie et al., 2019;

Okamura et al., 2016; Skoczeń et al., 2019; Stahlschmidt et al., 2019; Stevanovic et al., 2017; Trent et al., 2013). However, no existing validation studies of the RCADS utilized a sample of maltreated youth. This population must be examined closely, given that the factor structures of latent variables used in PTSD assessment differ significantly among maltreated youth compared to non-traumatized youth and youth who experience non-maltreatment-related trauma (Howard et al., 2021).

Furthermore, confirmatory factor analyses conducted by Howard et al. (2021) revealed that items assessing negative thoughts about oneself and one's life, such as feeling inadequate or having no future, were not good predictors of PTSD in maltreated youth. These items resemble many features of depression, including low self-worth and negative outlook, suggesting that items measuring depression may not adequately predict PTSD in maltreated youth. Furthermore, child maltreatment increases the risk of social anxiety disorder (Brühl et al., 2019), a construct that the RCADS is designed to assess. Child maltreatment has consistently been linked to PTSD, anxiety disorders, and conduct disorders, particularly in links to separation anxiety and obsessive-compulsive disorder (Cao et al., 2016; Ford et al., 2000; Udwin et al., 2000). Therefore, hypothesis two predicted that the factor structure of the RCADS in the present sample of maltreated youth would differ from factors found in models based on the original normative sample and samples from related studies, such that anxiety- and conduct-related subscales of the RCADS would remain factors in the present maltreated sample while the Major Depressive Disorder factor would be removed. In summary, hypothesis two was that the factor structure of the RCADS in the present sample of maltreated youth would be composed of five factors: Generalized Anxiety, Panic Disorder, Social Anxiety, Separation Anxiety, and Obsessive Compulsive.

Hypothesis Three

The RSCA must be validated using a maltreated sample, given consistent findings that child maltreatment is linked to lower resiliency in youth (Collin-Vézina et al., 2011; Dubowitz et al., 2016). Most factor analytic studies to date support a three-factor solution of the RSCA composed of Sense of Mastery, Sense of Relatedness, and Emotional Reactivity (Gibson & Clarbour, 2017; Prince-Embury & Courville, 2008a; Prince-Embury & Courville, 2008b; Sætren et al., 2019; Saklofske et al., 2013). One study suggested a two-factor solution composed of Sense of Mastery and Sense of Relatedness (Villasana et al., 2017). However, no existing validation studies of the RSCA utilized a sample of maltreated youth. This population must be examined closely, given that the factor structures of latent variables used in PTSD assessment differ significantly among maltreated youth compared to non-traumatized youth and youth who experience non-maltreatment-related trauma (Howard et al., 2021).

Furthermore, confirmatory factor analyses conducted by Howard et al. (2021) revealed that items assessing interpersonal relationships were not good predictors of PTSD in maltreated youth. These items resemble many items on the Sense of Relatedness subscale of the RSCA, suggesting that items measuring youth's sense of relatedness may not adequately predict PTSD in maltreated youth. As mentioned, Howard et al. (2021) also found that items assessing negative thoughts about oneself, one's future, and one's ability to cope with difficult situations were also poor predictors of PTSD in maltreated youth. These items resemble many items in the Sense of Mastery subscale of the RSCA. Therefore, hypothesis three predicted that the factor structure of the RSCA in the present sample of maltreated youth would differ from factors found in models based on the original normative sample and samples from related studies, such that the Sense of Relatedness and Sense of Mastery factors would be removed as factors in the present maltreated

sample. In summary, hypothesis three was that the factor structure of the RSCA in the present sample of maltreated youth would be composed of a single factor: Emotional Reactivity.

Hypothesis Four

Finally, unique subscales were expected to be found from hypotheses one, two, and three. The unique subscales expected to derive from the ERQ-CA, the RCADS, and the RSCA in the present maltreated sample were also expected to be better predictors of PTSD symptom clusters, including intrusion, avoidance, negative alterations in cognition and mood, and alterations in arousal and reactivity among maltreated youth. In summary, hypothesis four was that factors identified in the present sample for the ERQ-CA, the RCADS, and the RSCA would better predict PTSD symptom clusters in maltreated youth than factors identified in the original normative sample and in samples from previous studies. Hypothesis four would only be tested if unique factors were derived following the evaluation of hypotheses one, two, or three.

CHAPTER 2

METHODOLOGY

Participants and Measures

Participants

The present study included youths aged 11 to 17 years assessed at Child Haven, a Department of Family Services (DFS) residential shelter in the Las Vegas area. Participants were assessed after being removed from their home due to child maltreatment. Participants included youths with a previous or current investigation following maltreatment-related trauma.

The sample size varied slightly for each hypothesis based on the number of participants who completed the corresponding assessments. The present study included approximately 108 youths who completed the information sheet, PTSD-RI, and ERQ-CA (hypotheses one and four), 125 youths who completed the information sheet, PTSD-RI, and RCADS (hypotheses two and four), and 132 youths who completed the information sheet, PTSD-RI, and RSCA (hypotheses three and four).

Measures

Information Sheet

An information sheet was used to obtain information regarding participant gender, age, and ethnicity.

Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA; Gullone & Taffe, 2011)

The ERQ-CA (Appendix A) is a 10-item self-report measure assessing emotion regulation strategies in youth aged 9 to 18. Items are rated on a five-point Likert-type scale ranging from “strongly disagree” to “strongly agree.” The ERQ-CA takes approximately 10

minutes to administer. The ERQ-CA assesses two emotion regulation strategies: cognitive reappraisal (CR) and expressive suppression (ES). CR is the cognitive restructuring of a potentially emotion-eliciting situation to alter its emotional impact. ES is a response modulation strategy that inhibits the expression of emotions.

The Revised Child Anxiety and Depression Scale (RCADS; Chorpita et al., 2000)

The RCADS (Appendix B) is a 47-item self-report measure of depression and anxiety in children. The measure has six subscales: separation anxiety (SA), social phobia (SP), generalized anxiety (GA), panic disorder (PD), obsessive-compulsive (OC), and major depression (MD). Scores are aggregated into two domains: Total Anxiety Scale (sum of the five anxiety subscales) and Total Anxiety and Depression Scale (sum of all six subscales). Respondents rate how often each item applies to them using a four-point Likert-type scale ranging from "never" to "always."

The Resiliency Scales for Children and Adolescents (RSCA; Prince-Embury, 2006, 2007)

The RSCA (Appendix C) is a 64-item self-report measure of resiliency in children and adolescents ages 9 to 18. The RSCA measures three domains of resiliency: Sense of Mastery (MAS), Sense of Relatedness (REL), and Emotional Reactivity (REA). The measure also contains two indexes: The Resource Index (RES) and the Vulnerability Index (VUL). Respondents rate how often each item applies to them using a five-point Likert-type scale ranging from "never" to "almost always."

The UCLA PTSD Reaction Index for DSM-5 (PTSD-RI-5; Pynoos & Steinberg, 2013)

The PTSD-RI (Appendix D; Pynoos & Steinberg, 2013) is a semi-structured clinical interview tool to assess trauma history, provide DSM-5 PTSD diagnosis, including dissociative subtype, and assess chronicity and severity of DSM-5 PTSD symptom cluster presentations. The PTSD-RI-5 is a revision of the widely used UCLA PTSD Reaction Index for DSM-IV (PTSD-

RI; Steinberg et al., 2004). Like its predecessor, the PTSD-RI-5 has demonstrated good psychometric properties and has been established as a developmentally informed diagnostic assessment tool to assess traumatized youth reliably and accurately for DSM-5 criteria for PTSD (Kaplow et al., 2020).

Procedure

Procedures were in accordance with the University of Nevada, Las Vegas (UNLV) and Department of Family Services (DFS) policies regarding research with human participants. The UNLV Office for the Protection of Research Subjects, Institutional Review Board (IRB), Social and Behavioral Sciences Committee approved protocol #710923-7 on February 8th, 2019. An approved contract by UNLV and DFS was also in accordance with state and county laws regarding the treatment of children in protective custody.

As mentioned, all data was collected via assessments conducted at Child Haven, a DFS site serving as a residential shelter in Las Vegas, Nevada. Youths resided in "cottages" separated by age and gender, and each cottage had a primary (supervisor) and secondary staff member on-site at all times. Graduate students worked closely with DFS staff to make these assessments possible. First, a list of eligible youths was obtained through the DFS Placement Team. The investigators then carefully reviewed the lists to ensure that the youth had not previously been assessed. This cross-reference was an important step, given that previously discharged youth could be placed back in protective custody in the future. Next, graduate students would coordinate with cottage staff to ensure the assessments would not interfere with school, appointments, or planned leisure activities. Once an available participant was identified, the graduate student briefly met with cottage staff to discuss the youth's emotional and behavioral functioning that day. The assessment would be postponed if the youth had a bad day to avoid causing further distress.

Given the youths' status in state custody, assessments did not require parental permission. The assessment process was carefully described to each youth, and then verbal assent was acquired. All participants were told they could decline or cease participation at any point. The

assessments were conducted in a confidential environment without DFS personnel present. Participants aged 11 years or older completed a self-report information form, the ERQ-CA, RCADS, RSCA, and PTSD-RI, as part of a larger assessment battery. Measures for the present study took approximately 30 minutes to administer. Participants were reminded that they could ask questions throughout the evaluation and were encouraged to share their feelings. Youths were routinely reminded that participation was optional and that they were not required to answer any questions. Participants were assured they would not incur repercussions if they opted not to respond. Participating youths were encouraged to take breaks during the assessment process.

Mental health providers (i.e., doctoral students or clinical interns) were available on-site to support participants who expressed discomfort or emotional distress during the assessment process. At 24 and 48 hours post-assessment, youths met with a clinically trained graduate student to complete a distress survey. Appropriate actions were taken if a youth expressed an intent to harm oneself or others. Participating youths were referred for therapy or therapeutic services following the assessment process, as appropriate. The graduate students also provided regular group psychotherapy services for all youth, regardless of their participation in the study. A licensed clinical psychologist supervised all therapy groups.

After completing the assessment process, the graduate student wrote a thorough evaluation report detailing each participant's diagnostic findings, clinical impressions, and further assessment/treatment recommendations. These reports were reviewed and signed by a licensed clinical psychologist and sent to the youth's case worker and treatment team as appropriate. Participant data used in this study were de-identified prior to analysis by graduate

students and replaced with a code of letters and numbers to maintain anonymity. De-identified data was stored in a locked filing cabinet in a secure university lab.

Data Analyses

The present study examined the factor structure of the ERQ-CA, RCADS, and RSCA using Confirmatory Factor Analysis (CFA). CFA is a type of structural equation modeling that requires specific expectations regarding the number of factors, which variables reflect those factors, and whether the factors are correlated (Thompson, 2004). Like exploratory factor analysis, CFA is based on the common factor model and attempts to reveal the structure of correlations among variables using a set of latent variables (Fabrigar et al., 1999). The number of factors and the expected pattern of variable loadings onto factors is set a priori.

Factor analyses are frequently conducted using exploratory factor analysis rather than CFA due to the lack of theoretical basis required to make strong assumptions about the number of factors or the exact variables influenced by the factors (Fabrigar et al., 1999). CFA may also lead to missing alternative models because it is impractical to test each one. However, as described previously, the factor structures of the ERQ-CA, RCADS, and the RSCA have been studied numerous times, which provides enough empirical basis to specify and test specific models. CFA is the preferred method because it focuses on testing specific hypotheses about the data and reduces the likelihood of relying on chance characteristics (Fabrigar et al., 1999). Statistical analyses were calculated using SPSS 28 and EQS 6.4. Detailed descriptions of how CFA was utilized in the present investigation are outlined in the following sections.

Hypothesis One

Hypothesis one was that the factor structure of the ERQ-CA in the present sample of maltreated youth would be composed of a single factor, Expressive Suppression. CFA was used to examine the factorial structure of the ERQ-CA. CFA was conducted on research models based on previous literature. Then, a classic item analysis was performed on the original model using the present sample. Items with an item test correlation lower than 0.3 were eliminated. The internal consistency of the ERQ-CA and its factors were obtained through Cronbach's alpha coefficient, where α values $\geq .70$ were considered acceptable. A new model was formed using the remaining factors and items. Correlations between factors and total score were not obtained, given that the new model comprised only one factor. CFA was then conducted on the new model.

The same statistics were used for each CFA on all models. Goodness-of-fit indexes were calculated, including the Robust Root Mean Square Error of Approximation (R-RMSEA), the Standardized Root Mean Square Residual (SRMR), the Robust Comparative Fit Index (R-CFI), and the Tucker-Lewis Index (TLI) (Brown, 2006; Hu & Bentler, 1999). Next, the configural measurement and structural invariance were tested using a Multigroup Confirmatory Factorial Analysis (MGCFA). An MGCFA was performed on the new model of the ERQ-CA across gender and age. Several hierarchical steps were followed based on the existing literature (Byrne, 2008a, 2008b; Liu et al., 2015; Samuel et al., 2015). The goodness-of-fit indexes explained before were used in addition to the adjusted Satorra-Bentler Chi-square difference (ΔS-Bχ2) and the ΔCFI.

Hypothesis Two

Hypothesis two was that the factor structure of the RCADS in the present sample of maltreated youth would be composed of five factors: Generalized Anxiety, Panic Disorder, Social Anxiety, Separation Anxiety, and Obsessive-Compulsive. CFA was used to examine the factorial structure of the RCADS. CFA was conducted on research models based on previous literature. Then, a classic item analysis was performed on the original model using the present sample. Items with an item test correlation lower than 0.3 were eliminated. The internal consistency of the RCADS and its factors were obtained through Cronbach's alpha coefficient, where α values ≥ .70 were considered acceptable. A new model was formed using the remaining factors and items. Correlations were calculated between the different factors of the RCADS and between each factor and the total score of the measure. The interpretation of these results was discussed according to the criteria proposed by Cohen (1988) regarding the magnitude of the effect sizes (≥ .10 - < .30 = low magnitude; ≥ .30 - < .50 = moderate magnitude; ≥ .50 = high magnitude). CFA was then conducted on the new model.

The same statistics were used for each CFA on all models. Goodness-of-fit indexes were calculated, including the Robust Root Mean Square Error of Approximation (R-RMSEA), the Standardized Root Mean Square Residual (SRMR), the Robust Comparative Fit Index (R-CFI), and the Tucker-Lewis Index (TLI) (Brown, 2006; Hu & Bentler, 1999). Next, the configural measurement and structural invariance were tested using a Multigroup Confirmatory Factorial Analysis (MGCFA). An MGCFA was performed on the new model of the RCADS across gender and age. Several hierarchical steps were followed based on the existing literature (Byrne, 2008a, 2008b; Liu et al., 2015; Samuel et al., 2015). The goodness-of-fit indexes explained before were used in addition to the adjusted Satorra-Bentler Chi-square difference (ΔS-Bχ2) and the ΔCFI.

Hypothesis Three

Hypothesis three was that the factor structure of the RSCA in the present sample of maltreated youth would be composed of a single factor: Emotional Reactivity. CFA was used to examine the factorial structure of the RSCA. CFA was conducted on research models based on previous literature. Then, a classic item analysis was performed on the original model using the present sample. Items test correlation lower than 0.3 were eliminated. The internal consistency of the RSCA and its factors were obtained through Cronbach's alpha coefficient, where α values ≥ .70 were considered acceptable. A new model was formed using the remaining factors and items. The Pearson product moment correlation coefficient was used to obtain the correlations between the different factors of the RSCA and between each factor and the total score of the measure. Again, the interpretation of these results was discussed according to the criteria proposed by Cohen (1988) regarding the magnitude of the effect sizes (≥ .10 - < .30 = low magnitude; ≥ .30 - < .50 = moderate magnitude; ≥ .50 = high magnitude). Statistical analyses were calculated using EQS. CFA was then conducted on the new model.

The same statistics were used for each CFA on all models. Goodness-of-fit indexes were calculated, including the Robust Root Mean Square Error of Approximation (R-RMSEA), the Standardized Root Mean Square Residual (SRMR), the Robust Comparative Fit Index (R-CFI), and the Tucker-Lewis Index (TLI) (Brown, 2006; Hu & Bentler, 1999). Next, the configural measurement and structural invariance were tested using a Multigroup Confirmatory Factorial Analysis (MGCFA). An MGCFA was performed on the new model of the RSCA across gender and age. Several hierarchical steps were followed based on the existing literature (Byrne, 2008a, 2008b; Liu et al., 2015; Samuel et al., 2015). The goodness-of-fit indexes explained before were used in addition to the adjusted Satorra-Bentler Chi-square difference (ΔS-Bχ2) and the ΔCFI.

Hypothesis Four

Hypothesis four was that factors identified in the present sample for the ERQ-CA, the RCADS, and the RSCA would better predict PTSD symptom clusters in maltreated youth than factors identified in previous studies. Linear hierarchical regression analyses were used to test each model presented in the literature and the new, defined models for the ERQ-CA, the RCADS, and the RSCA in the present study. Regression analyses were used to demonstrate how each model (previous models and the new model based on the present maltreated sample) predicted DSM-5 PTSD symptom clusters of intrusion, avoidance, negative alterations in cognition and mood, and alterations in arousal and reactivity among maltreated youth.

CHAPTER 3

RESULTS

Hypothesis One: Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA)

Hypothesis one was that the factor structure of the ERQ-CA in the present sample of maltreated youth would be composed of a single factor, Expressive Suppression.

Classic Item Analysis and Reliability

The internal consistency coefficient (Cronbach's alpha) of the ERQ-CA was .81. ERQ-CA item means in the present sample ranged from 2.27 (item 4) to 3.60 (item 2). The standard deviation ranged from 1.19 (item 7) to 1.41 (item 6). The item-test correlation coefficients ranged from .27 (item 4) to .71 (item 10). Two items (items 2 and 4) were deleted at this step for the purpose of improving reliability because they obtained an item-test correlation coefficient less than .30. Cronbach's alpha of the measure after removing these items was .82. The Cronbach's alpha of each new factor was .84 (Cognitive Reappraisal) and .60 (Expressive Suppression). Factors with α values $< .70$ were removed (Expressive Suppression), and a new model was formed using the remaining factors and items. Two items from the original 10-item model were removed in the present model, and eight items were retained (Tables 4 and 5).

The ERQ-CA model derived from the present sample was thus composed of one factor and six items, with no items moved between factors and no new items added. The first factor, Cognitive Reappraisal, was composed of items 1, 3, 5, 7, 8, and 10. The present model did not remove any items from the original model's first factor. No items were added or moved to the first factor in the present model. All items from the second factor, Expressive Suppression, were removed due to poor reliability and internal consistency in the present sample.

Table 4

Summary of Items Removed in the Present Sample ERQ-CA Model

Factor	Items removed
F1 Cognitive Reappraisal	None
F2 Expressive Suppression	2. I keep my feelings to myself 4. When I am feeling happy, I am careful not to show it 6. I control my feelings by not showing them 9. When I'm feeling bad (e.g., sad, angry, or worried), I'm careful not to show it

Table 5

Summary of Items Retained in the Present Sample ERQ-CA Model

Factor	Items retained
F1 Cognitive Reappraisal	1. When I want to feel happier, I think about something different 3. When I want to feel less bad (e.g., sad, angry, or worried), I think about something different 5. When I'm worried about something, I make myself think about it in a way that helps me feel better 7. When I want to feel happier about something, I change the way I'm thinking about it 8. I control my feelings about things by changing the way I think about them 10. When I want to feel less bad (e.g., sad, angry, or worried), I change the way I'm thinking about it
F2 Expressive Suppression	None

Confirmatory Factor Analysis

The factorial structure of the ERQ-CA was examined through CFA. The present sample ERQ-CA model obtained the best goodness-of-fit scores on all indexes compared to models based on previous literature (Table 6). The new model demonstrated acceptable goodness-of-fit indexes. The R-CFI and TLI values were above 0.90 (R-CFI = .99; TLI = .98), the R-RMSEA value was less than 0.05 with a 90% confidence interval (R-RMSEA = .05), and the SRMR was between .00 and .08 (SRMR = .05). The present sample ERQ-CA model was the only model to obtain a "good" SRMR score (≤ .05). Results indicated an adequate fit for the expected one-factor model of the ERQ-CA for the present sample, suggesting that the ERQ-CA effectively measures only one distinguishable emotion regulation strategy among maltreated youth. The new model thus served as the baseline model for the subsequent tests of measurement invariance.

Table 6

CFA Goodness-of-Fit Indexes for the ERQ-CA Models

	S-Bχ^2	df	R-RMSEA 90% CI	SRMR	R-CFI	TLI
Model 1	47.18	34	.06 (.00, .09)	.07	.96	.94
Model 2	34.83	20	.08 (.03, .12)	.15	.93	.91
Model 3	26.42	14	.09 (.04, .14)	.16	.93	.89
Own model	11.76	9	.05 (.00, .12)	.05	.99	.98

Note. Model 1 represents the original two-factor model with no items removed (Chen et al., 2023; Enebrink et al., 2013; Fathalla & Ibrahim, 2020; Gómez-Ortiz et al., 2016; Gosling et al., 2018; Gullone & Taffe, 2011; Ling et al., 2019; Liu et al., 2017; Martín-Albo et al., 2020; Mohd et al., 2022; Namatame et al., 2020; Ng et al., 2019; Pastor et al., 2019; Teixeira et al., 2015; Teuber et al., 2022; Villacura-Herrera et al., 2022). Model 2 represents the two-factor, eight-item model (Gong et al., 2022). Model 3 represents the two-factor, seven-item (Kim & Tamminem, 2022). Own Model represents the new one-factor model based on the present sample. S-Bχ^2 = Satorra-Bentler scaled χ^2; df = degrees of freedom; R-RMSEA = robust root mean square error of approximation; CI = confidence interval; SRMR = standardized root mean square residual; R-CFI = robust comparative fit index; TLI= Tucker Lewis Index.

Measurement Invariance Across Gender and Age

Next, a test of configural invariance was conducted to determine whether the present sample ERQ-CA model fit the data well for both boys and girls and across all ages (Tables 7 and 8). The same pattern of fixed and free factor loadings was specified for each group. Results did not support configural invariance of the measure, so subsequent tests of metric, scalar, and residual invariance would not be meaningful and thus were not conducted. Interestingly, the model held better for girls and younger youth ages 11 to 14 years.

Table 7

Goodness-of-Fit Indexes for the ERQ-CA for Gender

	S-Bχ^2	df	R-RMSEA 90% CI	SRMR	R-CFI	TLI
Girls	5.11	9	.00 (.00, .09)	.05	1.00	1.10
Boys	12.66	9	.08 (.00, .17)	.06	.98	.96

Note. S-Bχ^2 = Satorra-Bentler χ^2 scaled; df = degrees of freedom; TLI = tucker-lewis index; RCFI = robust comparative fit index; R-RMSEA = robust root mean square error of approximation; SRMR = standardized root mean square residual.

Table 8

Goodness-of-Fit indexes for the ERQ-CA for Age

	S-Bχ^2	df	R-RMSEA 90% CI	SRMR	R-CFI	TLI
11-14 years	17.73	9	.12 (.03, .20)	.07	.93	.89
15-18 years	18.35	9	.13 (.04, .22)	.09	.92	.86

Note. S-Bχ^2 = Satorra-Bentler χ^2 scaled; df = degrees of freedom; TLI = tucker-lewis index; RCFI = robust comparative fit index; R-RMSEA = robust root mean square error of approximation; SRMR = standardized root mean square residual.

Hypothesis Two: Revised Child Anxiety and Depression Scale (RCADS)

Hypothesis two was that the factor structure of the RCADS in the present sample of maltreated youth would be composed of five factors: generalized anxiety, panic disorder, social phobia, separation anxiety, and obsessive-compulsive.

Classic Item Analysis and Reliability

The internal consistency coefficient (Cronbach's alpha) of the RCADS was .96. RCADS item means in the present sample ranged from .34 (item 37) to 1.45 (item 11). The standard deviation ranged from .73 (item 18) to 1.21 (item 9). The item-test correlation coefficients ranged from .35 (item 9) to .70 (item 34). No items were deleted at this step for the purpose of improving reliability because all obtained an item-test correlation coefficient greater than .30. Cronbach's alpha of each factor was .74 (separation anxiety), .84 (social phobia), .84 (generalized anxiety), .89 (panic disorder), .79 (obsessive-compulsive), and .88 (major depressive). No factors were removed because all factors obtained α values > .70. As such, the original model proposed by the developers was retained with no items removed, added, or moved between factors (Tables 9 and 10).

The first factor, separation anxiety, was composed of items 5, 9, 17, 18, 33, 45, and 46. The second factor, social phobia, was composed of items 4, 7, 8, 12, 20, 30, 32, 38, and 43. The third factor, generalized anxiety, was composed of items 1, 13, 22, 27, 35, and 37. The fourth factor, panic disorder, was composed of items 3, 14, 24, 26, 28, 34, 36, 39, and 41. The fifth factor, obsessive-compulsive, was composed of items 10,16, 23, 31, 42, and 44. The sixth and final factor, major depression, was composed of items 2, 6, 11, 15, 19, 21, 25, 29, 40, and 47. The RCADS model derived from the present sample was thus composed of the same 47 items and six factors proposed by the original developers.

Table 9

Summary of Items Removed in the Present Sample RCADS Model

Factor	Items Removed
F1. Separation Anxiety	None
F2. Social Phobia	None
F3. Generalized Anxiety	None
F4. Panic Disorder	None
F5. Obsessive-Compulsive	None
F6. Major Depression	None

Table 10

Summary of Items Retained in the Present Sample RCADS Model

Factor	Items Retained
F1. Separation Anxiety	5. I would feel afraid of being on my own at home 9. I worry about being away from my parents 17. I feel scared if I have to sleep on my own 18. I have trouble going to school in the mornings because I feel nervous or afraid 33. I am afraid of being in crowded places (like shopping centers, the movies, buses, busy playgrounds) 45. I worry when I go to bed at night 46. I would feel scared if I had to stay away from home overnight
F2. Social Phobia	4. I worry when I think I have done poorly at something 7. I feel scared when I have to take a test 8. I feel worried when I think someone is angry with me 12. I worry that I will do badly at my school work 20. I worry I might look foolish

	30. I worry about making mistakes 32. I worry what other people think about me 38. I feel worried if I have to talk in front of my class 43. I feel afraid that I will make a fool of myself in front of people
F3. Generalized Anxiety	1. I worry about things 13. I worry that something awful will happen to someone in my family 22. I am tired a lot 27. I worry that something bad will happen to me 35. I worry about what is going to happen 37. I think about death
F4. Panic Disorder	3. When I have a problem, I get a funny feeling in my stomach 14. I suddenly feel as if I can't breathe when there is no reason for this 24. When I have a problem, my heart beats really fast 26. I suddenly start to tremble or shake when there is no reason for this 28. When I have a problem, I feel shaky 34. All of a sudden I feel really scared for no reason at all 36. I suddenly become dizzy or faint when there is no reason for this 39. My heart suddenly starts to beat too quickly for no reason 41. I worry that I will suddenly get a scared feeling when there is nothing to be afraid of
F5. Obsessive-Compulsive	10. I get bothered by bad or silly thoughts or pictures in my mind 16. I have to keep checking that I have done things right (like the switch is off, or the door is locked) 23. I can't seem to get bad or silly thoughts out of my head 31. I have to think special thoughts (like numbers or words) to stop bad things from happening

F6. Major Depression	42. I have to do some things over and over again (like washing my hands, cleaning or putting things in a certain order) 44. I have to do some things in just the right way to stop bad things from happening 2. I feel sad or empty 6. Nothing is much fun anymore 11. I have trouble sleeping 15. I have problems with my appetite 19. I have no energy for things 21. I am tired a lot 25. I cannot think clearly 29. I feel worthless 40. I feel like I don't what to move 47. I feel restless

Correlation coefficients between the new RCADS model's different factors and the scale's total score were statistically significant (Table 11). The correlation coefficients were positive and of high magnitude in all cases. Values ranged from .58 between the third factor (generalized anxiety) and the sixth factor (major depression) to .89 between the fourth factor (panic disorder) and the total score of the RCADS and between the fifth factor (obsessive-compulsive) and the total score of the RCADS.

Table 11

Correlations between factors and RCADS total scores

Factor	Total Score	F1	F2	F3	F4	F5
F1 Separation Anxiety	.86*					
F2 Social Phobia	.81*	.67*				
F3 Generalized Anxiety	.88*	.76*	.66*			
F4 Panic Disorder	.89*	.74*	.59*	.74*		
F5 Obsessive-Compulsive	.89*	.74*	.64*	.74*	.81*	
F6 Major Depression	.88*	.66*	.58*	.74*	.77*	.76*

Note. *Correlation is significant at the $p < .01$ level.

Confirmatory Factor Analysis

The factorial structure of the RCADS was examined through CFA. Neither model demonstrated acceptable goodness-of-fit indexes (Table 12). The R-CFI and TLI values were not above 0.90 (R-CFI = .55; TLI = .53), the R-RMSEA values were not less than 0.05 with a 90% confidence interval (R-RMSEA = .08), and the SRMR was not between .00 and .08 (SRMR = .29). Results indicate that a six-factor model, regardless of whether item 45 is moved, is not the best measurement of depression and anxiety among maltreated youth. The present sample RCADS model was still used as the baseline model for the subsequent tests of measurement invariance because it achieved the best Satorra-Bentler scaled chi-square ratio.

Table 12

CFA goodness-of-fit indexes for the RCADS models

	S-Bχ^2	df	R-RMSEA 90% CI	SRMR	R-CFI	TLI
Model 1/Own	1890.86	1034	.08 (.08, .09)	.29	.55	.53
Model 2	3001.13	1081	.08 (.08, .09)	.29	.55	.53

Note. Model 1/Own represents the original six-factor model, also the model used in the present sample (Becker et al., 2019; Brown et al., 2013; Chorpita et al., 2000; Chorpita et al., 2005; de la Torre-Luque et al., 2019; de Ross et al., 2002; Donnelly et al., 2018; Esbjørn et al., 2012; Fontana et al., 2019; Gormez et al., 2017; Kösters et al., 2015; McKenzie et al., 2019; Okamura et al., 2016; Skoczeń et al., 2019; Stahlschmidt et al., 2019; Stevanovic et al., 2017; Trent et al., 2013). Model 2 represents the six-factor model with item 45 moved from the separation anxiety factor to the generalized anxiety factor (de Ross et al., 2002; Okamura et al., 2016). S-Bχ^2 = Satorra-Bentler scaled χ^2; df = degrees of freedom; R-RMSEA = robust root mean square error of approximation; CI = confidence interval; SRMR = standardized root mean square residual; R-CFI = robust comparative fit index; TLI= Tucker Lewis Index.

Measurement Invariance Across Gender and Age

Next, a test of configural invariance was conducted to determine whether the present sample RCADS model fit the data well for both boys and girls and across all ages (Tables 13 and 14). The same pattern of fixed and free factor loadings was specified for each group. Results did not support the configural invariance of the measure, so subsequent tests of metric, scalar, and residual invariance would not be meaningful and thus were not conducted.

Table 13

Goodness-of-Fit Indexes for the RCADS for Gender

	S-Bχ^2	df	R-RMSEA 90% CI	SRMR	R-CFI	TLI
Girls	2649.65	1081	.14 (.13, .14)	.32	.31	.28
Boys	1781.33	1034	.11 (.10, .12)	.36	.05	.00

Note. S-Bχ^2 = Satorra-Bentler χ^2 scaled; df = degrees of freedom; TLI = tucker-lewis index; RCFI = robust comparative fit index; R-RMSEA = robust root mean square error of approximation; SRMR = standardized root mean square residual.

Table 14

Goodness-of-Fit indexes for the RCADS for Age

	S-Bχ^2	df	R-RMSEA 90% CI	SRMR	R-CFI	TLI
11-14 years	1770.45*	1033	.10 (.09, .11)	.37	.27	.24
15-18 years	2038.70*	1033	.13 (.12, .14)	.31	.42	.39

Note. * = $p < .05$. S-Bχ^2 = Satorra-Bentler χ^2 scaled; df = degrees of freedom; TLI = tucker-lewis index; RCFI = robust comparative fit index; R-RMSEA = robust root mean square error of approximation; SRMR = standardized root mean square residual.

Hypothesis Three: Resiliency Scales for Children and Adolescents (RSCA)

Hypothesis three was that the factor structure of the RSCA in the present sample of maltreated youth would be composed of a single factor: Emotional Reactivity.

Classic Item Analysis and Reliability

The internal consistency coefficient (Cronbach's alpha) of the RSCA was .89. RSCA item means in the present sample ranged from .56 (item 62) to 3.06 (item 15). The standard deviation ranged from .99 (item 49) to 1.57 (item 39). The item-test correlation coefficients ranged from -.01 (item 63) to .62 (item 20). Twenty-two items (8, 9, 15, 34, 39, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 58, 59, 60, 61, 63, 64) were deleted at this step for the purpose of improving reliability because they obtained an item-test correlation coefficient greater than .30. Cronbach's alpha of the measure after removing these items was .94. The Cronbach's alpha of each factor was .92 (Sense of Mastery), .92 (Sense of Relatedness), and .91 (Emotional Reactivity). No factors were removed because all factors obtained α values > .70. A new model was formed using the remaining factors and items. In total, 22 items from the original 64-item model were removed in the present model, and 8 items were retained (Tables 15 and 16).

The RSCA model derived from the present sample was thus composed of 3 factors and 42 items with no items moved between factors and no new items added. The first factor, Sense of Mastery, was composed of items 1, 2, 3, 4, 5, 6, 7, 10, 11, 12, 13, 14, 16, 17, 18, 19, and 20. The second factor, Sense of Relatedness, was composed of items 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 35, 36, 37, 38, 40, 41, 42, 43, and 44. The third and final factor, Emotional Reactivity, was composed of items 56, and 57. No items were added or moved between factors in the present model.

Table 15

Summary of Items Removed in the Present Sample RSCA Model

Factor	Items Removed
F1. Sense of Mastery	8. I make good decisions 9. I can adjust when plans change 15. I can learn from my mistakes
F2. Sense of Relatedness	34. If people let me down, I can forgive them 39. If something bad happens, I can ask my parent(s) for help
F3. Emotional Reactivity	45. It is easy for me to get upset 46. People say that I am easy to upset 47. I strike back when someone upsets me 48. I get very upset when things don't go my way 49. I get very upset when people don't like me 50. I can get so upset that I can't stand how I feel 51. I get so upset that I lose control 52. When I get upset, I don't think clearly 53. When I get upset, I react without thinking 54. When I get upset, I stay upset for about one hour 55. When I get upset, I stay upset for several hours 58. When I am upset, I make mistakes 59. When I am upset, I do the wrong thing 60. When I am upset, I get into trouble 61. When I am upset, I do things that I later feel bad about 62. When I am upset, I hurt myself 63. When I am upset, I hurt someone 64. When I am upset, I get mixed-up

Table 16

Summary of Items Retained in the Present Sample RSCA Model

Factor	Items Retained
F1. Sense of Mastery	1. Life is fair 2. I can get the things I need 3. I can control what happens to me 4. I do things well 5. I am good at fixing things 6. I am good at figuring things out 7. I can get past problems in my way 10. If I have a problem, I can solve it 11. If I try hard, it makes a difference 12. If at first I don't succeed, I will keep on trying 13. I can think of more than one way to solve a problem 14. I can ask for help when I need to 15. I can let others help me when I need to 16. Good things will happen to me 17. My life will be happy 18. No matter what happens, things will be all right 19. I can meet new people easily 20. I can make friends easily
F2. Sense of Relatedness	21. I can meet new people easily 22. I can make friends easily 23. People like me 24. I feel calm with people 25. I have a good friend 26. I like people 26. I spend time with my friends 28. Other people treat me well 29. I can trust others 30. I can let others see my real feelings 31. I can calmly tell others that I don't agree with them 32. I can make up with friends after a fight 33. I can forgive my parent(s) if they upset me 35. I can depend on people to treat me fairly 36. If people let me down, I can forgive them 37. I can calmly tell a friend if he or she does something that hurts me 38. If something bad happens, I can ask my friends for help

	40. There are people who will help me if something bad happens 41. If I get upset or angry, there is someone I can talk to 42. There are people who love and care about me 43. People know who I really am 44. People accept me for who I really am
F3. Emotional Reactivity	56. When I get upset, I stay upset for the whole day 57. When I get upset, I stay upset for several days

Correlation coefficients between the first two factors of the new RSCA model and the scale's total score were statistically significant (Table 17). The correlation coefficients between the first two factors and the total score of the measure were positive and of high magnitude. Values ranged from .64 between the first factor (Sense of Mastery) and the second factor (Sense of Relatedness) to .92 between the second factor (Sense of Relatedness) and the total score of the RSCA. In contrast, the third factor (Emotional Reactivity) was not significantly correlated with any factor or the total score of the measure.

Table 17

Correlations between factors and RSCA total scores

Factor	Total Score	F1	F2
F1. Sense of Mastery	.88*		
F2. Sense of Relatedness	.92*	.64*	
F3. Emotional Reactivity	.06	.07	-.08

Note. *Correlation is significant at the $p < .01$ level.

Confirmatory Factor Analysis

The factorial structure of the RSCA was examined through CFA. Neither model demonstrated acceptable goodness-of-fit indexes (Table 18), although the present sample RSCA model obtained slightly better goodness-of-fit. The R-CFI and TLI values for the new model were not above 0.90 (R-CFI = .72; TLI = .71), the R-RMSEA value was not less than 0.05 with a 90% confidence interval (R-RMSEA = .08), and the SRMR was not between .00 and .08 (SRMR = .20). Results suggest that a three-factor model, regardless of whether items were deleted to improve reliability, does not appropriately measure resiliency among maltreated youth. The present sample RSCA model was still used as the baseline model for the subsequent tests of measurement invariance because it achieved a slightly better fit and the best Satorra-Bentler scaled chi-square ratio.

Table 18

CFA goodness-of-fit indexes for the RSCA models

	S-Bχ^2	df	R-RMSEA 90% CI	SRMR	R-CFI	TLI
Model 1	3503.09	1952	.09 (.08, .09)	.30	.61	.60
Own Model	1441.57	819	.08 (.07, .09)	.20	.72	.71

Note. Model 1 represents the original three-factor model proposed by the developers (Gibson & Clarbour, 2017; Prince-Embury & Courville, 2008a; Prince-Embury & Courville, 2008b; Sætren et al., 2019; Saklofske et al., 2013). Own Model represents the proposed model based on the present sample. S-Bχ^2 = Satorra-Bentler scaled χ^2; df = degrees of freedom; R-RMSEA = robust root mean square error of approximation; CI = confidence interval; SRMR = standardized root mean square residual; R-CFI = robust comparative fit index; TLI= Tucker Lewis Index.

Measurement Invariance Across Gender and Age

Next, a test of configural invariance was conducted to determine whether the present sample ERQ-CA model fit the data well for both boys and girls and across all ages (Tables 19 and 20). The same pattern of fixed and free factor loadings was specified for each group. Results did not support the configural invariance of the measure, so subsequent tests of metric, scalar, and residual invariance would not be meaningful and thus were not conducted.

Table 19

Goodness-of-Fit Indexes for the RSCA for Gender

	S-Bχ^2	df	R-RMSEA 90% CI	SRMR	R-CFI	TLI
Girls	1335.85	861	.11 (. 10, .12)	.23	.70	.68
Boys	1694.14	861	.15 (.14, .16)	.20	.41	.38

Note. S-Bχ^2 = Satorra-Bentler χ^2 scaled; df = degrees of freedom; TLI = tucker-lewis index; RCFI = robust comparative fit index; R-RMSEA = robust root mean square error of approximation; SRMR = standardized root mean square residual.

Table 20

Goodness-of-Fit indexes for the RSCA for Age

	S-Bχ^2	df	R-RMSEA 90% CI	SRMR	R-CFI	TLI
11-14 years	1427.20	819	.12 (.11, .13)	.22	.64	.62
15-18 years	1541.24	819	.13 (.12, .14)	.23	.51	.48

Note. S-Bχ^2 = Satorra-Bentler χ^2 scaled; df = degrees of freedom; TLI = tucker-lewis index; RCFI = robust comparative fit index; R-RMSEA = robust root mean square error of approximation; SRMR = standardized root mean square residual.

Hypothesis Four: Predictors of PTSD Symptom Clusters

Hypothesis three was that factors identified in the present sample for the ERQ-CA, the RCADS, and the RSCA would better predict PTSD symptom clusters in maltreated youth than factors identified in previous studies.

ERQ-CA Model Comparisons

Multiple linear regression analyses were completed to examine how well each model predicted DSM-5 PTSD symptom clusters, including intrusion, avoidance, negative alterations in cognition and mood, and alterations in arousal and reactivity. Analyses were completed on each model from the previous literature and the new model based on the present sample to determine which model best predicted PTSD symptoms within a sample of maltreated youth. Results revealed that Model 1, the original two-factor model proposed by developers, best predicted all four symptom clusters including intrusion (R2 = .14, F(1, 129) = 21.15, $p < .001$), avoidance (R2 = .10, F(1, 129) = 13.89, $p < .001$), negative alterations in cognition and mood (R2 = .15, F(1, 129) = 23.46, $p < .001$), and alterations in arousal and reactivity (R2 = .08, F(1, 129) = 10.76, $p < .01$). However, the new model based on the present sample also significantly predicted all four symptom clusters including intrusion (R2 = .24, F(1, 126) = 10.03, $p < .001$), avoidance (R2 = .13, F(1, 126) = 4.83, $p < .001$), negative alterations in cognition and mood (R2 = .26, F(1, 126) = 11.89, $p < .001$), and alterations in arousal and reactivity symptoms (R2 = .22, F(1, 126) = 9.06, $p < .001$).

RCADS Model Comparisons

The model based on the present sample was equivalent to Model 1, the original six-factor model proposed by developers. Model 2 was nearly equivalent to Model 1 but with one item moved between factors. Given the similarity of these measures, multiple linear regression

analyses were performed on only the model used in the present sample to examine whether this model significantly predicted DSM-5 PTSD symptom clusters in maltreated youth. Results revealed that Model 1, the original six-factor model proposed by developers and equivalent to the model based on the present sample, significantly predicted all four symptom clusters, including intrusion (R2 = .54, F(6, 124) = 23.47, $p < .001$), avoidance (R2 = .28, F(6, 124) = 7.70, $p < .001$), negative alterations in cognition and mood (R2 = .53, F(6, 124) = 22.06, $p < .001$), and alterations in arousal and reactivity (R2 = .50, F(6, 124) = 19.85, $p < .001$). Interestingly, only the sixth factor (major depression) emerged as a statistically significant predictor ($p < .01$) within the model for the third and fourth symptom clusters (negative alterations in cognition and mood; alterations in arousal and reactivity).

RSCA Model Comparisons

Multiple linear regression analyses were completed to examine how well each model predicted DSM-5 PTSD symptom clusters, including intrusion, avoidance, negative alterations in cognition and mood, and alterations in arousal and reactivity. Analyses were completed on the original model proposed by developers and the new model based on the present sample to determine which model best predicted PTSD symptoms within a sample of maltreated youth. Results revealed that the new model based on the present sample was the only model to significantly ($p < .05$) predict negative alterations in cognition and mood (R2 = .21, F(1, 107) = 14.15, $p < .001$) and alterations in arousal and reactivity (R2 = .23, F(1, 129) = 15.41, $p < .001$). Neither Model 1 (R2 = .01, F(1, 107) = 1.07, $p = .30$) nor the present model (R2 = .05, F(1, 107) = 2.54, $p = .08$) significantly predicted intrusion symptoms. Similarly, neither Model 1 (R2 = .01, F(1, 107) = 1.55, $p = .22$) nor the present model (R2 = .05, F(1, 107) = 2.69, $p = .07$) significantly predicted avoidance symptoms.

CHAPTER 4

DISCUSSION, IMPLICATIONS, AND FUTURE DIRECTIONS

Research on childhood trauma is scarce, and the research on maltreatment on childhood PTSD is even more limited. Most studies on childhood trauma have focused on general, non-interpersonal trauma (e.g., accidents, deaths, community violence) as opposed to maltreatment trauma (i.e., abuse and neglect) due to the difficulties associated with studying such a vulnerable population. As a result, little is known about the effects of maltreatment on developing PTSD symptoms in youth. The lack of research in this area is problematic, given that maltreatment trauma impacts youth in markedly different ways than other forms of trauma (Moylan et al., 2010). The present study bridged a significant gap in the research, as it was the first investigation to examine the factorial structures of the ERQ-CA, RCADS, and RSCA using a sample of maltreated youth.

Specific characteristics of youth appear to be uniquely linked to maltreatment and traumatic stress. Among these are emotion regulation, anxiety, depression, and resiliency. Emotion regulation skills have a significant impact on the development of PTSD symptoms (Aupperle et al., 2012; Ehring & Quack, 2010), and youth who have experienced maltreatment tend to be less effective in identifying, understanding, and managing their emotions (Burns et al., 2010; Coyle et al., 2014; Dannlowski et al., 2013; John et al., 2017; Lavi et al., 2019; Maughan & Cicchetti, 2002; McLaughlin et al., 2018; van den Berg et al., 2019; Young & Widom, 2014). Similarly, anxiety and depression are also associated with higher rates of PTSD (Lai et al., 2015; Lonigan et al., 1994), and maltreated youth are at greater risk of experiencing symptoms of anxiety and depression compared to non-maltreated youth (Cao et al., 2016; Gardner et al., 2019; Moylan et al., 2010). Finally, traits associated with resiliency are also connected to maltreatment

and PTSD, with lower resiliency being associated with poorer outcomes (Brown et al., 2019; Collin-Vézina et al., 2011; Dubowitz et al., 2016). Fewer studies examine resiliency and PTSD compared to emotion regulation, anxiety, and depression, which have been examined more thoroughly. It is, therefore, essential to further examine the predictive ability of emotion regulation, anxiety, depression, and resiliency in measuring PTSD symptoms in maltreated youth.

The current study sought to reveal unique and more accurate predictors of DSM-5 symptom clusters among maltreated youth. The present study hypothesized that the ERQ-CA, RCADS, and RSCA factor structures in the present sample would differ from factors found in the original normative samples and from samples from related studies. The present study also predicted that the new factorial structures identified in the present sample for each measure would serve as better predictors of PTSD symptom clusters in maltreated youth than factors identified in previous studies with other samples.

The results of the study were mixed. Hypothesis one was that the ERQ-CA model based on a maltreated sample would be a one-factor model composed of items measuring expressive suppression. Hypothesis one was not supported. The new model removed all expressive suppressive items and retained all cognitive reappraisal items. Although the present ERQ-CA model was different than expected, it achieved the best goodness-of-fit indexes and was the best predictor of all four symptom clusters. One unanticipated result was that the model also held better for girls and younger maltreated youth (ages 11 to 14) compared to boys and older youth (ages 15 to 17), which resembles a similar finding from Howard et al. (2022) showing gender differences in thought patterns. Overall, findings suggest that emotion regulation in maltreated

youth is best understood through measuring the youth's ability to reframe unhelpful thoughts (cognitive reappraisal).

Hypothesis two was that the factor structure of the RCADS in the present sample of maltreated youth would be composed of five factors: generalized anxiety, panic disorder, social phobia, separation anxiety, and obsessive-compulsive (removing the major depression factor). Hypothesis two was not supported. Results supported the original six-factor model proposed by developers. However, none of the models achieved adequate goodness-of-fit indexes, and the model did not hold across gender and age groups. These findings provide some support for a six-factor model, but the best-fitting RCADS model in a sample of maltreated youth remains unknown.

Hypothesis three was that the factor structure of the RSCA in the present sample of maltreated youth would be composed of a single factor measuring emotional reactivity. Hypothesis three was not supported. Contrary to expectations, results supported a three-factor model composed of sense of mastery, sense of relatedness, and emotional reactivity. However, none of the models achieved adequate goodness-of-fit indexes, and the model did not hold across gender and age groups. These findings provide some support for a three-factor model, but the best-fitting RSCA model in a sample of maltreated youth remains unknown.

Hypothesis four was that the new ERQ-CA, RCADS, and RSCA models would serve as better predictors of PTSD symptom clusters in maltreated youth than factors identified in previous studies. Hypothesis four was partially supported by the data. The present sample ERQ-CA and RCADS models significantly predicted all four PTSD symptom clusters. However, the original two-factor ERQ-CA model served as a better predictor of each PTSD symptom cluster, and the present sample RCADS model was equivalent to the original six-factor model. The new

RSCA model was the only model to significantly predict two of the four symptom clusters (negative alterations in cognition and mood; alterations in arousal and reactivity). However, the new RSCA model did not significantly predict intrusion or avoidance symptoms.

It is necessary to study child maltreatment and PTSD, given the notable lack of studies on this population. The limited research in this area is concerning, given the stark differences in symptoms and effects of child maltreatment compared to other forms of trauma. The current investigation revealed vital information regarding PTSD symptom presentation in maltreated youth despite the mixed findings. The results of the present study revealed information regarding unique predictors of PTSD in youth who have experienced maltreatment. This information has significant implications for the assessment and treatment of PTSD in maltreated youth, which are outlined in the following sections.

Predictors of PTSD Symptoms in Maltreated Youth Versus Non-Maltreated Youth

Several items were removed from the ERQ-CA and the RSCA to improve reliability. Furthermore, the individual factors of the RCADS varied widely in their ability to predict PTSD symptom clusters. The models themselves also differed in how well they fit the data. Further examination of the removed versus retained items and the resulting factors provides valuable information regarding predicting PTSD symptomology in maltreated youth.

Poor Predictors of PTSD Symptoms in Maltreated Youth

Expressive Suppression

All items measuring expressive suppression were removed in the new ERQ-CA model, suggesting that it is not an accurate measure of PTSD in maltreated youth. Expressive suppression is the inhibition of showing emotions, such as hiding one's feelings from others by monitoring one's tone, facial expression, or behavior. As a result, they may appear more reserved

or guarded. This trait may be a poor predictor of PTSD in this population due to safety issues. For example, youth who were physically or emotionally abused when showing emotion may have learned to view the expression of emotion as unsafe, dangerous, or "wrong." In contrast, it is also possible that expressive suppression emerged as a poor predictor simply because maltreated youth are more dysregulated and struggle to identify and understand emotions (Coyle et al., 2014; Dannlowski et al., 2013; van den Berg et al., 2019; Young & Widom, 2014). It can thus be assumed that they may also find it challenging to control the expression of their emotions.

Emotional Reactivity

Most items measuring emotional reactivity were removed in the new RSCA model. Similarly, the emotional reactivity factor itself was not correlated with other factors or with the total score of the RSCA. These outcomes suggest that emotional reactivity is not the best predictor of PTSD symptoms compared to other facets of resiliency. Emotional reactivity items assess the intensity of emotional upset, the time needed to recover from emotional upset, and functional impairment while upset. Emotional reactivity may not have been a good predictor for reasons similar to the abovementioned problems with youth's ability to label and regulate their feelings. This makes sense, given that most of the removed items were specifically those asking about the intensity of emotions and impairment associated with their emotional reaction. In contrast, the retained items inquired about the time needed to recover from emotional upset. It may be that maltreated youth understand when they are upset, but they struggle to understand their feelings and how their emotions impact them.

Salient Predictors of PTSD Symptoms in Maltreated Youth

Further examination of the items retained in the ERQ-CA, RCADS, and RSCA revealed that there are multiple traits that we can measure to better predict and understand PTSD in maltreated youth. Looking at the themes across these items and the resulting factors can help researchers and clinicians understand traumatic stress symptoms in this population.

Cognitive Reappraisal

In contrast to expressive suppression, cognitive reappraisal did appear to predict PTSD in maltreated youth adequately. In fact, the new model containing only these items was the best-fitting model and significantly predicted all four symptom clusters. Cognitive reappraisal is the ability to alter one's thinking about a situation to change one's emotions. Howard et al. (2022) revealed that youth's beliefs about the traumatic event, specifically the belief that they are to blame or are "bad," was a good predictor of PTSD in this population. Thus, it makes sense that measuring their ability to change their thought patterns would also be a good predictor of PTSD in maltreated youth.

Depression

Although the six-factor RCADS model significantly predicted all four symptom clusters in the present sample, comparing each factor in the model revealed that only one factor (major depression) significantly predicted negative alterations in cognition and mood and alterations in arousal and reactivity. This suggests that depression is particularly relevant to understanding the presentation of PTSD in maltreated youth, which makes sense, given what we know about the link between depression and child maltreatment. It is also relevant that depression items were best at predicting cognition, mood, and reactivity in the present sample. This connection is understandable when considering the symptoms of depressive disorders in youth (e.g.,

irritability, sadness, low self-esteem, hopelessness, suicidal ideation, sleep impairment, and poor concentration). It is also worth noting that depression items were encompassed under only one factor, whereas items measuring anxiety were separated into five factors. This observation may also explain the greater predictive power of depression compared to anxiety.

Additional Considerations Regarding Predictors of PTSD Symptoms in Maltreated Youth

Questions remain regarding the predictive ability of emotion regulation, anxiety, depression, and PTSD. Although the new model predicted PTSD symptoms, the present sample ERQ-CA model was not the overall best predictor of PTSD symptom clusters. This suggests that expressive suppression, which was removed in the new model, may still provide valuable information regarding symptom presentation in maltreated youth. The present sample RCADS model predicted all four symptom clusters but did not obtain acceptable goodness-of-fit indexes. Furthermore, the major depression factor emerged as the only significant predictor within the model for two symptom clusters (negative alterations in cognition and mood; alterations in arousal and reactivity). Items measuring anxiety may be less helpful in predicting traumatic stress in maltreated youth. Similarly, the present sample RSCA model did not obtain acceptable goodness-of-fit indexes and did not significantly predict intrusion or avoidance symptoms. This discovery suggests that other latent variables may be more accurate in measuring emotion regulation as it relates to PTSD in maltreated youth. Fortunately, findings still provide insight into resiliency's potential ability to predict intrusion and avoidance symptoms.

Questions remain regarding the predictive ability of emotion regulation, anxiety, depression, and PTSD. Although the new model predicted PTSD symptoms, the present sample ERQ-CA model was not the overall best predictor of PTSD symptom clusters. This suggests that expressive suppression, which was removed in the new model, may still provide valuable

information regarding symptom presentation in maltreated youth. The present sample RCADS model did predict all four symptom clusters, but it did not obtain acceptable goodness-of-fit indexes. Furthermore, the major depression factor emerged as the only significant predictor within the model for two of the symptom clusters (negative alterations in cognition and mood; alterations in arousal and reactivity). It is possible that items measuring anxiety are less helpful in predicting traumatic stress in maltreated youth. Similarly, the present sample RSCA model did not obtain acceptable goodness-of-fit indexes and did not significantly predict intrusion or avoidance symptoms. This discovery suggests that there may other latent variables that are more accurate in measuring emotion regulation as it relates to PTSD in maltreated youth. Fortunately, findings still provide insight into the potential ability of resiliency to predict symptoms of intrusion and avoidance.

Limitations of the Present Study

The findings of the present study provided valuable information for understanding the presentation of PTSD symptoms in maltreated youth. However, there are limitations associated with studying PTSD and this population in particular. The following limitations of the current investigation should be considered when interpreting the results.

One important limitation is that the data collected in the present sample were based solely on the youth's self-report of symptoms and did not include parents or caregivers in the assessment process. Youth's responses on items may have been impacted by social desirability or other participant bias. Youth may also not be reliable reporters due to forgetfulness, limitations in attention and concentration, malingering, lack of trust, and resistance or guardedness.

Another limitation of the current study is the generalizability of the results. The current investigation restricted the age range of maltreated youths to ages 11 to 17, so caution should be used when generalizing results to younger maltreated children. Furthermore, the present study utilized a convenience sample. Participants in the current study experienced maltreatment trauma that warranted removal from the home and placement in the foster care system. The present sample did not include youth who experienced unsubstantiated maltreatment trauma that did not result in removal from the home. The present sample also did not include youth who were removed from the home and placed with other family members or those in a foster home at the time of the assessment. Therefore, we cannot determine the extent to which these results may apply to youth living with family, foster families, or who experienced maltreated trauma that did not result in the removal from their home.

The present study was also limited in the variety of variables that were investigated. For example, the present study used measures of emotion regulation, depression, anxiety, and resiliency based on the current lack of information and the previous literature suggesting the relevance of these variables. However, assessments measuring other variables may be even better diagnostic tools than the ERQ-CA, RCADS, or RSCA. Most youths in this study also reported experiencing non-maltreated-related traumas, such as domestic violence and the death of a close family member, as well as various ages of exposure and frequency of exposure to traumatic events. It is nearly impossible to isolate the trauma or traumas causing traumatic stress, so the potential impact of polyvictimization, age of traumatic experience, and chronicity or frequency of maltreatment is not well understood and was not explicitly investigated in the current study. Furthermore, maltreated youth have often experienced other adverse events or early life stressors before, during, and after the maltreatment trauma (Heim et al., 1997; Mendle et al., 2011; Slack et al., 2004), which could also be linked to the development of traumatic stress.

Clinical Implications

Despite these limitations, the results of the present study have practical implications that would be useful to clinicians and mental health professionals. Implementation of effective and reliable interventions and assessments of PTSD in maltreated youth is imperative due to the detrimental effects of childhood maltreatment on youth. The current study may be beneficial in further understanding the clinical treatment and assessment of child maltreatment and PTSD within adolescents.

Assessment

The current investigation offers the only factorial analysis of the ERQ-CA, RCADS, and RSCA in a sample of maltreated youth. No other study to date has attempted to evaluate the utility of these measures in predicting PTSD symptomology in this vulnerable population. It is essential to develop accurate assessment measures to help clinicians understand and predict PTSD in maltreated youth. The current findings suggest that the ERQ-CA, RCADS, and RSCA can be valuable tools to promptly identify PTSD symptoms in maltreated youth. Assessing depressive symptoms and the ability to reframe unhelpful thoughts may be particularly effective in identifying PTSD in this population. Clinicians working with maltreated youth should consider monitoring depression and thought patterns as early indicators of risk for traumatic stress.

In contrast, emotional regulation and emotional reactivity measures do not appear to be useful predictors of PTSD in assessing maltreated youth. Practitioners may wish to consult the results of the current study when selecting appropriate assessment batteries for identifying PTSD in maltreated youth. Clinicians working with maltreated youth should pay close attention to patients that exhibit symptoms of depression and negative thought patterns. Patients that report

higher levels of depression and more negative cognitions may benefit from further assessment for PTSD.

Treatment

Clinicians treating PTSD in maltreated youth may find it helpful to target symptoms of depression and negative thought patterns. Cognitive behavioral therapies, designed to help patients identify cognitive distortions and replace unhelpful thoughts with helpful ones, may be especially effective in treating PTSD within this population. Providers may also consider focusing on reducing maladaptive coping strategies and teaching their patients adaptive coping techniques to promote emotion regulation skills. Trauma-Focused Cognitive Behavioral Therapy (TF-CBT; Cohen et al., 2006) is often regarded as the gold-standard treatment for traumatic stress in children and adolescents. Core modules of TF-CBT include relaxation skills, affect modulation skills and cognitive coping skills. It is also a flexible model that can be delivered in various treatment settings, making it helpful in working with maltreated youth in foster care. Regardless of the intervention or tools used, the current investigation provides new insights for practitioners to consider when working with maltreated youth.

Recommendations for Future Research

The current investigation provides new information on predictors of PTSD in maltreated youth, but more research is needed. Future studies on PTSD and child maltreatment may wish to replicate or elaborate on the present findings. Studies should also address the limitations of the present study.

One method of addressing these limitations may be modifying the population studied. The present study was limited in the number of informants, given that only the youths completed all self-report measures. Collecting data from multiple informants may provide more accurate and reliable information than adolescents' self-report data alone. Researchers may consider including information reported by parents, caregivers, teachers, and DFS staff who routinely work with the children. These informants can be used to gain corroborating information regarding child demographics, trauma exposure, and PTSD symptoms.

Furthermore, the present study only included youth in state custody and only included adolescents ages 11 to 17 years. It is difficult to determine whether these factors impacted the present findings, especially because being in state custody generally means that the maltreatment occurred relatively recently. Future studies could extend their sample population to include younger children and maltreated youth not currently in state custody.

Researchers may also wish to validate other measures that have yet to be studied in a sample of maltreated youth. The present study examined measures of emotion regulation, anxiety, depression, and resiliency, but it is worth considering whether other variables would better DSM-5 PTSD clusters in maltreated youth. For example, behavioral problems such as aggression, theft, substance use, cheating, rule-breaking, and risky sexual behaviors have all been linked to child maltreatment (Avery et al., 2000; Cicchetti & Toth, 2005; Linning &

Kearney, 2004; Malvaso et al., 2018). Further examination of externalizing behavior problems may provide additional insight into predictors of PTSD in maltreated youth.

Further examination of the findings observed in the present study may provide researchers with valuable information about the patterns of PTSD symptomology in maltreated youth. Such exploration may better inform assessment and prevention practices for this uniquely vulnerable and understudied population. Additional research is necessary to improve the accurate and reliable identification of maltreated youth at risk for developing PTSD.

APPENDIX A

Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA; Gullone & Taffe, 2011)

Code Number _____

Emotion Regulation Questionnaire (youth)

[Adapted from Gross, J.J., & John, O.P. (2003).]

These 10 questions are about how you feel inside, and how you show your emotions/feelings. Some of the questions may seem similar to one another, but they are different in important ways.

Please read each statement, and then **circle** the choice that seems **most true for you**. Do not spend too much time on any one item. Remember, this is not a test. There are no right or wrong answers. We really want to know what you think.

1. When I want to feel happier, I think about something different.	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
2. I keep my feelings to myself	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
3. When I want to feel less bad (e.g., sad, angry or worried), I think about something different.	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
4. When I am feeling happy, I am careful not to show it.	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
5. When I'm worried about something, I make myself think about it in a way that helps me feel better.	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
6. I control my feelings by not showing them	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
7. When I want to feel happier about something, I change the way I'm thinking about it.	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
8. I control my feelings about things by changing the way I think about them.	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
9. When I'm feeling bad (e.g., sad, angry, or worried), I'm careful not to show it.	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
10. When I want to feel less bad (e.g., sad, angry, or worried) about something, I change the way I'm thinking about it.	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree

APPENDIX B

The Revised Child Anxiety and Depression Scale (RCADS; Chorpita et al., 2000)

Date: _____ **Name/ID:** _____

RCADS

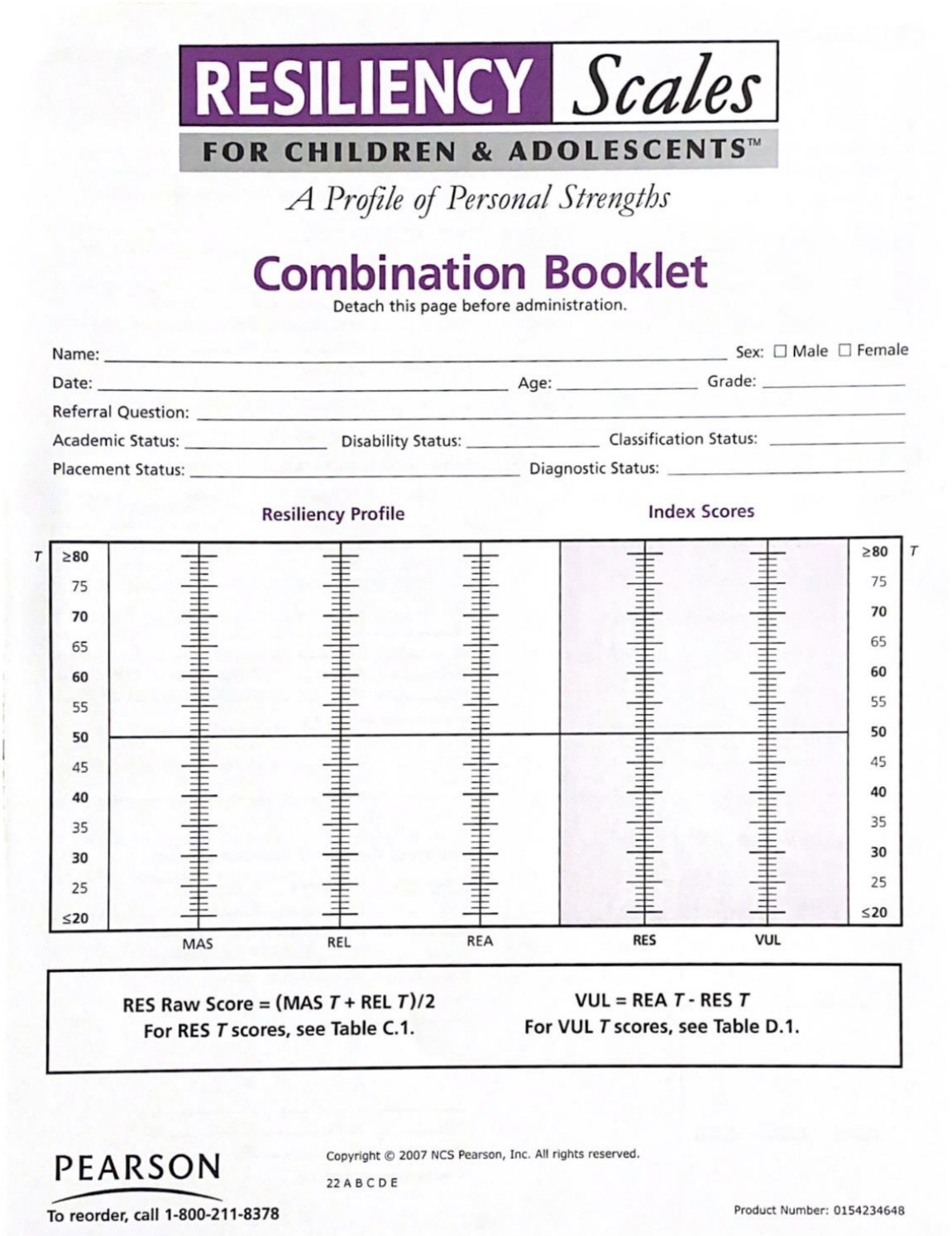
Please put a circle around the word that shows how often each of these things happens to you. There are no right or wrong answers.

1. I worry about things	Never	Sometimes	Often	Always
2. I feel sad or empty	Never	Sometimes	Often	Always
3. When I have a problem, I get a funny feeling in my stomach	Never	Sometimes	Often	Always
4. I worry when I think I have done poorly at something	Never	Sometimes	Often	Always
5. I would feel afraid of being on my own at home	Never	Sometimes	Often	Always
6. Nothing is much fun anymore	Never	Sometimes	Often	Always
7. I feel scared when I have to take a test	Never	Sometimes	Often	Always
8. I feel worried when I think someone is angry with me	Never	Sometimes	Often	Always
9. I worry about being away from my parents	Never	Sometimes	Often	Always
10. I get bothered by bad or silly thoughts or pictures in my mind	Never	Sometimes	Often	Always
11. I have trouble sleeping	Never	Sometimes	Often	Always
12. I worry that I will do badly at my school work	Never	Sometimes	Often	Always
13. I worry that something awful will happen to someone in my family	Never	Sometimes	Often	Always
14. I suddenly feel as if I can't breathe when there is no reason for this	Never	Sometimes	Often	Always
15. I have problems with my appetite	Never	Sometimes	Often	Always
16. I have to keep checking that I have done things right (like the switch is off, or the door is locked)	Never	Sometimes	Often	Always
17. I feel scared if I have to sleep on my own	Never	Sometimes	Often	Always
18. I have trouble going to school in the mornings because I feel nervous or afraid	Never	Sometimes	Often	Always
19. I have no energy for things	Never	Sometimes	Often	Always
20. I worry I might look foolish	Never	Sometimes	Often	Always
21. I am tired a lot	Never	Sometimes	Often	Always
22. I worry that bad things will happen to me	Never	Sometimes	Often	Always

23. I can't seem to get bad or silly thoughts out of my head	Never	Sometimes	Often	Always
24. When I have a problem, my heart beats really fast	Never	Sometimes	Often	Always
25. I cannot think clearly	Never	Sometimes	Often	Always
26. I suddenly start to tremble or shake when there is no reason for this	Never	Sometimes	Often	Always
27. I worry that something bad will happen to me	Never	Sometimes	Often	Always
28. When I have a problem, I feel shaky	Never	Sometimes	Often	Always
29. I feel worthless	Never	Sometimes	Often	Always
30. I worry about making mistakes	Never	Sometimes	Often	Always
31. I have to think of special thoughts (like numbers or words) to stop bad things from happening	Never	Sometimes	Often	Always
32. I worry what other people think of me	Never	Sometimes	Often	Always
33. I am afraid of being in crowded places (like shopping centers, the movies, buses, busy playgrounds)	Never	Sometimes	Often	Always
34. All of a sudden I feel really scared for no reason at all	Never	Sometimes	Often	Always
35. I worry about what is going to happen	Never	Sometimes	Often	Always
36. I suddenly become dizzy or faint when there is no reason for this	Never	Sometimes	Often	Always
37. I think about death	Never	Sometimes	Often	Always
38. I feel afraid if I have to talk in front of my class	Never	Sometimes	Often	Always
39. My heart suddenly starts to beat too quickly for no reason	Never	Sometimes	Often	Always
40. I feel like I don't want to move	Never	Sometimes	Often	Always
41. I worry that I will suddenly get a scared feeling when there is nothing to be afraid of	Never	Sometimes	Often	Always
42. I have to do some things over and over again (like washing my hands, cleaning or putting things in a certain order)	Never	Sometimes	Often	Always
43. I feel afraid that I will make a fool of myself in front of people	Never	Sometimes	Often	Always
44. I have to do some things in just the right way to stop bad things from happening	Never	Sometimes	Often	Always
45. I worry when I go to bed at night	Never	Sometimes	Often	Always
46. I would feel scared if I had to stay away from home overnight	Never	Sometimes	Often	Always
47. I feel restless	Never	Sometimes	Often	Always

APPENDIX C

The Resiliency Scales for Children and Adolescents (RSCA; Prince-Embury, 2006, 2007)



RESILIENCY Scales

FOR CHILDREN & ADOLESCENTS™

A Profile of Personal Strengths

Combination Booklet

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Name: _____ Sex: ☐ Male ☐ Female

Date: _____ Age: _____ Grade: _____

Referral Question: _____

Academic Status: _____ Disability Status: _____ Classification Status: _____

Placement Status: _____ Diagnostic Status: _____

Resiliency Profile | Index Scores

T	MAS	REL	REA	RES	VUL	T
≥80						≥80
75						75
70						70
65						65
60						60
55						55
50						50
45						45
40						40
35						35
30						30
25						25
≤20						≤20

RES Raw Score = (MAS *T* + REL *T*)/2
For RES *T* scores, see Table C.1.

VUL = REA *T* - RES *T*
For VUL *T* scores, see Table D.1.

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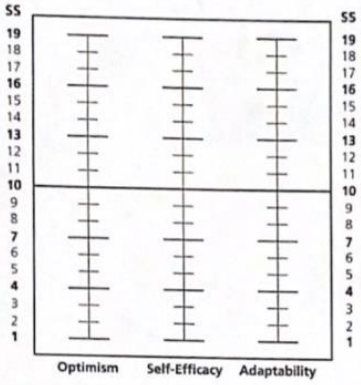
MAS Subscale Profile

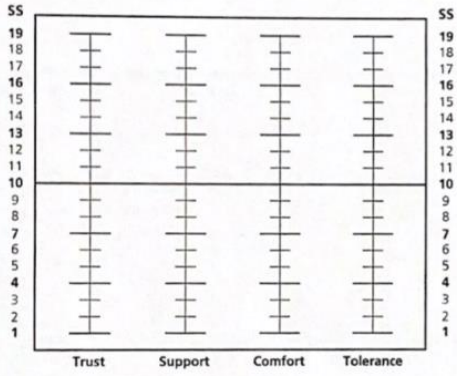


Sense of Mastery Subscale Scoring

Optimism	Self-Efficacy	Adaptability
1	5	15
2	6	16
3	7	17
4	8	
18	9	
19	10	
20	11	
	12	
	13	
	14	
Total	Total	Total
SS	SS	SS

For scaled scores, see Table A.2.

REL Subscale Profile

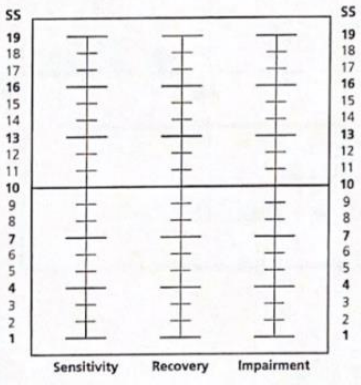


Sense of Relatedness Subscale Scoring

Trust	Support	Comfort	Tolerance
6	5	1	11
7	18	2	12
8	19	3	13
9	20	4	14
10	21		15
23	22		16
24			17
Total	Total	Total	Total
SS	SS	SS	SS

For scaled scores, see Table A.3.

REA Subscale Profile



Emotional Reactivity Subscale Scoring

Sensitivity	Recovery	Impairment
1	10	7
2	11	8
3	12	9
4	13	14
5		15
6		16
		17
		18
		19
		20
Total	Total	Total
SS	SS	SS

For scaled scores, see Table A.4.

MAS

Here is a list of things that happen to people and that people think, feel, or do. Read each sentence carefully, and circle the *one* answer (Never, Rarely, Sometimes, Often, or Almost Always) that tells about you best. THERE ARE NO RIGHT OR WRONG ANSWERS.

	0	1	2	3	4
1. Life is fair.	Never	Rarely	Sometimes	Often	Almost Always
2. I can make good things happen.	Never	Rarely	Sometimes	Often	Almost Always
3. I can get the things I need.	Never	Rarely	Sometimes	Often	Almost Always
4. I can control what happens to me.	Never	Rarely	Sometimes	Often	Almost Always
5. I do things well.	Never	Rarely	Sometimes	Often	Almost Always
6. I am good at fixing things.	Never	Rarely	Sometimes	Often	Almost Always
7. I am good at figuring things out.	Never	Rarely	Sometimes	Often	Almost Always
8. I make good decisions.	Never	Rarely	Sometimes	Often	Almost Always
9. I can adjust when plans change.	Never	Rarely	Sometimes	Often	Almost Always
10. I can get past problems in my way.	Never	Rarely	Sometimes	Often	Almost Always
11. If I have a problem, I can solve it.	Never	Rarely	Sometimes	Often	Almost Always
12. If I try hard, it makes a difference.	Never	Rarely	Sometimes	Often	Almost Always
13. If at first I don't succeed, I will keep on trying.	Never	Rarely	Sometimes	Often	Almost Always
14. I can think of more than one way to solve a problem.	Never	Rarely	Sometimes	Often	Almost Always
15. I can learn from my mistakes.	Never	Rarely	Sometimes	Often	Almost Always
16. I can ask for help when I need to.	Never	Rarely	Sometimes	Often	Almost Always
17. I can let others help me when I need to.	Never	Rarely	Sometimes	Often	Almost Always
18. Good things will happen to me.	Never	Rarely	Sometimes	Often	Almost Always
19. My life will be happy.	Never	Rarely	Sometimes	Often	Almost Always
20. No matter what happens, things will be all right.	Never	Rarely	Sometimes	Often	Almost Always

For *T* scores, see Table A.1.

TS _____ **RS** _____

REL

Here is a list of things that happen to people and that people think, feel, or do. Read each sentence carefully, and circle the *one* answer (Never, Rarely, Sometimes, Often, or Almost Always) that tells about you best. THERE ARE NO RIGHT OR WRONG ANSWERS.

	0	1	2	3	4
1. I can meet new people easily.	Never	Rarely	Sometimes	Often	Almost Always
2. I can make friends easily.	Never	Rarely	Sometimes	Often	Almost Always
3. People like me.	Never	Rarely	Sometimes	Often	Almost Always
4. I feel calm with people.	Never	Rarely	Sometimes	Often	Almost Always
5. I have a good friend.	Never	Rarely	Sometimes	Often	Almost Always
6. I like people.	Never	Rarely	Sometimes	Often	Almost Always
7. I spend time with my friends.	Never	Rarely	Sometimes	Often	Almost Always
8. Other people treat me well.	Never	Rarely	Sometimes	Often	Almost Always
9. I can trust others.	Never	Rarely	Sometimes	Often	Almost Always
10. I can let others see my real feelings.	Never	Rarely	Sometimes	Often	Almost Always
11. I can calmly tell others that I don't agree with them.	Never	Rarely	Sometimes	Often	Almost Always
12. I can make up with friends after a fight.	Never	Rarely	Sometimes	Often	Almost Always
13. I can forgive my parent(s) if they upset me.	Never	Rarely	Sometimes	Often	Almost Always
14. If people let me down, I can forgive them.	Never	Rarely	Sometimes	Often	Almost Always
15. I can depend on people to treat me fairly.	Never	Rarely	Sometimes	Often	Almost Always
16. I can depend on those closest to me to do the right thing.	Never	Rarely	Sometimes	Often	Almost Always
17. I can calmly tell a friend if he or she does something that hurts me.	Never	Rarely	Sometimes	Often	Almost Always
18. If something bad happens, I can ask my friends for help.	Never	Rarely	Sometimes	Often	Almost Always
19. If something bad happens, I can ask my parent(s) for help.	Never	Rarely	Sometimes	Often	Almost Always
20. There are people who will help me if something bad happens.	Never	Rarely	Sometimes	Often	Almost Always
21. If I get upset or angry, there is someone I can talk to.	Never	Rarely	Sometimes	Often	Almost Always
22. There are people who love and care about me.	Never	Rarely	Sometimes	Often	Almost Always
23. People know who I really am.	Never	Rarely	Sometimes	Often	Almost Always
24. People accept me for who I really am.	Never	Rarely	Sometimes	Often	Almost Always

For *T* scores, see Table A.1.

TS _____ **RS** _____

REA

Here is a list of things that happen to people and that people think, feel, or do. Read each sentence carefully, and circle the *one* answer (Never, Rarely, Sometimes, Often, or Almost Always) that tells about you best. THERE ARE NO RIGHT OR WRONG ANSWERS.

	0	1	2	3	4
1. It is easy for me to get upset.	Never	Rarely	Sometimes	Often	Almost Always
2. People say that I am easy to upset.	Never	Rarely	Sometimes	Often	Almost Always
3. I strike back when someone upsets me.	Never	Rarely	Sometimes	Often	Almost Always
4. I get very upset when things don't go my way.	Never	Rarely	Sometimes	Often	Almost Always
5. I get very upset when people don't like me.	Never	Rarely	Sometimes	Often	Almost Always
6. I can get so upset that I can't stand how I feel.	Never	Rarely	Sometimes	Often	Almost Always
7. I get so upset that I lose control.	Never	Rarely	Sometimes	Often	Almost Always
8. When I get upset, I don't think clearly.	Never	Rarely	Sometimes	Often	Almost Always
9. When I get upset, I react without thinking.	Never	Rarely	Sometimes	Often	Almost Always
10. When I get upset, I stay upset for about one hour.	Never	Rarely	Sometimes	Often	Almost Always
11. When I get upset, I stay upset for several hours.	Never	Rarely	Sometimes	Often	Almost Always
12. When I get upset, I stay upset for the whole day.	Never	Rarely	Sometimes	Often	Almost Always
13. When I get upset, I stay upset for several days.	Never	Rarely	Sometimes	Often	Almost Always
14. When I am upset, I make mistakes.	Never	Rarely	Sometimes	Often	Almost Always
15. When I am upset, I do the wrong thing.	Never	Rarely	Sometimes	Often	Almost Always
16. When I am upset, I get into trouble.	Never	Rarely	Sometimes	Often	Almost Always
17. When I am upset, I do things that I later feel bad about.	Never	Rarely	Sometimes	Often	Almost Always
18. When I am upset, I hurt myself.	Never	Rarely	Sometimes	Often	Almost Always
19. When I am upset, I hurt someone.	Never	Rarely	Sometimes	Often	Almost Always
20. When I am upset, I get mixed-up.	Never	Rarely	Sometimes	Often	Almost Always

For *T* scores, see Table A.1.

TS **RS**

APPENDIX D

The UCLA PTSD Reaction Index for DSM-5 (PTSD-RI-5; Pynoos & Steinberg, 2013)

UCLA PTSD Reaction Index for DSM-5
Children/Adolescents ©

Robert S. Pynoos, M.D., M.P.H
Alan M. Steinberg, Ph.D.

UCLA PTSD REACTION INDEX FOR CHILDREN/ADOLESCENTS - DSM-5©

Child/Adolescent Name: _____ ID #_____ Age: _____ Sex: □ Girl □ Boy
Grade in School _____ School: _____ Teacher: _____ City/State _____
Interviewer Name/I.D. _____ Date (*month, day, year*) ____/____/____ (Session #_____)

TRAUMA/LOSS HISTORY SCREENING QUESTIONS: Use the questions in the screening form provided below to ask about history of different types of trauma and loss. Place a check mark in the box on the left for each type of trauma /loss experience that has occurred. In interviewing the child/adolescent, you may ask: ***Sometimes people have scary or violent things that happen to them where someone could have been or was badly hurt or killed. I'm going to ask you some questions about whether any of these kinds of things have happened to you so that you can tell me if they did.*** [For those children/adolescents able to complete the form on their own, you may instruct them to place a check mark in the box on the left of the screening form to indicate that the trauma/loss has happened to them.] In either case, follow up on those items endorsed using the **TRAUMA/LOSS DETAILS** form provided in the next section.

TRAUMA/LOSS HISTORY SCREENING QUESTIONS	
□	**1) Serious Accidental Injury**: Have you ever been in a bad accident (like a serious car, bus, train or bicycle accident or a bad fall) where you or someone else was or could have been badly hurt or killed? Have you ever seen a bad accident where someone was badly hurt or killed?
□	**2) Illness/Medical Trauma**: Have you ever been so sick that you and your parents (or people taking care of you) were scared that you might die? Did you have a medical treatment that was very scary or painful? Did you ever see someone you really care about get so sick that you were scared they might die?
□	**3) Community Violence**: Did you ever see a bad fight or shooting in your neighborhood, like between gangs? Were you afraid of getting badly hurt or killed? Have you seen someone mugged, robbed, stabbed or killed in your neighborhood?
□	**4) Domestic Violence**: Have you ever seen adults you live with get in a bad fight with each other, where someone got punched, kicked or hit with something? Have adults you live with threatened to hurt each other? Have you ever seen an adult you live with forced to do something sexual by another adult you live with?
□	**5) School Violence/Emergency**: Were you ever at school when something really scary happened, like a shooting, a stabbing, a fire, where you or someone got badly beaten up or someone attempted or committed suicide?
□	**6) Physical Assault**: Have you ever been badly physically hurt (punched, kicked, stabbed, shaken) by someone outside of your family or who was not taking care of you? Have you ever been badly hurt (punched, kicked, stabbed) by someone outside your family, like someone in your neighborhood or a stranger?
□	**7) Disaster**: Have you ever been in a natural disaster, like a hurricane, tornado, earthquake, flood or wildfire where you were hurt or could have been hurt or killed? Have you been in a natural disaster where you saw someone badly hurt or killed? Have you been in a place where there was a chemical spill or explosion?
□	**8) Sexual Abuse**: Did someone who was taking care of you ever force you to do something sexual? Did someone taking care of you ever make you watch something sexual?
□	**9) Physical Abuse**: Have you ever been badly hurt (punched, kicked, stabbed, shaken) by someone who is in your family or was taking care of you? Have you seen another child in your family being badly physically hurt by a parent, caregiver or legal guardian?
□	**10) Neglect**: Has there ever been a time when someone who should have been taking care of you didn't, like they didn't take you to a doctor when you were really sick, they left you alone for too long, didn't make sure you were going to school or didn't do their best to keep you healthy or safe?
□	**11) Psychological Maltreatment/Emotional Abuse**: Did anyone in your family ever keep telling you that you are no good, keep yelling at you or keep threatening to leave you or send you away? Were you often punished at home in ways that felt very unfair?
□	**12) Interference with Caregiving**: Was there ever a time when someone who was supposed to take care of you couldn't, like they were too sick, they were so sad they stayed in bed or they had a drinking or drug problem?

TRAUMA/LOSS HISTORY SCREENING QUESTIONS	
☐	**13) Sexual Assault**: Did someone outside your family ever force you to do something sexual? Did you ever see someone else being forced to do something sexual?
☐	**14) Kidnapping/Abduction**: Have you ever been stolen or kidnapped (taken somewhere against your will) by someone without the permission of your parent or legal guardian?
☐	**15) Terrorism**: Were you ever there when a terrorist attack happened, like a bombing, chemical attack or where people were taken hostage?
☐	**16) Bereavement**: Has someone really close to you ever died?
☐	**17) Separation**: Were you ever separated for a long time from someone you depend on, like a parent went to jail or was hospitalized, or you were placed in foster care?
☐	**18) War/Political Violence**: Have you lived in a country where a war or armed conflict was happening (like soldiers or armed groups were fighting)? Did you see people who had been badly hurt or killed in a war or armed conflict?
☐	**19) Forced Displacement**: Have you ever been forced to move out of your house due to war, armed conflict or disaster, like having to move to a trailer or refugee camp?
☐	**20) Trafficking/Sexual Exploitation**: Have you ever done sexual things for money, food, clothes or protection? Were you ever sold to someone to work for them? Have you been forced into prostitution or pornography?
☐	**21) Bullying**: Has someone your age or a student at your school ever bullied you, like kept calling you dirty names, making sexual comments, threatening to beat you up or spreading mean rumors around school or online?
☐	**22) Attempted Suicide:** Have you ever tried to kill yourself?
☐	**23) Witnessed Suicide**: Have you ever seen someone after he/she attempted or committed suicide?

TRAUMA/LOSS DETAILS: For each experience endorsed on the Trauma/Loss History Screening Questions form, place a check mark to indicate whether the specified trauma details were present, whether the child/adolescent was a *victim*, *witness* or *learned about** the trauma, and the age(s) over which the trauma occurred. (Both of these forms may be updated over the course of treatment as additional information about trauma history is revealed or as additional traumas occur.) **Learned about* **only** refers to indirect exposure in learning aversive details of violent personal assault, homicide, suicide, serious accident, or serious injury to a close relative or friend. It does **not** include learning about death due to natural causes.

Trauma Type	Trauma Details	Role in Event	Age(s) Experienced 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
Serious Accidental Injury	☐ Motor Vehicle Accident ☐ Fall with Serious Injury ☐ Severe Burn ☐ Dog Bite Requiring Stitches ☐ Near Drowning ☐ Hospitalized ☐ Other_____	☐ Victim ☐ Witness ☐ Learned about	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Trauma Type	Trauma Details	Role in Event	Age(s) Experienced 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
Illness/Medical Trauma	☐ Child ☐ Family ☐ Friend ☐ Type of Illness _____ ☐ Extended Hospitalization ☐ Major Medical Procedures ☐ Catastrophic Medical Event	☐ Victim ☐ Witness ☐ Learned about	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Community Violence	☐ Someone Injured or Killed ☐ Mugging ☐ Drug Dealing ☐ Gang-Related ☐ Home Robbery ☐ High Crime Community ☐ Witness Arrest of a Family Member ☐ Other _____	☐ Victim ☐ Witness ☐ Learned about	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Domestic Violence	☐ Witnessed Physical Attack or Fight ☐ Heard Threatened Harm ☐ Heard Screams of Distress ☐ Witnessed Sexual Assault ☐ Weapon Used ☐ Serious Injury ☐ Police Response ☐ Restraining Order	☐ Witness ☐ Learned about	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
School Violence/Emergency	☐ Shooting ☐ Stabbing ☐ Fire ☐ Bomb threat ☐ Hostage Situation ☐ Suicide ☐ Homicide ☐ Acute Medical Death ☐ Witnessed Resuscitation Efforts ☐ Other _____	☐ Victim ☐ Witness ☐ Learned about	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Physical Assault	☐ Punched ☐ Kicked ☐ Stabbed ☐ Shaken ☐ Weapon Used ☐ Reported to police ☐ Other _____	☐ Victim ☐ Witness ☐ Learned about	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Trauma Type	Trauma Details	Role in Event	Age(s) Experienced 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
Disaster	☐ Earthquake ☐ Fire ☐ Flood ☐ Hurricane ☐ Tornado ☐ Chemical spill ☐ Explosion ☐ Evacuated ☐ Lost Home ☐ Injury ☐ Death of family member ☐ Other _____	☐ Victim ☐ Witness ☐ Learned about	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Sexual Abuse	☐ Forced sexual behavior ☐ Watch something sexual ☐ Penetration occurred ☐ Perpetrator _____ ☐ Child Protective Services Report ☐ Investigation conducted ☐ Charges filed ☐ Conviction ☐ Perpetrator removed from home ☐ Child Removed from Home	☐ Victim ☐ Witness ☐ Learned about	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Physical Abuse	☐ Badly Physically Hurt ☐ Punched ☐ Kicked ☐ Stabbed ☐ Shaken ☐ Weapon Used ☐ Perpetrator _____ ☐ Child Protective Services Report ☐ Investigation Conducted ☐ Charges Filed ☐ Conviction ☐ Perpetrator Removed From Home ☐ Child Removed From Home	☐ Victim ☐ Witness ☐ Learned about	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Trauma Type	Trauma Details	Role in Event	Age(s) Experienced 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
Neglect	☐ Medical Neglect ☐ School Neglect ☐ Left Alone/Unsupervised ☐ Failure to promote health ☐ Failure to promote safety ☐ Other _____ ☐ Perpetrator _____ ☐ Child Protective Services Report ☐ Investigation Conducted ☐ Charges Filed ☐ Conviction ☐ Perpetrator Removed from Home ☐ Child Removed from Home	☐ Victim ☐ Witness	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Psychological Maltreatment/ Emotional Abuse	☐ Berating ☐ Threatened Abandonment ☐ Excessive Punishment ☐ Other _____ ☐ Perpetrator _____ ☐ Child Protective Services Report ☐ Investigation Conducted ☐ Charges Filed ☐ Conviction ☐ Perpetrator Removed From Home ☐ Child Removed From Home	☐ Victim ☐ Witness	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Trauma Type	Trauma Details	Role in Event	Age(s) Experienced 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
Interference with Caregiving	**Impairment Due to:** ☐ Medical illness ☐ Mental health problem ☐ Alcohol use/abuse/addiction ☐ Drug use/abuse/addiction ☐ Extended hospitalization or rehabilitation **Affected Caregiver:** ☐ Mother ☐ Father ☐ Other relative ☐ Other (non-related) adult ☐ Other _____	☐ Victim ☐ Witness	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Sexual Assault	**Perpetrator**: ☐ Relative ☐ Position of trust (teacher, coach, step-parent, minister, clergy, relative not in the home) ☐ Acquaintance (neighbor, etc.) ☐ Stranger **Trauma Details:** ☐ Weapon used ☐ Object used ☐ Penetration occurred ☐ Date/Acquaintance rape ☐ Reported to police ☐ Investigation conducted ☐ Charges filed ☐ Conviction ☐ Other _____	☐ Victim ☐ Witness ☐ Learned about	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Trauma Type	Trauma Details	Role in Event	Age(s) Experienced 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
Kidnapping/ Abduction	**Perpetrator**: ☐ Parent ☐ Relative ☐ Step-parent ☐ Position of trust (teacher, coach, clergy) ☐ Acquaintance (neighbor, etc.) ☐ Stranger ☐ Length of time _____ ☐ Reported to police ☐ Investigation conducted ☐ Charges filed ☐ Conviction	☐ Victim ☐ Witnessed ☐ Learned about	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Terrorism	☐ Shooting ☐ Bombing ☐ Suicide bombing ☐ Chemical agent ☐ Biological agent ☐ Radiological agent ☐ Hostages taken ☐ Parent or caregiver injured ☐ Parent or caregiver killed ☐ Other _____	☐ Victim ☐ Witnessed ☐ Learned about	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Trauma Type	Trauma Details	Role in Event	Age(s) Experienced 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
Bereavement	**Deceased/Cause** ☐ Primary Caregiver #_____ ☐ Parent #_____ ☐ Sibling #_____ ☐ Grandparent #_____ ☐ Other Relative #_____ ☐ Friend #_____ ☐ Other _____ #_____ **Cause of Death** 1.Natural Causes (illness, age) 2.Accident (car, drowning, fall) 3.Drug overdose 4.Natural disaster 5.Homicide 6.Suicide 7.Other _____	☐ Witnessed ☐ Learned about	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Separation	**Cause of Separation** ☐ Parental death ☐ Parents separated ☐ Parents divorced ☐ Parent hospitalized ☐ Parent/sibling incarcerated ☐ Immigration proceeding ☐ Military deployment ☐ Combat ☐ Child placed in foster care ☐ Parent removed from the home ☐ In refugee situation ☐ Due to immigration situation ☐ Other _____	☐ Victim	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Trauma Type	Trauma Details	Role in Event	Age(s) Experienced 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
War/Political Violence	☐ Lived in war-torn region ☐ Experienced armed conflict ☐ Saw wounded people ☐ Saw dead bodies ☐ Family members taken as prisoners ☐ Home damaged/destroyed ☐ Internally displaced ☐ War refugee ☐ Other _____	☐ Victim ☐ Witness ☐ Learned about	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Forced Displacement	**Cause of Displacement:** ☐ War/political violence ☐ Disaster ☐ Other _____ **Site of Displacement:** ☐ Trailer ☐ Refugee camp ☐ Relocation center ☐ Other _____	☐ Victim ☐ Witness	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Trafficking/Sexual Exploitation	☐ Sex for money, food, clothes ☐ Pornography ☐ Sold into prostitution ☐ Sold into slave labor (unpaid servant or worker) ☐ Other _____	☐ Victim ☐ Witness ☐ Learned about	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Bullying	☐ Verbal insults ☐ Threats of physical harm ☐ Injury ☐ Sexual comments ☐ Rumors at school/internet ☐ Exclusion from social activities ☐ Other _____	☐ Victim ☐ Witness	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Trauma Type	Trauma Details	Role in Event	Age(s) Experienced 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
Attempted Suicide	**Method:** ☐ Drug ☐ Hanging ☐ Drowning ☐ Firearm ☐ Other _____	☐ Victim ☐ Witness ☐ Learned about	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Witnessed Suicide	☐ Completed suicide ☐ Attempted suicide **Method** ☐ Overdose ☐ Knife/Razor ☐ Firearm ☐ Hanging ☐ Jumping from a height ☐ Other _____ **Person** ☐ Mother ☐ Father ☐ Brother ☐ Sister ☐ Other relative ☐ Close friend ☐ Acquaintance/schoolmate ☐ Stranger	☐ Witness	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

If only one trauma/loss type is endorsed above, write in the trauma/loss type in this blank: _____.
If more than one trauma/loss type is endorsed, have the child/adolescent choose the trauma/loss experience that BOTHERS THEM THE MOST NOW and identify that trauma/loss type in this blank: _____.

Clinician: Provide a brief description of the trauma/loss type that is most bothersome now:

_____
_____
_____
_____
_____
_____

POSTTRAUMATIC STRESS SYMPTOMS

Here is a list of problems people can have after bad things happen. Please think about the bad thing that happened to you that bothers you the most now. For each problem **CIRCLE ONE** of the numbers (0, 1, 2, 3 or 4) that tells how many days the problem happened to you **in the past month,** even if the bad thing happened a long time ago. Use the **Frequency Rating Sheet** to help you decide how many days the problem happened **in the past month**.

HOW MUCH OF THE TIME DURING THE PAST MONTH…		**None**	**Little**	**Some**	**Much**	**Most**
1 E3	I am on the lookout for danger or things that I am afraid of (like looking over my shoulder even when nothing is there).	0	1	2	3	4
2 D2	I have thoughts like "I am bad."	0	1	2	3	4
3 C2	I try to stay away from people, places, or things that remind me about what happened.	0	1	2	3	4
4 E1	I get upset easily or get into arguments or physical fights.	0	1	2	3	4
5 B3	I feel like I am back at the time when the bad thing happened, like it's happening all over again.	0	1	2	3	4
6 D4	I feel like what happened was sickening or gross.	0	1	2	3	4
7 D5	I don't feel like doing things with my family or friends or other things that I liked to do.	0	1	2	3	4
8 E5	I have trouble concentrating or paying attention.	0	1	2	3	4
9 D2	I have thoughts like, "The world is really dangerous."	0	1	2	3	4
10 B2	I have bad dreams about what happened, or other bad dreams.	0	1	2	3	4
11 B4	When something reminds me of what happened I get very upset, afraid, or sad.	0	1	2	3	4
12 D7	I have trouble feeling happiness or love.	0	1	2	3	4
13 C1	I try not to think about or have feelings about what happened.	0	1	2	3	4
14 B5	When something reminds me of what happened, I have strong feelings in my body like my heart beats fast, my head aches or my stomach aches.	0	1	2	3	4
15 D3	I am mad with someone for making the bad thing happen, not doing more to stop it, or to help after.	0	1	2	3	4
16 D2	I have thoughts like "I will never be able to trust other people."	0	1	2	3	4
17 D6	I feel alone even when I am around other people.	0	1	2	3	4
18 B1	I have upsetting thoughts, pictures or sounds of what happened come into my mind when I don't want them to.	0	1	2	3	4

HOW MUCH OF THE TIME DURING THE PAST MONTH…		None	Little	Some	Much	Most
19$_{D3}$	I think that part of what happened was my fault.	0	1	2	3	4
20$_{E2}$	I hurt myself on purpose.	0	1	2	3	4
21$_{E6}$	I have trouble going to sleep, wake up often, or have trouble getting back to sleep.	0	1	2	3	4
22$_{D4}$	I feel ashamed or guilty about some part of what happened.	0	1	2	3	4
23$_{D1}$	I have trouble remembering important parts of what happened.	0	1	2	3	4
24$_{E4}$	I feel jumpy or startle easily, like when I hear a loud noise or when something surprises me.	0	1	2	3	4
25$_{D4}$	I feel afraid or scared.	0	1	2	3	4
26$_{E2}$	I do risky or unsafe things that could really hurt me or someone else.	0	1	2	3	4
27$_{D4}$	I want to get back at someone for what happened.	0	1	2	3	4
With Dissociative Symptoms (Dissociative Subtype)						
28$_{A1}$	I feel like I am seeing myself or what I am doing from outside my body (like watching myself in a movie).	0	1	2	3	4
29$_{A1}$	I feel not connected to my body, like I'm not really there inside.	0	1	2	3	4
30$_{A2}$	I feel like things around me look strange, different, or like I am in a fog.	0	1	2	3	4
31$_{A2}$	I feel like things around me are not real, like I am in a dream.	0	1	2	3	4

Clinician: Check whether the reactions (thoughts and feelings) above appear to cause clinically significant ***distress*** *or* ***functional impairment***.

□ **Clinically Significant Distress: (**check if youth endorses #1 below)
□ Yes □ No 1. Do these reactions (thoughts and feelings) bother or upset you a lot?

□ **Clinically Significant Functional Impairment**: (check if functional impairment at home, at school, in peer relationships, in developmental progression)

□ **Home**: (check if youth endorses #1, #2 or #3 below)
□ Yes □ No 1. Do these reactions (thoughts and feelings) make it harder for you to get along with people at home?
□ Yes □ No 2. Do these reactions (thoughts and feelings) get you into trouble at home?
□ Yes □ No 3. Do these reactions (thoughts and feelings) cause some other problem at home?
Describe: _____

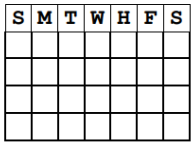
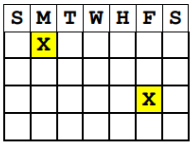
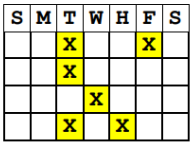
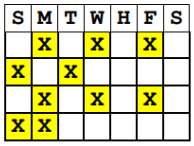
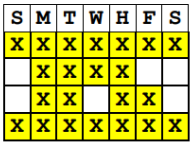
□ **School**: (check if youth endorses #1 *or* #2 below)
□ Yes □ No 1. Do these reactions (thoughts and feelings) make it harder for you to do well in school?
□ Yes □ No 2. Do these reactions (thoughts and feelings) cause other problems at school?
Describe: _____

□ **Peer Relationships**: (check if youth endorses #1 below)
□ Yes □ No 1. Do these reactions (thoughts and feelings) make it harder for you to get along with your friends or make new friends?
Describe: _____

□ **Developmental Progression**: (check if youth endorses #1 below)
□ Yes □ No 1. Do these reactions (thoughts and feelings) make it harder for you to do important things that other kids your age are doing?
□ Yes □ N0 2. Other (describe) _____
_____

FREQUENCY RATING SHEET

HOW MANY DAYS DURING THE PAST MONTH DID THE PROBLEM HAPPEN?

0	1	2	3	4
NONE	**LITTLE**	**SOME**	**MUCH**	**MOST**
				
NEVER	**TWO DAYS A MONTH**	**1-2 DAYS A WEEK**	**2-3 DAYS A WEEK**	**ALMOST EVERY DAY**

UCLA PTSD REACTION INDEX FOR CHILDREN/ADOLESCENTS - DSM-5©

SCORE SHEET

Subject ID#_____ **Age**____ **Sex (circle): M F** **Date:** _____ **Subject Name:** _____

For Items 2, 9, and 16: indicate highest score only for DSM-5 Symptom D2; for Items 15 and19: indicate highest score only for DSM-5 Symptom D3; for Items 6, 22, 25, and 27: indicate highest score only for DSM-5 Symptom D4; for Items 20 and 26: indicate highest score only for DSM-5 Symptom E2. Category B Total: Sum scores for symptoms B1-B5; Category C Total: Sum scores for symptoms C1 and C2; Category D Total: Sum scores for symptoms D1-D7; Category E Total: Sum scores for symptoms E1-E6; PTSD-RI Total Scale Score: Sum Category B, C, D, and E.

Item #	DSM-5 Symptom	Score *(0-4)*
18	B1	
10	B2	
5	B3	
11	B4	
14	B5	
SYMPTOM CATEGORY B SUMMATIVE SCORE:		____
13	C1	
3	C2	
SYMPTOM CATEGORY C SUMMATIVE SCORE:		____

Item #	DSM-5 Symptom	Score *(0-4)*
23	D1	
2*	D2	____
9*	D2	
16*	D2	
15*	D3	____
19*	D3	
6*	D4	____
22*	D4	
25*	D4	
27*	D4	
7	D5	
17	D6	
12	D7	
SYMPTOM CATEGORY D SUMMATIVE SCORE:		____

Item #	DSM-5 Symptom	Score *(0-4)*
4	E1	
20*	E2	____
26*	E2	
1	E3	
24	E4	
8	E5	
21	E6	
SYMPTOM CATEGORY E SUMMATIVE SCORE:		____

Dissociative Symptoms

28. A1 ____
29. A1 ____
(***Indicate highest score for A1***) ____

30. A2 ____
31. A2 ____
(***Indicate highest score for A2***) ____

PTSD-RI TOTAL SCALE SCORE

____

DSM-5 PTSD DIAGNOSIS

B: One or more Category B symptoms present: ☐
C: One or more Category C symptoms present: ☐
D: Two or more Category D symptoms present: ☐
E: Two or more Category E symptoms present: ☐
F: Symptom duration greater than one month: ☐
G: Symptoms cause clinically significant ***distress*** or ***impairment***: ☐
Specify Dissociative Subtype:
One or more dissociative symptoms present: ☐

Estimating Whether DSM-5 PTSD Category B, C, D, and E Symptom Criteria are Met

If symptom score is 3 or 4, then score symptom as "present." For question #4, #10, and #26; use a rating of 2 or more for symptom presence. Then determine whether one or more B symptoms are present; whether one or more C symptoms are present; whether two or more D symptoms are present; and whether two or more E symptoms are present. If one or more Dissociative Symptoms are present, then assign Dissociative Subtype.

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CURRICULUM VITAE

Amanda N. Howard, M.A.

(Amanda Kilgore)
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EDUCATION

Ph.D. in Clinical Psychology • University of Nevada, Las Vegas 2023
Las Vegas, NV
Dissertation: *Examining the factor structures of the ERQ-CA, RCADS, and RSCA to identify unique predictors of PTSD symptom clusters in maltreated youth*
Major Advisor: Christopher A. Kearney, Ph.D.

M.A. in Clinical Psychology • University of Nevada, Las Vegas 2020
Las Vegas, NV
Master's Thesis: *Examining the factor structures of the A-DES and PTCI to identify unique predictors of PTSD symptom clusters in maltreated youth*
Major Advisor: Christopher A. Kearney, Ph.D.

B.A. in Psychology and Sociology • Michigan State University Honors College 2016
East Lansing, MI
Dual Minors in Women and Gender Studies & Lesbian, Gay, Bisexual, Transgender, Queer and Sexuality Studies
Honors Thesis: *Gender as a moderator of associations among parental depression, anxiety, and substance abuse and child internalizing and externalizing problems*
Major Advisors: C. Emily Durbin, Ph.D.; Joseph Lonstein, Ph.D.

CLINICAL EXPERIENCE

SUNY Upstate Medical University August 2022 – Present
Syracuse, NY

SUNY Upstate Medical University is a leading academic medical center located in Syracuse, New York. The internship interweaves multidisciplinary training into each rotation including pediatricians, pediatric psychologists, psychiatrists, nurse practitioners, social workers, etc.

Title: Doctoral Psychology Intern
Supervisor and Director of Child Psychology Training: Ron Saletsky, Ph.D.
Internship Director: Michael Miller, Ph.D.

Rotations:

- Adolescent Intensive Outpatient Program (8/22-12/22): 4 weekly hours of group facilitation (2 hours adolescent group and 2 hours parent group) and 1-2 hours weekly of individual therapy. Weekly individual supervision and Consultation Team meetings. Services provided adhered to a Dialectical Behavior Therapy (DBT) framework.

- Pediatric Consultation-Liaison (12/22-4/22): performed psychological risk assessments to children and adolescents in the SUNY Upstate Pediatric Emergency Department.
- Trauma Clinic/ENHANCE Foster Care Clinic (4/22-8/22): conducted trauma screening, psychoeducation, and brief intervention to children and families affected by medical traumas in both inpatient and outpatient settings as part of the Pediatric Surgery Treatment Team. Conducted brief intervention with children and families within the Onondaga County foster care system as part of the ENHANCE Foster Care Clinic's multidisciplinary treatment team.

Additional Internship Training Experiences:

- Outpatient clinic: Carried an individual and family therapy caseload with patients ranging in age and diagnosis within a community mental health clinic of the New York State Office of Mental Health.
- Autism Diagnostic Observation Schedule-2 (ADOS-2)/Psychological Assessment Clinic: completed 6 assessment batteries focused on ruling out or identifying Autism Spectrum Disorder in children and adolescents. Batteries included a parent interview, administration and scoring of the Autism Diagnostic Observation Schedule-2 (ADOS-2), caregiver-report questionnaires, integrated report writing, and feedback sessions. Observed 10 live ADOS-2 administrations and assisted with scoring and interpretation as part of a team of clinicians.
- Rorschach Performance Assessment System (R-PAS): 6 hours of training in the administration and coding of the R-PAS.
- Didactics/Grand Rounds: 8-10 hours weekly of seminars (DBT, assessment, theory and philosophy, case formulation, diversity, child therapy, trauma, ethics in psychology, supervision) and grand grounds.

The Evidence Based Practice of Nevada August 2021 – May 2022
Henderson, Nevada

The Evidence Based Practice of Nevada (The EBP) is an independent behavioral healthcare practice in southern Nevada. The Pediatric Specialty Treatment rotation provides training in addressing complex behavioral concerns via individualized application of empirically supported interventions.

Title: Psychology Practicum Trainee
Supervisor: Adrianna Wechsler Zimring, Ph.D.

Individual therapy:

- Maintained a caseload of 8 weekly in-person and telehealth patients ages 4-18 years
- Presenting concerns included neurodevelopmental disorders, depressive disorders, anxiety disorders, obsessive-compulsive and related disorders, trauma and stressor-related disorders, and disruptive disorders

Intakes & Consultations:

- Performed two-hour intake appointments which included semi-structured clinical interviews, initial diagnosis, and assessment of appropriateness for treatment at our clinic
- Provided clinical recommendations for additional diagnostic assessment and/or treatment at the end of these appointments

Neuropsychological Evaluations:

- Completed comprehensive neuropsychological evaluations for children with a variety of presenting neurodevelopmental, neurocognitive, educational, and behavioral concerns
- Comprehensive evaluation process included: intake and psychiatric interview; selection of appropriate test battery; test administration, scoring, and interpretation; providing initial feedback to family; integrated report writing; and follow-up feedback and consultation to access services

Community Outreach

- Led a mindfulness workshop for 6th-12th graders and their families during a community STEM event
- Composed articles featured on our website blog designed to provide parent-friendly information on childhood disorders, empirically supported treatments, and childhood education

Support:

- Weekly pediatric consultation team meetings
- Weekly individual supervision
- Bi-weekly didactic trainings
- Monthly lunch & learn information sessions

The PRACTICE Community Mental Health Clinic August 2017 – May 2022
Las Vegas, Nevada

The PRACTICE serves as both a community mental health clinic and the training clinic of the UNLV psychology department. The PRACTICE provides sliding-scale individual, family, and group therapy to children and adults in the Las Vegas metropolitan area.

Title: Psychology Practicum Trainee
Primary Supervisors: Michelle Paul, Ph.D (2017-2021); Tara Raines, Psy.S., Ph.D. (2021-2022); John Nixon, Ed.D. (2021-2022)

Individual therapy:

- Maintained a caseload of 4-11 weekly in-person and telehealth patients ages 6-45 years
- Presenting concerns included neurodevelopmental disorders, depressive disorders, anxiety disorders, obsessive-compulsive and related disorders, trauma and stressor-related disorders, dissociative disorders, feeding and eating disorders, elimination disorders, sleep-wake disorders, gender dysphoria, disruptive, impulsive-control, and conduct disorders, and personality disorders
- Worked with an interpreter (bilingual psychologist) to provide services to Spanish-speaking families to ensure culturally and linguistically appropriate service provision
- Provided systemic support to child and adolescent patients by providing parent/caretaker consultation sessions
- Collaboratively developed treatment plans with patients/caregivers
- Participated in the national Child Help Training Collaborative which included a TF training certification program, assessment of PTSD and related challenges monthly consultations with a certified trainer, and a three-day intensive workshop

Group therapy:

- Co-facilitated 1 weekly skills-based psychotherapy group for children and their parents focused on emotion regulation, mindfulness, and parent management training
- Co-facilitated 1 weekly DBT-informed skills group for adolescents.
- Groups typically included 4-8 members with a broad range of presenting concerns
- Monthly case management and risk assessment sessions with each group member/family.
- Assisted in developing the curriculum for the teen group program
- Utilized expertise in providing telehealth services to assist in adaptation of teen group materials to online format following COVID-19 pandemic.

Psychological Assessment:

- Completed comprehensive psychodiagnostic assessments for children and adolescents including administration scoring, interpretation, integrative report writing, and therapeutic feedback with children, adolescents, and caregivers

Intake Interviews:

- Completed child, adolescent, and adult therapy intake sessions using semi-structured clinical interviews and thorough risk assessment
- Administered, scored, and interpreted screening questionnaires
- Presented on intake cases in grand rounds
- Provided therapeutic feedback of treatment recommendations to patients

Support:

- Weekly individual and group supervision
- Weekly staff meetings and interdisciplinary case rounds with students and supervisors from counseling psychology, community psychology, school psychology, couples and family therapy, and clinical mental health counseling backgrounds
- Monthly interdisciplinary consultation team meetings with psychiatrists and pediatric psychiatry fellows
- Monthly TF-CBT consultation calls with Dr. Elise Brown
- Annual training in Collaborative Assessment and Management of Suicidality (CAMS)

Administrative:

- Served as front desk administrator with duties including greeting patients and their families, managing billing, and completing general clerical tasks to assist clinicians in their clinical work
- Provided workshops on Titanium software and workshops on progress note writing to master's and doctoral level clinicians
- Assisted program development through creating Qualtrics surveys to aid assessment of trauma and PTSD for patients interested in a grief group

Title: Billing Graduate Assistant
Supervisor: Michelle Paul, Ph.D
Support:
- Weekly team meetings with front desk and administrative staff

Administrative:
- Monitored the clinic waitlist and completed initial phone intake screenings
- Managed all billing for the clinic through assisting front desk staff and clinicians in addressing patient concerns regarding payments
- Completed daily invoices for clinical appointments, weekly billing audits, and bi-weekly deposits

Title: Communities in Schools (CIS) Graduate Assistant
Supervisor: Michelle Paul, Ph.D; John Nixon, Ed.D.
Rural Telehealth:
- Caseload of 8 weekly telehealth patients ages 10-18 years
- Provided telehealth services (prior to and during the COVID-19 pandemic) within the PRACTICE specialty clinic, Tele-Mental Health Services to Community in Schools of Northeastern Nevada, to children and adolescents living in rural Northeastern Nevada.

Support:
- Weekly individual supervision
- Received extensive raining in the technical, ethical, and practical use of virtual psychotherapy (prior to the COVID-19 pandemic)

Administrative:
- Served as the liaison between our clinic and the CIS coordinator in Northeastern Nevada

Clark County Department of Family Services (DFS) August 2018 – August 2020
Las Vegas, Nevada

The Clark County Department of Family Services (DFS) is the local child welfare agency for children and adolescents. Practicum students at DFS primarily work at Child Haven, the residential emergency shelter for children and adolescents in protective custody.

Title: Psychology Practicum Trainee
Supervisor: Lisa Linning, Ph.D.
Individual therapy:
- Maintained a caseload of 1-2 weekly in-person patients ages 3-9 years including in-home and community- and school-based intervention
- Presenting concerns included trauma and stressor-related disorders and anxiety disorders

Group therapy:
- Co-facilitated 1 DBT-informed psychotherapy group (2 times/week) for adolescents ages 12-17 years and 1 skills-based psychotherapy group (2 times/week) for children ages 6-11 years based on a novel group protocol that I developed
- Groups typically included 5-10 members with a broad range of presenting concerns

- Provided therapeutic childcare services for toddlers ages 2-4 years

Crisis intervention:

- Worked with a team of Licensed Clinical Social Workers and Clinical Mental Health Counselors to identify and treat suicidality and high-risk behaviors in adolescents via crisis prevention planning, de-escalation strategies, and safety planning

Psychological Assessment:

- Administered psychodiagnostics assessments to a diverse population of maltreated youth
- Scored and wrote comprehensive evaluations used in the determination of services and care provided to children and adolescents in child welfare

Support:

- Weekly individual supervision
- Monthly consultation with interdisciplinary team

UNLV Child School Refusal and Anxiety Disorders Clinic August 2018 – August 2020
Las Vegas, Nevada

The UNLV Child School Refusal and Anxiety Disorders Clinic is a research-based sliding-scale outpatient facility that provides assessment and treatment of children and adolescents with school refusal behavior and related anxiety problems. Providers coordinate closely with school personnel.

Title: Psychology Practicum Trainee
Supervisor: Christopher A. Kearney, Ph.D.

Individual therapy:

- Maintained a caseload of 6 weekly in-person patients ages 5-16 years
- Presenting concerns included depressive disorders, anxiety disorders, disruptive disorders, and school refusal
- Collaborated with MDTs to create behavior intervention plans and consultation on IEP/ 504-Plans
- Provided education on behavior management in school settings

Psychological Assessment/ Diagnostic Intakes:

- Conducted two-hour initial intake diagnostic assessments consisting of structured clinical interviews and a series of biopsychosocial assessments to assess and
- Scored, interpreted, and wrote integrated reports based on assessment findings
- Provided therapeutic feedback of diagnostic findings and treatment recommendations

Support:

- Weekly individual and group supervision

CLINICAL CERTIFICATIONS AND TRAINING

Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) certification pending. Completed 11-hour online training and certification, 3-day workshop, 2 case presentations, and 12 consultation calls	Pending Licensure
HIPAA Awareness for Mental Health Certification, valid through August 17, 2023	2021
Making Connections (in collaboration with the Child Help Project); certified group facilitator. Completed 3-day training for a group psychotherapy protocol designed for children, adolescents, and caregivers impacted by childhood cancer	2020
Acceptance and Commitment Therapy (ACT). Completed 2-Day Workshop with Dr. Steven C. Hayes	2019
Complex Traumatic Grief (CTG) intervention. Completed 11-hour online training and certification.	2019
Interpersonal Social Rhythm Therapy (IPSRT) an intervention designed to treat adults with bi-polar disorder. Completed 8-hour training and certification.	2017
Screening, Brief Intervention, and Referral to Treatment (SBIRT), an evidence-based practice used to identify, reduce, and prevent problematic use, abuse, and dependence on alcohol and illicit drugs. Received 6 hours of seminar/didactic training.	2017
Project ImPACT, an evidence-based, parent-mediated intervention for young children with autism spectrum disorder (ASD). Completed 3-day training under supervision of Dr. Brooke Ingersoll.	2015

OTHER CLINICAL EXPERIENCE

Post-Event Counseling through UMC Hospital and the PRACTICE; provided short-term distance counseling during the COVID-19 pandemic — 2020

Making Connections – Grief group for children and families impacted by childhood cancer; served as group facilitator and assisted with program development through creation of Qualtrics assessment surveys — 2020

Supervised undergraduate assistants in providing brief exposures and teaching emotion regulation skills at the Selective Mutism Association Day Camp — 2019

Co-facilitated child and parent psychotherapy groups designed to treat selective mutism in children and parent management training with caregivers — 2018

Provided school-based intervention through the Truancy Diversion Project, an absenteeism prevention program and research project in collaboration with the Clark County School District — 2016 – 2017

Co-facilitated Project ImPACT parent and provider groups under supervision of Dr. Brooke Ingersoll — 2015

HONORS AND AWARDS

Outstanding Contribution to Diversity, Equity, and Inclusion — 2022

- This award honors service contributions that support students, faculty, or community members from marginalized backgrounds. Potential examples include participating in relevant committees or organizations, conducting trainings, community outreach, or facilitating dialogue about social justice issues.

Summer Doctoral Research Fellowship, $7,000 — 2021

- A fellowship awarded to outstanding doctoral students who have demonstrated excellence in their fields of study. This fellowship covered tuition and fees and provided a summer stipend. Required submission of a statement of purpose as well a recommendation letter from a faculty member.

Patricia Sastaunik Scholarship, $2,500 — 2021

- A merit- and finance-based scholarship awarded to graduate students in academic standing. Required submission of a statement of purpose as well a recommendation letter from a faculty member.

Charles Schwab Scholarship Recipient, $4,000 — 2018

- A scholarship awarded to a graduate student at the PRACTICE who

demonstrated excellence in clinical work. This scholarship provided a stipend to support additional clinical training experiences over the summer semester.

APA Student Travel Scholarship Recipient, $500 2018

1st place scholarship recipient in the Psychology Section of the University Undergraduate Research and Arts Forum, $500 2016

Dean's List, Michigan State University College of Social Science 2012 – 2016

RESEARCH EXPERIENCE

Graduate Research Assistant and Lab Manager, The UNLV Child & Adolescent Research in Selective Mutism, Anxiety, and Absenteeism (CHARISMA) Lab University of Nevada, Las Vegas 2016 – 2022
Principal Investigator: Christopher Kearney, Ph.D.

- Founded and managed the Adolescent and Child Trauma (ACT) division of the CHARISMA Lab
- Formed an interlocal agreement between UNLV and Department of Family Services (DFS) in Las Vegas to conduct research at Child Haven, the local emergency shelter for children and adolescents in state custody
- Administered, scored, and interpreted comprehensive assessments of PTSD and related problems in maltreated children and adolescents to facilitate data collection
- Supervised Regent's Service RAs 2017 – Present
- Collaborated with a research group in Spain to examine factors predictive of PTSD in maltreated children and adolescents
- Evaluated the psychometrics of various measures to create a psychometrically sound assessment battery to assess PTSD and related mood and behavioral problems in maltreated children and adolescents
- Supervised several student projects through the UNLV Research and Mentorship Program (RAMP) and McNair Scholars
- Served as a committee member for an undergraduate's honors thesis
- Co-facilitated meetings for the Truancy Diversion Program to eliminate chronic absenteeism in students from local high schools
- Administered questionnaires and semi-structured clinical interviews to high school students to assess family, individual, and interpersonal factors related to school refusal
- Led lab meetings

Graduate Research Assistant, The UNLV Reasoning and Memory Lab 2017 – 2018
University of Nevada, Las Vegas
Principal Investigator: David E. Copeland, Ph.D.

- Aided a study on the effects of attachment to fictional characters on feelings of grief
- Contributed to a study on the influence of physical appearance and

attraction on word recall
- Discussed and presented on scholarly research

Research Assistant, Autism Research Lab, Michigan State University 2015 – 2016
Principal Investigator: Dr. Brooke Ingersoll, PhD
- Collaborated on projects related to the dissemination and implementation of parent-mediated interventions for young children with autism spectrum disorder (ASD) in Medicaid systems
- Formulated qualitative coding schemes
- Co-led provider workshops on the dissemination and implementation of Project ImPACT
- Provided childcare during parent focus groups
- Transcribed focus groups
- Assisted graduates students in administering ADOS assessments
- Supported in-home and in-lab assessments for children with ASD

Research Assistant, Child Emotions Lab, Michigan State University 2014 – 2016
Principal Investigator: Dr. C. Emily Durbin, PhD
- Designed a study examining gender as a moderator of the transmission of mental health problems between parents and offspring
- Conducted electroencephalograph (EEG) and temperament visits with children ages 4-12 years for a longitudinal study on the transmission of biological processes from parents to children and how these processes relate to the development of personality
- Co-led a brief intervention examining the neural and behavioral effects of targeting effortful control skills in preschool-aged children
- Coordinated training groups to coach research assistants on temperament visits
- Devised Remark Office OMR scanner templates for automatic data entry coding
- Facilitated training for Remark Office OMR data entry
- Coded child temperament videos for positive and negative affect

Research Assistant, Sleep and Learning Lab, Michigan State University 2014 – 2016
Principal Investigator: Dr. Kimberly Fenn, PhD
- Orchestrated the setup of polysomnography (PSG) sleep technology
- Managed participants during 10-hour sleep deprivation studies
- Supported a study on social-evolutionary effects on cognition by running participants through experiment scripts, entering data in Microsoft Excel, and analyzing data from Qualtrics surveys

- Aided a study on the effects of sleep on false witness identification by running participants through experiment scripts and utilizing infrared eye tracking equipment
- Contributed to a study on the effects of sleep on memory for word pairs by facilitating the evaluation of data and organization of data points collected through utilizing Microsoft Excel
- Edited and discussed scholarly articles and research presentations
- Trained in salivary hormone data collection

PEER REVIEWED PUBLICATIONS

Howard, A., Gonzálvez, C., & Kearney, C.A. (2022). Unique factor structures of the Adolescent Dissociative Experiences Scale and Posttraumatic Cognitions Inventory and their relation to PTSD symptom clusters in maltreated youth. *Journal of Aggression, Maltreatment and Trauma*, 31(2). https://doi.org/10.1080/10926771.2021.1894290

Pickard, K., **Kilgore, A.**, & Ingersoll, B. (2016) Using community partnerships to enhance the feasibility and acceptability of an evidence-based, parent mediated intervention for use in a Medicaid system. *American Journal of Community Psychology*.

MANUSCRIPTS AND BOOK CHAPTERS

Howard, A. N. (2020). Examining the Factor Structures of the A-DES and PTCI to Identify Unique Predictors of PTSD Symptom Clusters in Maltreated Youth. *UNLV Theses, Dissertations, Professional Papers, and Capstones*, 3903. https://digitalscholarship.unlv.edu/thesesdissertations/3903

Kearney, C.A., Gerthoffer, A., **Howard, A.**, & Diliberto, R. (2019). Selective mutism. In B. Olatunji (Ed.), *Handbook of anxiety and related disorders*. Cambridge: Cambridge University Press.

Velasco, V., **Howard, A**., Kearney, C.A. (2017). Differential Effects of Child Maltreatment Type and Chronicity Variables on PTSD Symptoms. UNLV *McNair Scholars Research Journal.*

CONFERENCE WORKSHOPS

Howard, A.N., Burke, S., Mraz, A., Ellis, K., Donohue, J., Benjelloun, N., Kearney, C.A. (2021, June 9-10). *Assessment of PTSD and related symptoms for maltreated adolescents: Protocol and empirical findings* [Workshop]. Nevada Child Abuse Prevention and Safety Conference, virtual conference during the COVID-19 pandemic.

Kearney, C.A., Fornander, M., **Howard, A.** (2017, July 21-23). *Problematic Absenteeism and School Refusal Behavior* [Workshop presentation]. School Social Work Association of America (SSWAA) annual conference, San Diego, CA.

CONFERENCE POSTER AND PAPER PRESENTATIONS

Burke, S., Constantine, M., Mraz, A., Ellis, K., **Howard, A.**, Kearney, C.A. (2021, November 18 – 21). *Do Trauma-Related Cognitions Predict Indirect Self-Injurious Behaviors in Maltreated Youth?* [Poster presentation]. Association for Behavioral and Cognitive Therapies Annual Conference, New Orleans, LA.

Howard, A.N. (2021, April 21) *Examining the Factor Structures of the A-DES and PTCI to Identify Unique Predictors of PTSD Symptom Clusters in Maltreated Youth* [Data blitz presentation]. UNLV Department of Psychology Graduate Research Fair, Las Vegas, NV.

Donohue, J.S., **Howard, A.N**., Kearney, C.A. (2021, March 18 – 19). *Expressive suppression and cognitive reappraisal predict resilience in a sample of maltreated youth* [Poster presentation]. Anxiety and Depression Association of America (AADA) virtual conference during the COVID-19 pandemic.

Donohue, J.S., **Howard, A.N**., Kearney, C.A. (2021, April 28 – 30). *Don't 'bottle it up'! The relationship between emotion regulation and resilience in maltreated youth* [Poster presentation]. Western Psychological Association (WPA) virtual conference during the COVID-19 pandemic.

Burke, S., Constantine, M., Rede, M., **Howard, A.**, Mraz. A, Kearney, C.A. (2020, May 21-24). *Suicidal ideation attempts and non-suicidal self-injury associated with higher rates of internalizing symptoms and lower rates of resilience in maltreated youth* [Poster presentation]. Association for Psychological Science (APS) National Conference, Chicago, IL. (Conference canceled).

Howard, A.N., Fornander, M.J., Bacon, V., Rede, M., Burke, S., Constantine, M., Gerthoffer, A., Diliberto, R., Kearney, C.A. (2019, October 12-13). *Somatic symptoms and internalizing problems as moderators of selective mutism severity* [Poster presentation]. Selective Mutism Association (SMA) National Conference, Las Vegas, NV.

Fornander, M.J., Bacon, V., Reede, M., Constantine, M., Burke, S., **Howard, A.**, Gerthoffer, A., Diliberto, R., Kearney, C.A. (2019, October 12-13). *Selective mutism presentation in US versus non-US children* [Poster presentation]. Selective Mutism Association (SMA) National Conference, Las Vegas, NV.

Velasco, V., **Howard, A.**, Kearney, C. A. (2019, August 8-11). *Exploring perpetrator relationship and avoidance symptoms as predictors of childhood PTSD in a sexually maltreated sample* [Paper presentation]. American Psychological Association (APA) National Conference, Chicago, IL.

Bacon, V.R, Fornander, M.J., Rede, M., Constantine, M., Burke, S., **Howard, A.**, Gerthoffer, A., Kearney, C.A. (2019, May 23-26). *Bullying as a risk factor for school absenteeism* [Poster presentation]. Association for Psychological Science (APS) National Conference, Washington, D.C.

Fornander, M.J., Bacon, V., **Howard, A.,** Gerthoffer, A., & Kearney, C.A. (2018, November 15-18). *Predicting school refusal behavior with youth report of school climate* [Poster presentation]. Association of Behavioral and Cognitive Therapies (ABCT) National Conference, Washington D.C.

Fornander, M.J., Bacon, V., **Howard, A.**, Gerthoffer, A., & Kearney, C.A. (2018, November 15-18). *Internalizing symptoms as predictors or problematic school absenteeism* [Poster presentation]. Association of Behavioral and Cognitive Therapies (ABCT) National Conference, Washington D.C.

Fornander, M.J., Bacon, V., Diliberto, R., **Howard, A.,** Kearney, C.A. (2018, September 15-16). *Predicting symptoms severity in children with selective mutism* [Poster presentation]. Selective Mutism Association (SMA) National Conference, Chicago, IL.

Bacon, V., Fornander, M.J., **Howard, A.,** Gerthoffer, A., Kearney, C.A. (2018, September 15-16). *Boys Will Be Boys? Gender Differences in Informant Reports of Symptoms in Children with Selective Mutism* [Poster presentation]. Selective Mutism Association (SMA) National Conference, Chicago, IL.

Howard, A.N., Velasco, V., Fornander, M.J., Gerthoffer, A., Bacon, V., Kearney, C.A. (2018, August 9-12). *Reexperiencing Symptoms in Childhood PTSD Act as a Protective Factor against Dissociative Symptoms* [Poster presentation]. American Psychological Association (APA), San Francisco, CA.

Velasco, V., **Howard, A.N.**, Fornander, M.J., Gerthoffer, A., Bacon, V., Kearney, C.A. (2018, April 26-29). *PTSD Symptom Clusters Predict Dissociative Symptoms in Maltreated Youth* [Poster presentation]. Western Psychological Association (WPA), Portland, OR.

Velasco, V., **Howard, A.N.**, Fornander, M.J., Gerthoffer, A., Bacon, V., Kearney, C.A. (2018, April 27-29). *PTSD Symptom Clusters Predict Dissociative Symptoms in Maltreated Youth* [Poster presentation]. Nevada Psychological Association (NPA), Las Vegas, NV.

Fornander, M.J., Lozano, A., Perez, F., Rodriguez, A., Bacon, V., **Howard, A.N.**, Gerthoffer, A., & Kearney, C.A. (2018, April 27-29). *School climate risk and protective factors of school refusal behavior* [Poster presentation]. Nevada Psychological Association (NPA), Las Vegas, NV.

Kearney, C.A., Fornander, M., **Howard, A.,** & Bacon, V. (2018, March 12-16). *The role of the School Refusal Assessment Scale in an evolving multi-tiered system of supports model* [Paper presentation]. Lorentz Center Conference on School Absenteeism: Universal Problem Seeks Gold Standard Solutions, Leiden, Netherlands.

Kearney, C.A., Fornander, M., **Howard, A.,** & Bacon, V. (2018, March 12-16). *The short version of a long, troubled history of differentiating among school attendance problems* [Paper presentation]. Lorentz Center Conference on School Absenteeism: Universal Problem Seeks Gold Standard Solutions, Leiden, Netherlands.

Fornander, M., **Howard, A.**, Gerthoffer, A., Skedgell, K. (2017, November 16-19).

Adolescents' Spoken Language and Ethnic Identity are Associated with Important Protective Factors against School Refusal Behaviors [Poster presentation]. Association for Behavioral and Cognitive Therapies (ABCT) annual conference, San Diego, CA.

Fornander, M., **Howard, A.**, Gerthoffer, A., Skedgell, K. (2017, May 12-14). *Adolescents' Spoken Language and Ethnic Identity are Associated with Important Protective Factors against School Refusal Behaviors* [Poster presentation]. Nevada Psychology Association (NPA) annual conference, Las Vegas, NV.

Kilgore, A., Durbin, C.E., & Lonstein, J. (2016, May 26-29). *Gender as a Moderator of Parental Depression, Anxiety, and Substance Abuse and Child Internalizing and Externalizing Problems* [Poster presentation]. Association for Psychological Science (APS) annual conference, Chicago, IL.

Kilgore, A., Durbin, C.E., & Lonstein, J. (2016, April 8). *Gender as a Moderator of Parental Depression, Anxiety, and Substance Abuse and Child Internalizing and Externalizing Problems* [Poster presentation]. Michigan State University Undergraduate Research and Arts Forum, East Lansing, MI.

Kilgore, A. & Bailey, K. (2016, April 8). *Predictors of providers' use of an evidence-based parent-mediated intervention for ASD in community settings* [Poster presentation]. Michigan State University Undergraduate Research and Arts Forum, East Lansing

WEBSITE ARTICLES

Howard, A. (2022, April 13). A brief guide to homeschooling. The Evidence Based Practice of Nevada. https://www.theebpnv.com/blog

Howard, A. (2022, January 19). Beyond the 'five stages': Understanding childhood grief. The Evidence Based Practice of Nevada. https://www.theebpnv.com/blog/beyond-the-five-stages-understanding-childhood-grief

LEADERSHIP AND PROFESSIONAL SERVICE ACTIVITIES

Graduate Mentor – Society of Clinical Child and Adolescent Psychology (Division 53) Mentoring Program — 2021 – 2022

Graduate Mentor – UNLV GPSA/CSUN Co-op Mentorship Program — 2020 – 2022

President and Founder – Diversity and Inclusion Student Committee (DISC) – University of Nevada, Las Vegas — 2019 – 2022

- Formed the first student-led D&I and social justice group, eventually gaining enough interest to form an executive board and become a Registered Student Organization
- Led meetings and facilitated discussion

- Presented on various D&I topics
- Hosted workshops and guest speaker presentations
- Coordinated with department organizations (CSC and IDEAS) to provide education on pronouns and encourage all faculty and students to include pronouns in email signatures
- Collaborated with local community organizations to host volunteer events and donation drives
- Volunteered on projects that serve low-income and unhoused individuals

Graduate Student Member – Inclusion, Diversity, Equity, Access, and Solutions (IDEAS) Committee – University of Nevada, Las Vegas 2019 – 2022

Graduate Volunteer – Resilient Communities non-profit organization 2019 – 2022

- Assisted with program development and community outreach under the supervision of Carolina Meza Perez, Psy.D.
- Provided presentations on professional development to undergraduate and high school students

Graduate student mentor – Opportunities for Undergraduates Mentorship Program (OUMP) – University of Nevada, Las Vegas 2016 – 2022

Student Reviewer – Association for Psychological Science (APS) 2015 – 2019

Public Relations and Social Media Coordinator – Living in Great Harmony Together (LIGHT) LGBTQIA+ organization of Michigan State University 2013 – 2014

Volunteer – Midwest Bisexual Lesbian Gay Transgender Ally College Conference (MBLGTACC) 2013

Vice President – Spectrum LGBTQIA+ organization of Michigan State University 2012 – 2014

Hall Government Representative – Spectrum LGBTQIA+ organization of Michigan State University 2012 – 2013

RCPD Student Support Intern – Internship with Dr. Joy Jacobs in Human Development and Family Studies department of Michigan State University 2012 – 2013

TEACHING EXPERIENCE

General Psychology (PSY 101) Fall 2018 – Spring 2020
Course Instructor for 8 Course Sections
University of Nevada, Las Vegas
Overall evaluation rating across 8 courses: 4.67 (more than 2 standard deviations above the overall department mean)

PROFESSIONAL AFFILIATIONS

Society for a Science of Clinical Psychology (SSCP; APA Div 12 Sec 3) 2021 – Present

Society of Child and Adolescent Clinical Psychology (APA Div 53) 2020 – Present

American Psychological Association of Graduate Students (APAGS) 2016 – Present

Association for Psychological Science (APS) 2015 – 2021

COMMUNITY SERVICE ACTIVITIES

Volunteer – Las Vegas Liberation 2021 – 2022

Children's Ministry Leader – Canyon Ridge Christian Church 2019 – 2022