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A POTENTIAL LOSS OF CHILDHOOD:

TRAUMA, ITS EFFECTS, & THE ELEMENTS OF HEALING

by

Kayla Jayne Reis

Submitted to the School of Honors Committee

in partial fulfillment

of the requirements for University Honors Scholars

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2019

This thesis is dedicated to my Lord and Savior, Jesus. He is where my strength is found and any good thing in me comes from.

Thank you to my family who instilled the value of education in me,

my friends who supported and made my life vibrant,

and my professors, especially Professor Felix, my thesis advisor,

for inspiring and teaching me.

Abstract

Trauma is likely to be experienced by many children in many different ways. Through an exploration of the current literature, this thesis, unearths a detailed look into four different trauma types: unaccompanied migrant youth, manmade disaster, natural disaster, and the domestic child welfare system. Regardless of how the child experienced trauma there were similarities amongst consequences and symptomology of the trauma. Many of the effects of trauma being evident through Post Traumatic Stress Disorder (PTSD), anxiety, depression, behavioral issues, poor educational achievement, and poor relationship skills. Six current and well-established interventions were analyzed for their efficacy amongst the four trauma types studied. This author found there were many gaps in the research, including but not limited to: length of follow up times, diversity of countries, and implementation methods. There is a great need for trauma informed care, as evidenced by the linkage between trauma and symptomology and life long effects. Unfortunately, much more research needs to be done.

KEY WORDS: Trauma, trauma informed care, children, manmade disaster, natural disaster, unaccompanied migrant youth, child welfare system

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Introduction

Two children. One lives in the suburbs of the United States with his mom and dad. He is fed and goes to school, but daily fears the coming home of dad. This homecoming is not one filled of joy, but one of terror, as he may witness another beating of mom, or if he is unlucky another wound inflicted on his own body. The other child lives in Gaza without a mom or dad, instead with an aunt, surrounded by the elements of war. He is fed and cared for, but his lifestyle is characterized by bombs crashing, people screaming, and soldiers marching. Although these children differ in their culture, religion, and home structure, there is one thing that unifies them – trauma.

Trauma is "an event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or life threatening and that has lasting adverse effects on the individual's functioning and mental, physical, social, emotional, or spiritual well-being" (SAMHSA, 2019). A traumatic event can come in many forms, such as natural disaster, manmade disaster, abuse, and bereavement. Depending on the trauma type it is characterized as an acute or chronic experience. The influences of the response of trauma rely heavily on the nature of the trauma, social and community support, individual characteristics, and belief systems (Betancourt & Khan, 2008). Due to these variety of influences, trauma can result in Post-Traumatic Stress Disorder (PTSD), increased anxiety, depression, behavioral issues, and possibly a loss of childhood. A loss of childhood could result when a child who undergoes a traumatic event (or several) is impacted in a way where his/her view of the world has changed from a child to a fearful individual. The world becomes a darker place where trust becomes a forgotten memory, and where safety is sought after, but not found. The child may lose their

attitude of joyfulness, playfulness, and curiosity – all traits that help a child develop, learn, and grow in this world.

This author began to wonder about the children who are in the darkest pits of trauma. Children who are withdrawn and feel lost because of the curveballs life has thrown their way. Children who may be battling psychological problems and experiencing so much loss they may be without a home, a family, or any social support. These children can be found in the United States, Zimbabwe, Israel – any country. Just like certain feelings and facial expressions are universal, trauma can be experienced anywhere, by anyone, in any culture. There has been much research on traumatic events, trauma effects, interventions, but lesser on how to apply all this knowledge on the ground. For knowledge and research to be truly effective it needs to be acted upon. The proceeding sections of this paper will explore the following:

- How does trauma type (i.e. natural disaster, manmade disaster, migrating, and complex) impact children differently?
- Are there any differences in the effectiveness and feasibility of interventions according to trauma type and geographical location, if so what?
- What are some of the gaps in the current literature according to trauma and children?

Research needs to be utilized to implement trauma-informed care that focuses on reducing psychological symptoms, and re-establishing trust, safety, and childlike characteristics to traumatized children around the world. Trauma reaches all around the globe and through many different forms. Research in the trauma arena has the ability to impact millions, if not billions of people. Through exploring the literature this author hopes to find interventions that can be research informed, applied in cross-cultural context, and easily utilized in all corners of the globe. This author believes the basis for these interventions will involve community support,

training staff on trauma informed care, and creative means of implementation. This author hopes that these interventions can restore traumatized children to living out their childhood.

Methodology

This thesis is an expanded literature review. To begin there is a general trauma knowledge portion that dives into the basic terms of trauma and factors that influence severity. The thesis continues into studying four specific trauma types. This author's hope is that by illustrating four particular traumas, readers will be able to better understand what trauma is and its effects. Also, in analyzing four different traumas this author was able to analyze different rates of psychological symptoms, and the uniqueness and similarities amongst each trauma type. The four types of traumas studied were as follows: Unaccompanied Migrant Youth Trauma, Manmade Disasters, Natural Disasters, and Child Welfare. Each trauma type had at least seven articles analyzed in order to study trends and to paint the picture of each trauma type. Articles were chosen if published in a scholarly journal and peer reviewed. The articles used to study these different traumas are categorized according to trauma type in Appendix A.

For the intervention section many learning houses were searched for the most prominent treatments being used for children experiencing trauma. The most prominent therapies being studied are as follows: Trauma-Focused Cognitive Behavioral Therapy (TF-CBT), Prolonged Exposure (PE), Attachment, Self-Regulation, and Competency (ARC), Cognitive Behavioral Intervention for Trauma in Schools (CBITS) and other school based interventions, Eye Movement Desensitization and Reprocessing (EMDR), and a variety of play/creative therapies. For each intervention at least three articles were reviewed and analyzed for year published, type of therapy, type of trauma, sample criteria and size, type of study, purpose of study, results of the therapy, and where the study was conducted. These were categorized into a chart in order to have a reference for this author and readers to study as needed. Articles were chosen if published in a scholarly journal and peer reviewed. The studies are compiled into a chart that can be found in

Appendix B. The goals of studying the literature in this fashion were to determine where the gaps in trauma informed care literature are, the effectiveness of different interventions, how modern the different treatments are, and an analysis of what interventions should be utilized when dealing with the four different traumas being studied in this author's thesis.

Trauma & Its Effects on Children

The modern world allows for broadcasting of natural disasters, wars, mass shootings, and overall, terrible acts that bring destruction to humanity. Images of people crying out in desperation, destruction of homes, and more flood the electronic screens and news the modern world frequents. What these images and film rolls cannot capture is the trauma that internally affects people after undergoing a single or several traumatic events. In particular, children can be affected by trauma in a way that disrupts them from growing up to be healthy adults. The children of this world today are surrounded by potentially traumatic events that can spark either resiliency or negative effects such as anxiety, depression, or PTSD. The following will briefly review what trauma and trauma informed care is, the factors that impact the severity of trauma, and how trauma affects children.

After a child experiences a traumatic event the effects of the trauma reverberates through the child. A traumatic event can curtail childhood and cause the child to lose healthy relationships, their sense of trust (Maikoetter, 2011; Gaffney, 2006; Ehntholt & Yule, 2006), and effect their behavioral, emotional, and mental health. This is where trauma-informed care comes in. Trauma-informed care on its most basic level is acknowledging that trauma can negatively affect the child in a manner the child cannot control, and the child needs intervention to return to optimal functioning (Maikoetter, 2011). One of the effects of trauma is behavioral issues. Traumatized children may be non-compliant, aggressive, and/or antisocial because of a traumatic event (Bowie, 2013, p. 82). Instead of writing the child off as troubled, one must dive deeper to discover the need behind the behavior. It is also worthy to note that not all the effects of trauma are maladaptive to the child. Children who have undergone a traumatic event have been shown to increase helping, comforting, and sharing behaviors (Kuenzlen et al., 2016).

Behavioral issues are not the only effect that can arise from experiencing trauma, but also mental health issues. PTSD in children who have experienced trauma has been widely studied. One study compared Chilean girls in foster care who were likely to have undergone abuse to Chilean girls who lived with at least their biological mothers. They found the rates of PTSD for those in foster care to be 18.5%, compared to 0% of girls living with their biological mother (Seiler, Kohler, Ruf-Leuschner, & Landolt, 2016, p. 184). In a sample of street children from Quito, Ecuador they found that 60% of the children fulfilled DSM-IV criteria for PTSD (Pluck, Banda-Cruz, Andrade-Guimaraes, Ricaurte-Diaz, & Borja-Alvarez, 2015, p. 221).

Trauma also affects children on the biological level. Traumatic events cause children to be put under stress in which the hormone cortisol is released (Maikoetter, 2011). This hormone causes arousal that can be destructive if it is constantly being emitted. In a study by Biological Psychiatry conducted January 2015 evidence was found that trauma and stress disorders can hasten ageing on the cellular level (as cited by Niaz, 2015). PTSD in young children has also been shown to reduce the size of the corpus callosum and frontal lobe which could negatively affect cognitive functions (Pluck et al., 2015). Trauma effects the behavior, mental health, and physical health of the child.

Factors that Influence the Severity of Trauma

The level of severity of the trauma depends on the factors that surround it. Each child will be affected by a traumatic event differently due to many different external and internal factors. It is important to analyze the factors that impact the severity of trauma, because this impacts the needed level of intervention. One of the major influences of severity of trauma is whether or not it is acute (a one-time occurrence) or chronic/complex (reoccurring occurrences). For example, an acute trauma experience could be a car accident, or robbery, whereas a chronic trauma

experience would be reoccurring physical abuse. In Kuenzlen, Beekhus, Thorpe, and Borge's (2016) study, they tested the question if an acute traumatic event could cause a long lasting impact on a child's functioning. The findings suggested that young children generally cope well with a single traumatic event. Acute and complex trauma relate closely to family and non-familial trauma. To expand on complex trauma, it should be noted that this is likely to occur within the family home (Campbell, Roberts, Synder, Papp, Strambler, & Crusto, 2016). The family home is crucial to a child's development, for it is where he or she learns to trust. When a family member abuses or neglects a child the environment where the child is supposed to learn trust may be replaced with the learning of mistrust. One study examined the level of social-emotional challenges as it relates to children who have undergone either family or nonfamily (nonfamilial) trauma. The study found that family trauma was more likely to be associated with high-risk level of social-emotional challenges in comparison to nonfamily trauma (Campbell et al., 2016). These findings suggest that when the trauma is inflicted by someone the child is relationally close to the effects of the trauma may be greater.

The socioeconomic class children are a part of also effects the severity of trauma experienced. Children from a lower socioeconomic background may have less access to resources and live in more dangerous areas where likelihood of experiencing traumatic events is increased. In Deeba and Rapee's (2015) study, conducted in Bangladesh, they compared community children (children enrolled in schools) and at-risk children (those receiving social support services like shelter homes) and the type of trauma and trauma effects each group of children experienced. Their findings were that children from the community reported more natural disaster traumatic events, while the at-risk children experienced more manmade traumatic events. They also found that the at-risk children scored higher on the anxiety and depression

scale, as well as the Children's Revised Impact of Event Scale-13 (CRIES) (Deeba & Rapee, 2015). In another study conducted in Gaza it was found that children and parents of higher economic status experienced a lesser amount of traumatic events (Thabet, Tawahina, Sarraj, & Vostanis, 2008).

Yet another factor that goes into determining the severity of the trauma is proximity. Proximity is essentially a question of did the child experience the traumatic event directly or indirectly? Proximity is a subjective factor that goes into determining trauma's effects. The greater perceived proximity to the event the greater reaction to the event in terms of perceiving it as a threat and increased likelihood of PTSD symptoms (Weinberg & Gil, 2016). Trauma can still have detrimental effects if the trauma is experienced indirectly through emotional and physical proximity (Yazdani, Zadeh, & Shafi, 2016). If a close family member experienced the trauma or if the traumatic event happened in the same neighborhood as the child, vicarious trauma can lead to the development of PTSD symptoms (Yazdani et al., 2016). Proximity can also come to play in memory. There are two types of perspectives that can be formed around a traumatic event: field perspective (recalling an event first hand, as if one was actually there) and observer perspective (recalling an event as an outsider). The field perspective would be a greater proximity to the event (Dawson & Bryant, 2016). Dawson's and Bryant's (2016) study found that boys who recalled a traumatic event of a tsunami through an observer perspective had less severe stress reactions to the trauma.

The final factor to examine is the total number of traumatic events endured. In the famous Adverse Childhood Experiences (ACEs) study they found that more trauma experiences in childhood increased health related risks later on in life (Felitti et. al, 1998). A study conducted in Gaza analyzed different levels of war exposure that children endured and found that not a single

type of war trauma increased likelihood of PTSD, rather a greater amount of war exposure endured would increase likelihood of PTSD (Thabet et al., 2008). Deeba and Rapee (2015) also support the finding that the more traumatic events endured the greater distress experienced by the child.

Exploring Modern Child & Youth Trauma

It is apparent that trauma strongly effects a child, but the trauma type strongly ties to the the response of the child. Much of the literature points to the complex trauma that occurs when a child is ongoing constant abuse as the most damaging to the child. The following section will explore complex trauma in the child welfare system, but along with trauma endured by unaccompanied minor youth, and children who have undergone manmade and natural disaster. This exploration hopes to enlighten if there are certain trends within certain traumatic experiences, or if there is a common thread amongst all these traumatic experiences. The importance of exploring the different traumatic events lies in the importance of choosing the correct intervention. In order to for an intervention to be implemented for the highest level of success, mental health professionals need to be aware of what trends are occurring amongst these different traumatized populations.

Unaccompanied Migrating Youth from Latin America

Unaccompanied migrant youth coming from South and Central America has been a hot topic with the current administration's separation and detainment of youth. The overall research discussed will focus primarily on the trauma informed perspective, rather than the political impacts. In the year 2014 alone, 68,000 unaccompanied migrant youth were apprehended mostly from South America (Swanson & Torres, 2016). This is not including the 50,000 family units that crossed the United States (US) – Mexican border in 2014 (Keller, Joscelyne, Granski, & Rosenfeld, 2017).

Youth and families are motivated to cross the southern border of the United States by more than living the white picket fence American dream. One of the main reasons of migration is an escape from violence – domestic, political, and gang related violence contribute to many

Central American immigrants crossing the border illegally (Roschelle, Greaney, Allan, & Porras, 2018). Data to determine trauma exposure, and severity of mental health concerns was collected from 234 adults who were awaiting their court trial from U.S. Customs and Border Protection (Keller et. al, 2017). The three countries represented were El Salvador, Honduras, and Guatemala. Findings showed that 204 out of 234 people were exposed to trauma, and 182 of the sample fled due to violence concerns (Keller et. al, 2017). It was also found that 32% have symptoms that are indicative to PTSD, and 26% have symptoms that are indicative to depression (Keller et. al, 2017). Sixty percent of people in this survey report fleeing due to gang violence (Keller et. al, 2017). In a different survey, nearly a third of respondents indicate that their neighborhoods are effected by gang activity and upwards of 74% of people in each country report that crime is a threat to the nation's wellbeing (Pérez, 2013, p. 220-221).

Children throughout Central America report having to evade criminal activities, receiving threats to their own well-being, and recruitment from criminal activities like gangs (Swanson & Torres, 2016). Children are in a vicious cycle, because the poverty, lack of family structure (single mothers with many children), and early drop out rates contributes to children being recruited by gangs (Pérez, 2013). The United Nations High Commissioner for Refugees (UNCHR) (2014) found that out of 400 unaccompanied minors, the majority fled Central America due to criminal violence and domestic violence (as cited by Swanson & Torres, 2016). There is no doubt that violence is a huge contributor to the increased numbers of unaccompanied minor youth and families entering into the United States.

Children from Latin America not only face risks of trauma during their time in their home country, but also on their journey into the United States. These children are traveling hundreds of miles through various means – walking, bus, trains, planes, boats, etc. that exposes

them to multiple harms. These children could be depending on coyotes to get them into the United States that may abandon them or hand them off to drug cartels (Swanson & Torres, 2016). Especially near the border there is an increased risk of exposure to drug cartels that may kidnap the children, recruit the children, or physically harm them (Swanson & Torres, 2016). Some children may already be starting the journey with trust and abandonment issues and the journey has the possibility to only reinforce the child's worldview that the world is an untrustworthy place. The journey also proves difficult physically, because the youth may be wandering in the dessert dealing with heat exposure and dehydration (Swanson & Torres, 2016).

Upon arrival into the United States unaccompanied youth are confronted with a new culture and a new legal system sometimes without familial support. Not only are these children at risk of trauma while acculturating to the language and customs of the United States (Thibeault, Mendez, Nelson-Gray, & Stein, 2017) they now also have to navigate the legal system. The youth can be easily stressed with the fear of deportation, not being able to provide for their family members, and not being able to find their family members (Linton, Kennedy, Shapiro, & Griffin, 2018). Since the youth are being processed through civil court they are not required to have lawyers, even though those with lawyers are much more likely to be able to legally stay in the United States (Roschelle et. al, 2018).

All of this uncertainty and unknown legal factors contribute to the youth's stress while in detention centers. The detention centers for the youth have been noted as tight and uncomfortable (Swanson & Torres, 2016; Perez, 2014) One study found that the majority of people in the detention center had anxiety, depression, and/or PTSD and that if they were removed from detention their psychological symptoms lessened, but if they were still in detention there was a worsening of symptoms (Keller et. al, 2003). Also the detention centers do

not promote opportunities for education and safe play which can lead to a higher risk of developing symptomology (Mares, Newman, Dudley, & Gale, 2002). The unaccompanied minors have a right to education, but one that is sometimes illegally refused by schools, or the teaching is not adequate for the level the children are on (Linton et. al, 2018; Roschelle et. al, 2018).

Cardoso (2018) studied 30 unaccompanied minor youth from Central America and found that each youth reported an average of 8.27 traumatic events in their lifetimes (p. 146). In the same study over half of the youth were at the level of diagnosable PTSD, 30% for major depressive disorder, and 30% have reported suicidal ideation (Cardoso, 2018, p. 149). Unaccompanied migrant youth from Central America are facing trauma in all stages of their life and this explains why their trauma exposure is so high. It begins when they are born into a violent culture that can include gangs, domestic violence, and risk of being abandoned on the street. If the children decide to take the journey to the United States they are faced with many challenges where their physical, emotional, and psychological boundaries will be tested. If the children make it to the United States they are confronted with cultural adjustment, detention centers, and the legal system. Overall the exposure to trauma is high in this population and the risk for psychological ill-being and mental illness because of trauma is also high.

Manmade Disaster

War crafts an environment of instability, little safety, and fear that is not conducive to the upbringing of a child. Children located in areas of war are exposed to violent acts that can be potentially traumatizing. A study that took place within the Gaza strip found that out of 197 children surveyed, 98.5% witnessed mutilated bodies and wounded people on TV, 94.9% witnessed signs of shelling, and 92.9% heard shelling (Thabet et al., 2008, p. 194). In Thabet et

al.'s (2008) study the children sampled experienced a mean of eight traumatic events. A different study conducted with refugee children (n=60) who have been exposed to community violence outside of the United States found that 47% directly experienced trauma and 47% vicariously experienced trauma (Betancourt & Kahn, 2008, p. 685). In Betancourt & Kahn's (2008) study 60% witnessed violence, 37% knew someone injured, 10% had death or serious injury of a parent, and 7% experienced death or injury of a sibling (p. 685). The likelihood of trauma exposure in a war environment for a child is high. Even if the child did not witness or partake in the traumatic event first hand, they can still experience it vicariously through a close family member or friend.

The effects of war trauma are very similar to other traumas. In Thabet et al.'s (2008) study out of 197 children from Gaza 138 of them were "likely to present with PTSD" and 33.9% were "rated as having anxiety symptoms of likely clinical significance" (p. 195). Betancourt and Kahn (2008) found that 34.15% of their sample of refugee children exposed to trauma reached the clinical cutoff for likely PTSD (p. 685). Another important note of the study was the commonalities of functional impairments and behavioral problems amongst the refugee children. 53.57% struggled academically, 44.64% acted violently, 47.27% had discipline issues in school or day care, and 38.89% reported attachment problems (Betancourt & Kahn, 2008, p. 686). War trauma negatively effects the mental health of children evidenced by rates of PTSD, anxiety, and behavioral problems.

When dealing with children who have been traumatized by war there are a few oddities to note. One of them which is that in addition to the PTSD, anxiety, and depression children traumatized by war are likely to report increased aggression (Punamäki, Qouta, & Peltonen, 2017; Niaz, 2015; Betancourt & Kahn, 2008). Another peculiarity to note is that boys are more

like to experience a traumatic war event than girls (Thabet et al., 2008; Catani et. al, 2008; Schick, Morina, Klaghofer, Schnyder, & Müller, 2013). In Catani et. al's (2008) study 58.8% of the boys reported "one war-related event compared to 40.2% of the girls" (p. 166). In Thabet et al.'s (2008) study the "boys were significantly exposed to more trauma than girls" (p. 194).

War effects not only the individual child, but the family as a whole. Unlike other forms of trauma, the individual child and the family system as a whole may experience the trauma together, which in turn can change how the child experiences the trauma and its effects. Diab et. al (2015) stated it this way, "To children, war signifies also loss of sense of security and often mistrust in adults' ability to protect them" (p. 25). Children seeing their parents unable to protect them from the dangers of the world adds complexity to the trauma faced during war. The parents can experience trauma resulting from the war which can affect their parenting of their children. Thabet et al.'s (2008) study in war torn Gaza, found that children and parents had signivicantly correlated scores in PTSD and anxiety (p. 195). In one study it was found that fathers, not mothers, who had high levels of trauma pre-birth of their child were likely to be "associated with children's lower attachment security via more severe psychological maltreatment" (Palosaari, Punamäki, Qouta, & Diab, 2013, p. 962). Psychological maltreatment means the children born to these fathers were more likely to have PTSS (Post-traumatic stress symptoms), depression, and anxiety (Palosaari et. al, 2013). Another study found that fathers who had PTSD correlated with increased depressive symptoms in their children (Schick et. al, 2013). For unknown reasons it seems that there is a paternal link found between fathers' war trauma experiences and their child's psychological distress, but no maternal link established yet. In addition to the interplaying role of war trauma and family relations, the family can experience the residual effects of war

such as lack of food and shelter that can lead to malnourishment and homelessness (Catani et. al, 2008).

What becomes of the children who are effected by wars years down the road? There were two longitudinal studies conducted in Kuwait after the Gulf Wars, in which parents and children were assessed, the first time in 1993, then the second time in 2003. It was found that children exposed to a greater amount of trauma during the Gulf War were more likely to be less educated and be without a job ten years later (Hadi, Lai, & Llabre, 2014). Those that had less schooling also had more anxiety and PTSS symptoms (Hadi et. al, 2014). The anxiety and PTSS symptoms may have been the reason for not continuing education. Also, those children who reported more exposure to traumatic events had more psychological distress ten years later (Llabre, Hadi, La Greca, & Lai, 2015). This coordinates with findings in a study done 11 years after the war in Kosovo. Higher trauma exposure correlated with higher risk of PTSD, anxiety, and depression 11 years after the conflict (Schick et. al, 2013). Social support to families affected by the Gulf War was seen to be present at the beginning of the crises, but decline over time (Llabre et. al, 2015). The families that received more consistent and long term social support showed lower levels of psychological distress ten years after the Gulf Wars (Llabre et. al, 2015). Through these studies it is evident that higher exposure to potentially traumatizing war events can lead to long term adverse effects for children with consist social support being a buffer to trauma's adverse effects.

Children living in war are exposed to an abnormal amount of traumas. These traumas can be seemingly simple like seeing dead bodies on a TV, or be horrifically tragic like witnessing the death of a family member. A child's reality in war is one of constant unknowingness and a stripping of their sense of safety even if their parents are present. The family system brings a

whole other complexity to war trauma. War is not only effecting the children, but the parents, and this trauma can affect the parenting in negative ways and lead to increased psychological symptoms in their children. War trauma could potentially be a complex trauma, because it can be a child's reality for an extended period of time. Even after times of peace are ushered in, the effects of war trauma do not immediately leave a child. The child can experience psychological problems, as well as behavioral issues like aggression for many years after the initial traumatic experience.

Natural Disaster

Much like manmade disasters natural disasters have the potential to destroy homes, kill loved ones, and displace families. Also like manmade disasters, natural disasters increase the likelihood of anxiety, depression, and PTSD. In a study conducted in Haiti after the earthquake of 2010, 55.74% of children suffered from a "high level of traumatic exposure and peritraumatic distress" and 42.09% had PTSD symptoms (Derivois, Mérisier, Cénat, & Castelot, 2014, p. 208). There have been many studies conducted on the long-term effects of natural disasters. In one study of 27,139 individuals it was found that experiencing a natural disaster by age five increased a risk of any disorder by 15.7%, a mood disorder by 16.3%, an anxiety disorder by 32.5%, and a substance use disorder by 9% (Maclean, Popovici, & French, 2016, p. 83). Usami et. al, (2014) studied the effects of the tsunami and Great East Earthquake of Japan on school aged children eight months, 20 months, then 30 months after the tsunami. The researchers found that the scores for PTSD and depression significantly decreased from the eight-month period to the 20 and 30-month period (Usami et. al, 2014, p. 5-7). Although, PTSD and depression symptoms did not improve for all so it is important to note differences in trauma exposures (Usami et. al, 2014).

The rates of trauma's adverse effects were likely to increase if the children experienced a death of a parent or had previous trauma before the natural disaster occurred. Kalantari and Vostanis (2010) compared two groups of Iranian children after an earthquake. One of the groups of children experienced death of a parent because of the earthquake, and the other group of children had both parents survive. It was found that the group who had lost a parent had significantly higher emotional and peer problems, conduct problems, and scores on the Strengths and Difficulties Questionnaire ((SDQ): measures mental health problems of children) (Kalantari & Vostanis, 2010, p. 162). Fujiwara et. al (2014) found that children who experienced a death of a parent in the Great East Japan Earthquake were "2.22 times more likely to show clinically significant internalizing problems" (p. 4). Liu et. al, (2011) found that compared with people who did not experience bereavement, the children who had were "11 times higher risk for PTSD and 8 times for depression" (p. 5). Losing a parent to a natural disaster can devastate a child because the child is now without the familiarity of two parents instead he or she is left with financial difficulties, displacement, role changes, the grieving of the other parent, and so on. Fujiwara et. al (2014) also found that children who experienced "other trauma before the earthquake were 2.22 times more likely to show clinically significant internalizing problems" (p. 4). These researchers demonstrated that the severity of post-trauma reactions to natural disasters depend on the type of and amount of trauma experienced.

Since natural and manmade disasters share many similarities research has been conducted to try to determine which is more traumatic. One study compared children who had been exposed to an earthquake and those who had been exposed to riots in India (Kumar & Fonagy, 2013). Kumar and Fonagy (2013) found that the riots sample showed greater difficulties on the SDQ than the earthquake sample (the riots sample had a percentage of 38.7% whereas the earthquake

sample had a percentage of 7.6%) (p. 697). This study found no significant differences between the two groups of traumatic stress experienced, but did find that the earthquake group was more likely to have experienced deaths of family members and injuries (p. 698). Myles et. al's (2018) study compared children and youth who experienced Hurricane Katrina, versus children and youth who experienced forced migration to escape armed conflict. The group who were forced to migrate from their homes reported more trauma exposure and more severe symptoms, as well as they were significantly more likely to have experienced violence or death (Myles et. al, 2018, p. 170-171). Another interesting point brought up by Myles et. al (2018) is the post migration's additional stress. Whereas those recovering from Hurricane Katrina were able to go to their homeland months later, those who were forced to migrate were now living as refugees and acculturating themselves to a foreign land and only imagining what was left of their homeland (Myles et. al, 2018, p. 171).

Whether or not manmade disaster is more harmful than natural disaster it is important to note that natural disaster is still traumatizing. Natural disaster can cause a sense of hopelessness and instability amongst children as they may lose their homes, loved ones, and way of life. Each child is going to react to being exposed to a natural disaster in their own way because of previous experiences, type of trauma, proximity to the event, and social supports after the trauma. It is imperative to explore each child's exposure to trauma knowing that every story has worth and it is worthwhile to hear these children's stories in order to best treat them.

Child Welfare in the United States

Children involved in the Child Welfare System (CWS) in the United States are likely to have been exposed to a serious form of trauma, one that is complex and whose effects are long lasting. Trauma experienced by children in CWS is likely inflicted by a family member, someone

who is supposed to love and care for a child, may instead by emotionally, physically, sexually abusing or maltreating the child. The interpersonal violence faced by these children can rewire the children in a way that increases their likelihood of ill functioning in the short and long term living of their life.

Children in the CWS are likely to have a high amount of trauma exposure, because the event(s) that lead them to being put in care are likely to be traumatic. In a sample of 131 children in the CWS each child reported an average of 4.36 traumatic events with neglect (96.4%) being the highest followed by exposure to domestic violence (77.5%) then emotional (53.3%), physical (44.4%), and sexual abuse (44.3%) (Whitt-Woosley, Sprang, & Royse, 2018, p. 298). In another study of 2,251 youth in the CWS found that they too experienced an average of 4.7 traumatic events in their life (Greeson et. al, 2011). In a larger sample of 16,212 children and adolescents entering into the CWS in Illinois similar trends were noticed. The most frequent trauma experienced again was neglect (45.7%) again followed by family violence (29.3%) (Kisiel et. al, 2014, p. 6). In a study of 43 adolescents in foster care it was reported that they experienced a collective 113 types of trauma in which 64 were before entering into the CWS, 37 were during, and 12 after placement (Riebschleger, Day, & Damashek, 2015, p. 345-347). The prevalence of trauma is high for children in the CWS. Neglect followed by domestic violence, then abuse seem to be the most common traumas faced by children in the CWS. It is also important to stress that trauma does not stop upon entering the CWS, it is possible that the trauma can occur while the child is in care and during the early years of aging out of the foster care system.

Another strong trend in the literature was the effect of trauma appeared to be greater for females than males. Kisiel, Summersett-Ringgold, Weil, & McClelland, (2017) found that females (58.5%) were more likely to be exposed to complex trauma than males (43.6%) (p. 442).

Another study found that "females were 3.2 times more likely than males to experience sexual trauma," 3.1 times more likely to be molested, and 5.1 times more likely to be raped (Salazar, Keller, Gowen, & Courtney, 2013, p. 547). When a trauma has a greater direct impact or proximity it is more likely to have a greater effect on the person. Sexual abuse is an incredibly close violation of a human's body and research supports that this is particularly traumatizing. Females are more likely to be sexually traumatized (Dorsey et al., 2012, p. 820; Salazar et al, 2013, p. 547), therefore they may be more likely to have PTSD, because historically this form of trauma has higher rates of trauma effects (Salazar et al, 2013).

Complex trauma is "exposure to multiple and/or chronic interpersonal traumatic experiences typically occurring within the caregiving system" (Kisiel et al., 2017, p. 438). Complex trauma is encountered many times in the CWS and research suggest its effects are more damaging than acute trauma. Kisiel et al. (2017) found that 46.7% of the sampled 7,483 entering the Illinois CWS had exposure to complex trauma (p. 442). Complex trauma was found to have a "greater likelihood of having significant problems with traumatic stress symptoms" (Kisiel et al., 2017, p. 446). Greeson et. al, (2011) found that youth who had experienced complex trauma in comparison to those who have not were 1.6 times more likely to have internalizing problems, 1.5 times more likely to have PTSS, and 1.2 times more likely to have a clinical diagnosis (p. 102).

Not only is complex trauma likely to have ill effects on the present life of the child, but also effects that can last a lifetime without treatment. Escobar-Chew, Carolan, & Burns-Jager (2015) studied 31 mothers who had their children involved in the CWS. The study found a history of complex trauma and ill effects that reverberated through the mothers' life times and most likely impacted their ability to parent. All 31 of the mothers had experienced childhood sexual abuse, a history of multiple traumas, and mental and physical health problems (Escobar-

Chew, et. al, 2015, p. 58-60). In addition to the lack of learned parenting skills, these mothers and many like them are dealing with their own trauma histories that play a factor into the inability to function well and parent their children.

Complex trauma is cyclical, and in order to prevent the cycle from continuing preventive factors should be in place, or at the very least a healing environment for children after the trauma occurs. Kisiel et. al, (2014) argues that the symptomology behind PTSD does not accurately describe the symptoms that occur after the traumatization of complex trauma. Kisiel et. al, (2014) also argues that there is no accurate diagnosis for children being complexly traumatized therefore these children are diagnosed with many different diagnoses. These authors propose a new diagnosis of Developmental Trauma Disorder (DTD) whose proposed criteria would be experiencing multiple traumas over the period of at least a year and patterns of dysregulation across multiple areas (Kisiel et. al, 2014, p. 3).

To foster an environment of healing there needs to be stability. In the CWS this can be especially difficult with children moving from foster home to foster home. This is not conducive to healing of the traumatized children that are likely to enter into the CWS. In a longitudinal study of 251 youth in foster care it was found that the more Adverse Childhood Experiences (ACE) between the age of four and 12 the greater likelihood of "rule breaking behaviors and physical health concerns form late childhood to early adolescence (Villodas et al., 2016, p.81). Villodas et al. (2016) also found that youth who had unstable placement patterns had a greater amount of ACEs and higher level of Post-Traumatic Stress (PTS) as opposed to children with stable placements (p. 84). A stable, safe environment is vital to a child's development. It was found in another study that the "coping and savoring skills, family strengths, interpersonal strengths, and educational setting made the largest individual contributions to the outcomes"

when a child was exposed to trauma (Kisiel et al., 2017, p. 446). This shows the importance of a child having social support on many levels – feeling supported by themselves, feeling supported by their home life/family, and feeling supported by their school. These social supports help mitigate trauma's adverse effects.

The CWS is a system with ample room for improvement, however, this creates a space for many possibilities. The CWS is a concentrated hub of many of the United States' traumatized children. If there could be a systematic approach as to how to intake and track traumatized children, then how the system can intervene in a trauma-informed way there could be positive repercussions. These repercussions would not only result in children's lives being happier, but more productive citizens and long-term financial savings for the US. Fang et al. 2012 (as cited by Kisiel et al., 2017, p. 437) stated that childhood trauma is "occurring at epidemic rates and costing the United States over $124 billion per year." As if the well-being of the United States' children is not enough, trauma-informed care interventions need to be set in place to improve the productiveness of the United States.

Discussion

Through this exploration of the literature it is evident that the type of traumatic event endured effects the severity of the negative symptoms of trauma. Within all four of the traumatic events explored children exposed to trauma, regardless of the type of trauma, were seen to have experienced PTSD, anxiety, and depression. Some traumatic events had higher rates of these mental health symptoms than others. Natural disasters when compared to manmade disasters had lower rates of PTSD, depression, and anxiety (Myles et. al's, 2018; Kumar and Fonagy, 2013). Natural disasters occur in a sudden fashion, but they are not likely to keep on occurring. Once the wildfire dies it dies, once the hurricane has passed it has passed, and so on and so forth. This

could explain why natural disasters do not result in higher rates of PTSD. The other types of traumas studied can occur for a longer time.

In three of the four trauma types studied there was a link between trauma exposure and life-long effects. Regardless of traumatic event, children exposed to trauma are less likely to be educated, employed, and living a lifestyle free from maladaptive behaviors such as substance abuse. This author found no research linking the trauma faced by unaccompanied migrant youth and long term effects, but that does not mean there is not a link. Many migrant youths already are misusing drugs such as inhalants, and may have spent long periods of time out of school which can lead to negative long term effects into adulthood. Traumatic experiences have adverse long-term effects and this rings true regardless of the type of trauma endured.

Gender also plays a factor in traumatic exposure. When studying manmade trauma, males are exposed to greater amounts of trauma, and have reaped greater negative effects in comparison to females. Whereas in the CWS it was found that females are exposed to more sexual trauma which results in greater negative effects. It can also be hypothesized that the sexual trauma of young females migrating from Latin America to the United States also experience a higher rate of sexual trauma and therefore greater negative effets. Gender plays an important role in the type of trauma exposure, therefore the type of trauma symptoms, and should be taken into account when screening and treating trauma.

An interesting occurrence in all of these traumatic events is that they have to do with displacement. The unaccompanied migrant child leaves their home for a new land, the child from Hurricane Katrina had their home destroyed, the child along the Gaza strip may have their home blown up by a bomb, and abused children find themselves in a new foster care home. These children are taken out of the familiarity, the safety, of their once known surroundings and found

to be in a completely new world. As adults one becomes accustomed to the realities of life and the necessity of movement, but perhaps this forced displacement experienced in early childhood occurs at a point where the child is too young to adapt. A child needs a steady place where he or she can develop. A steady home prevents worries of famine, destruction, and dangerous people and allows for a child to focus on imagination, wonder, and their relationship with themselves and others. A child who becomes displaced because of a traumatic event experiences an interruption in their normal development, which transcribes to symptoms such as PTSD, anxiety, depression, attachment disorder, and/or resilience.

There appears to be some common trends amongst all these traumas – disruption in the child's life and family unit. Experiencing a trauma changes who one is at the very core – once experienced he or she can never be exactly as before. This is not to say that experiencing a trauma is always life altering in a negative way, but it can be if the environment is not conducive to healing, and/or the characteristics of the individual are not quite strong enough (yet) to conquer the battle that trauma presents. When a trauma strikes a family like it will in the CWS, migration, natural disaster, and manmade disaster, roles are changed. The family as a unit changes not just the individual. The families may face a loss of their own members, a loss of income, a loss of mental, physical, social well-being. These losses thrust a child into a change of identity. The child has to figure out how to cope with this change in their family and grow into their new role.

The results of the displacement and disruption that occurs during these types of trauma are the basis of interventions. The displacement and disruption call for a reestablishment of safety for the child. This safety is attempted to be found in many different interventions. The main goals should be to help mitigate any mental health symptoms brought on by the trauma, put

social supports in place for long term effects, and anything to help the child become a child once more.

Interventions

Trauma-informed care interventions come in all shapes and sizes – some focus on resiliency building while others focus on reducing symptomology. There is no doubt that trauma has a negative impact on a child's behavior, mental state, emotional well-being, and physical well-being, and treatments have to be analyzed for their effectiveness to improve the child's state. Before experiencing trauma, a child deems the world: bright, full of possibilities, trustworthy, and safe. When a child undergoes trauma it is like they are being shoved into a cold, dark world, and have to relearn how to trust, feel safe, and where the light is once more. This is where intervention comes in. Therapies and interventions should be focused on enabling the child to feel safe and trust the world again (Ehntholt & Yule, 2006, Maikoetter, 2011; Gaffney, 2006) in order to promote healthy development.

The complexity of introducing an intervention lies in many different factors. Depending on the child's protective and risk factors each child will be effected differently by the trauma. Some protective factors that can help foster resiliency are positive self-esteem, good temperament, religious beliefs, family and social support (Ehntholt & Yule, 2006; Betancourt & Kahn, 2008). Some risk factors are extremely severe trauma, multiple traumatic events, no family or social support, and preexisting illness in the child (Ehntholt & Yule, 2006). The intervention method needs to be tailored to the child's symptomology, trauma type, trauma history, culture, age, level of social support, caregiver involvement in the child's life, and so forth. So many different factors influence the effectiveness of intervention.

The following section explores a few of the prominent treatments being used today. Each treatment is briefly discussed, but for a closer look into some of the research behind the intervention please refer to Appendix B, Appendix B lists at least three articles per intervention

and analyzes: year published, type of therapy, type of trauma, sample criteria and size, type of study, purpose of study, results of the therapy, and where the study was conducted.

Attachment, Self-Regulation, and Competency (ARC)

ARC is used specifically in cases with children who have experienced complex trauma. Complex trauma is trauma that occurs consistently over a long period of time, and is usually associated with abuse and neglect. Many of the studies of ARC have been with children below the age of thirteen. There are three domains focused on in the ARC model: attachment, self-regulation, and competency. Attachment recognizes that complex trauma most likely disrupted the caregiver-child relationship and seeks to restart and heal this caregiver-child relationship. Self-regulation recognizes that children who have experienced complex trauma find it difficult to identify, regulate, and express their emotions and looks to reform these issues. Competency focuses on switching the children from "survival mode" to helping them develop in an age appropriate manner by focusing on a variety of self and skill developmental tasks.

Much of the ARC research has been conducted in the United States and shows positive results in terms of symptomology and behaviors. A study in Alaska showed that children who experienced the ARC model had a 92% rate of being permanently placed, as opposed to the normal rate of 40% (Arvidson, et. al, 2011). This may be due to behavior improvements that was a commonality across all three studies analyzed (Hodgdon, Blaustein, Kinniburgh, Peterson, & Spinazzola, 2016; Hodgdon, Kinniburgh, Gabowitz, Blaustein, & Spinazzola, 2013; Arvidson, et. al, 2011). These behavioral improvements prove useful in child placement and parental stress. ARC provides a model to help children who have experienced complex trauma to connect with their caregivers, and the children to improve their symptomology through better self-regulation

and competency. Also, ARC being a relatively new model has more recent and fresh research that proves it is effective in this day and age.

Eye Movement Desensitization and Reprocessing (EMDR)

EMDR focuses on processing and reforming a traumatic memory. Necessities of the therapy include obtaining a trauma history, choosing the traumatic memories to reprocess, reprocessing those memories, and evaluating the effectiveness of treatment. During the therapy the child would retell the traumatic memory while following the therapist's finger with their eyes, or tapping can be used if it is more developmentally appropriate. Then the child would talk about the thoughts and feelings they had when retelling that trauma. The child repeats this until there is no distress in telling the trauma narrative. Then the therapy would shift to incorporate focusing on a positive belief while retelling the trauma.

EMDR has been studied across a wide variety of trauma types including complex, single event, and disaster traumas. EMDR has shown effective in multiple studies of different trauma types to lower PTSD symptomology. EMDR and Trauma Focused Cognitive Behavioral Therapy (TF-CBT) have much of the same effects in lowering symptomology (Diehle, Opmeer, Boer, Mannarino, & Lindauer, 2015; De Roos et. al, 2017; De Roos et. al, 2011). Much of the EMDR research has been conducted internationally in high income European countries.

Play-based/Creative Interventions

Creative styled interventions encompass a wide range of therapies – from narrative, drama, sports, play, photography, and so on, there are limitless types of creative interventions. Play is vital for a child's development, because through play the child learns to explore, innovate, and find joy. Trauma has a way of disrupting a child's natural tendency to play and replaces it with fear. One such intervention that seeks to reestablish play in a child's life is the

Life is Good Playmaker model. The Playmaker intervention model has four goals in mind to foster resilience: internal control, active engagement, joyfulness, and social connection (Cornelli Sanderson, & Gross, 2011). When the Playmaker model was implemented in the Gulf Coast, post Hurricane Katrina the children were significantly less depressed, anxious, withdrawn, and more joyful (Cornelli Sanderson, & Gross, 2011). The same intervention model was used in residential care with unaccompanied migrant youth who most likely have high levels of trauma exposure (Hidalgo, Milet, & Beck, 2016). They found that after undergoing Life is Good Playmaker Training, Trauma Systems Therapy, and implementation planning the staff was more satisfied with their job, vicarious trauma indicators in staff were decreased, and staff-youth relationships improved at the residential facilities (Hidalgo et al., 2016).

The Playmaker intervention is just one specific intervention model on how to foster resiliency and improve trauma symptoms. Another study researched the effectiveness of a sports based, trauma-informed treatment for females in residential care affected by complex trauma. Compared to the Treatment as Usual (TAU) group the “Do the Good” (DtG – sports therapy) group showed improvement in internalizing, externalizing, and CBCL (Child Behavior Checklist) symptoms along with behavioral improvement (D’Andrea, Bergholz, Fortunato, & Spinazzola, 2013). A mother-child play therapy intervention showed that post play therapy there were positive changes in children behaviors, and a better understanding of how to help their children through complex, manmade trauma (Cohen, Pat-Horenczyk, & Haar-Shamir, 2014). Play and creative interventions provides a barrier (the play) for children between them and the caregiver. This barrier creates a safety net in which children can communicate about their trauma comfortably, learn social and regulation skills, and increase resiliency. Play-based and creative

interventions have been studied across a wide range of trauma types, but have mainly been in high income countries.

Prolonged Exposure (PE) Therapy

PE therapy focuses on exposing the adolescent to the trauma in order to desensitize and reform the trauma experience. There are two main exposures used to conduct this therapy - imaginal and in vivo. Imaginal exposure would be the classic retelling of the story verbally or through drawings. The in vivo exposure would be sounds, sights, smells, etc. related to the trauma. PE also utilizes psychoeducation and relapse prevention techniques to make the therapy more well-rounded. To this author's knowledge PE therapy has only been tested on adolescents and adults at this time. Studies supporting the efficacy of PE therapy have been conducted throughout the world (Israel, United States, Netherlands), but all of these countries are high income countries. PE therapy has been shown to improve PTSD symptoms, depressive symptoms, and anxiety (Aderka, Foa, Applebaum, Shafran, & Gilboa-Schechtman, 2011; McLean, Yeh, Rosenfield, & Foa, 2015, Hendriks, 2017).

School Based Interventions

A popular method of trauma interventions is utilizing schools as the base of intervention. Schools have a unique opportunity to provide social networks and social support (Betancourt & Kahn, 2008, Gaffney, 2006; Diab et al., 2015). They can provide a "sense of predictability and security," (Betancourt & Kahn, 2008, p. 323) a place for social connectivity, play, and exploration (Betancourt & Kahn, 2008; Gaffney, 2006). Incorporating resiliency based interventions in school is a promising avenue to help traumatized children.

There are positive and sensible things when it comes to selecting school based intervention as the means to lowering children trauma effects. One of the positives is

accessibility to services. The children should be attending school regularly after whatever traumatic event occurs, and this would likely decrease rates of treatment retention. The trauma intervention services in schools may also prove more financially accessible. The teachers and school administration can provide insight to what children need treatment the most and evaluate the therapeutic process by reporting on behaviors in the classroom. Also, schools may have established rapport and trust with the caregivers making the services for their children more appealing.

There are many ways to implement school-based interventions. One of the methods is Cognitive Behavioral Intervention for Trauma in Schools (CBITS). The children are typically selected by referral of a school professional, parent, peer, or self, or they can be screened for PTSD and mental health problems with parental consent. After the children are selected they are seen by professionals trained in TF-CBT and they go through a weekly therapy at school. Other ways to conduct a school based intervention would be to a weekly classroom seminar, or have a selected group of students meet weekly for group therapy.

Although school based interventions suggest an ease of deliverability of treatment there are a few drawbacks. There is the added difficultly of building a trauma narrative when the child has to go back to the classroom. Also, mental health professionals have to ensure there is a continuity of care during school breaks. The bulk of research with school based interventions suggests less of an effect than other forms of treatment. Some of the studies conducted do point to reduced PTSD, depression, and anxiety (Gelkopf, & Berger, 2009; Hansel et. al, 2010; Gudiño, Leonard, & Cloitre, 2016; Jaycox et al., 2009). There are some things to cause hesitancy. For example, in Jaycox et al.'s (2009) study the parent and teacher reports of the children showed no significant changes, and in Fazel, Doll, & Stein's (2009) study the refugee

children continued to have higher SDQ scores and peer difficulties than the control group, and the results were only significant when analyzing the students that were directly seen as opposed to consultation only.

Even though the school system seems like an easy setting for trauma informed care interventions to help children there is a necessity of renovation of the intervention that should happen to improve the efficacy of treatment. Also, much of the research found by this author seemed to be older, dated roughly ten years. Positively, school based interventions have been evaluated with wide age ranges, a variety of trauma types, and variety of countries (all these countries to this author's knowledge have been high income).

Trauma Focused Cognitive Behavioral Therapy (TF-CBT)

One of the most commonly researched and widely accepted therapies with children who are experiencing PTSD and PTSS is TF-CBT. Just like in classic CBT, TF-CBT focuses on reforming negative cognitions, but is particularly focused on the negative cognitions surrounding the trauma. This is often done by writing, talking, painting, etc. a trauma narrative that is re-processed throughout the therapy. TF-CBT will also focus on psychoeducation, child-caregiver relationship, emotional regulation, and safety and future development. There are many recent studies that support the efficacy of TF-CBT in reducing PTSD symptoms (Sachser, Keller, & Goldbeck, 2017; Kane et. al, 2016; De Roos et. al, 2017; De Roos et. al, 2011) non trauma symptoms of anxiety and depression, (Diehle et. al, 2015; De Roos et. al, 2011) and behavior issues (De Roos et. al, 2011).

Discussion

All six of the different treatments proved effective in increasing resiliency, and/or decreasing symptomology in at least two of the studies analyzed by this author. This would

suggest that there are a wide range of therapies that can be utilized with children who have undergone trauma, and this intervention section only touches on a small fraction of them. Although there are many articles not included in this discussion of trauma interventions there are disparities amongst the twenty-three articles reviewed. One of these disparities is follow-up time. Out of the twenty-three articles read the longest follow up time was two years. The famous ACEs (Adverse Childhood Experiences) study showed the adverse effects of childhood trauma experiences on adulthood. The mean ages of these people taking the survey were 56.1 (males) and 49.3 (females) (Felitti et. al, 1998) years old. The study was able to make a strong connection between adverse childhood experiences and increased risk of alcoholism, drug abuse, depression, suicide attempt, smoking, poor self-related health, sexually transmitted disease, and obesity in adulthood (Felitti et. al, 1998). The importance of trauma intervention rests on the fact that trauma in childhood can negatively affect the fulfillment found in adulthood, yet there is no research to say that intervention in childhood will positively negate the effects of trauma in adulthood. In order to truly evaluate the effectiveness of any intervention there needs to be longitudinal studies done many years into adulthood. This study would evaluate the treated children on their educational attainment, employment, health related habits, drug usage, criminal behaviors, and general satisfaction of life. With this information there could be a huge case for trauma informed care and implementing interventions. If the research shows in the long run that trauma interventions decreases criminal activity, drug usage, and poor health then there will be a greater case for funding. If the research can prove that investing in early trauma informed intervention with children and youth will save costs of rehabilitation centers, hospital bills, and so on then trauma-informed care can become more widespread.

The other great disparity amongst all the research is the lack of research for middle and low income countries. Out of twenty-three articles examined only one took place in a low income country. Considering trauma occurs on a global level regardless of socioeconomic background there needs to be research that reflects that. Especially considering that those living in low income countries may have higher trauma exposure. It is probable that a therapy that works for one ethnic group or cultural setting will not work the next. Although mental health needs may not be well addressed in certain low and middle income countries, research still needs to be done there. It will also prove interesting to study if low-income and middle-income countries have greater social supports, therefore less adverse trauma effects. The knowledge of trauma's effects and trauma based interventions should be studied across many countries in order to attain a global picture of trauma.

One of the things that would be helpful after reading many sources on complex trauma that occurs in the United States is a database of traumatic experiences. It is difficult for foster care parents, case managers, and anyone concerned about the child's welfare to know what a child has gone through. If the traumas are not well documented, how is one to find effective treatment? If there was database that tracked traumatic experiences, there could be an increased likelihood of children attaining treatment for their trauma. There are many interventions that are proven effective it is just a matter of bringing these interventions to the children that need them. If there is a way to systematically screen children for their trauma, then the level of intervention can be selected. Much like some school systems usage of the Multi-Tiered System of Supports (MTSS) there needs to be a Multi-Tiered System of Trauma Intervention. In today's world where trauma has become a well-known word, mental health professionals are fortunate that much research is already at their fingertips. So, instead of retesting the same interventions over and

over again, perhaps it is time to test a new implementation method. Something that will not let children fall through the cracks.

This Multi-Tiered System of Trauma Intervention would have a few steps. The initial stage would take place in a steady community center where children attend regularly, this will most likely be a school. If a school is not available, other community centers should be utilized such as religious organizations, recreational centers, etc. There children will be screened with simple questionnaire of past traumas experiences and their current well-being status at the community centers. On tier one, all children at the community center will attain a trauma informed program with emphasis on resiliency. This is something all children can benefit from, because these programs build coping mechanisms and resiliency that will help later in life. This program could look like the ERASE program implemented in Israel (Gelkopf, & Berger, 2009).

Tier two would consists of children who have high rates of trauma effects (PTSD, anxiety, depression, self-regulation problems). These children would have access to more specialized interventions that would take place in groups and include interventions like TF-CBT, play based, sports, drama, and so forth. Finally, tier three would be for the children screened with the highest trauma scores, or the children for whom tier two is not working. Tier three would be individualized care in which a therapy such as EMDR, PE, TF-CBT, and creative therapies could be utilized, but on a one-to-one level. With a combination of community wide screening and specialized treatment to the needs of the child hopefully no child will be left behind to deal with the effects of trauma on their own. This model would also provide a more feasible way of intervening for trauma exposed children. Intervening at a community/school wide level will make it easier for children and youth to receive treatment, and may also cut down on costs.

Conclusion

Trauma has the ability to hijack a child's brain and body and produce a shell of the child that once was there. Without proper supports, traumatic events can usher in an early end to childhood - a cessation of wonder, joy, curiosity, and trust. There are a variety of factors that determine the severity of trauma and a variety of different ways children can react to trauma. Every child with trauma exposure has a unique story. The child's social supports, caregiver relations, socioeconomic background, culture, religion, personality, biology, and trauma type is going to effect how they experience the trauma. Trauma is messy. It does not have an easy fix, but there are ways to reduce symptomology and build resilience.

In the beginning of this study four trauma types were discussed: unaccompanied migrant youth, manmade disaster, natural disaster, and the child welfare system in the United States. Unaccompanied migrant youth face migration worries, cultural adjustments, famine, death, and so forth. Children that have been exposed to manmade disaster face bombings, seeing dead bodies, forced migration, and destroyed homes. Children that have been exposed to natural disaster may have their homes destroyed, families' separated, and witnessing destruction. Children in the welfare system face abusive or neglectful caregivers. Patterns identified in the research suggest some crossover amongst all these different trauma types as to what the children might be exposed to. Some of the trauma experiences discussed seem to have more negative effects, such as the complex trauma that is likely to be faced in the child welfare system. As a result of the research conducted, common threads among the various trauma experiences were identified. All of the trauma types have PTSD, depression, and anxiety symptomology associated with them. Three out of four of the trauma types linked trauma exposure to negative long term

effects. There was also a strong base of research that showed children who face trauma have academic, behavioral, emotional, and social difficulties.

Additionally, different prominent interventions and outcome effectiveness were explored. It was found that all the interventions were effective in some capacity, however, the question is what intervention methods work best with which trauma types? One of the findings is that EMDR may be more effective with single incident traumas than TF-CBT, and perhaps other interventions. Even though EMDR and TF-CBT are effective, in two of the studies reviewed with children who faced single event trauma, EMDR had faster results (De Roos et. al., 2011) and better scores (De Roos et. al, 2017) than TF-CBT.

TF-CBT, EMDR, and PE seem to focus more so on lowering anxiety, depression, and PTSD symptomology. The play based/creative therapies and ARC shift their focus to building resiliency. In addition to helping reduce symptomology these interventions also have evidence of lowering behavioral problems. Behavioral problems may arise out of the child having trouble regulating their emotions. Therapies like ARC have an entire competency based on emotional regulation. ARC's focus on emotional regulation may be part of the reason they are able to see behavioral improvements (Hodgdon et. al, 2013; Hodgdon et. al, 2015). In Cohen et. al's (2013) study where they evaluated mother-child play therapy, the mothers noticed a great improvement in their child's behavior post-complex trauma. The improvement in behavior has significant implications for stability of placements for traumatized children in the welfare system. If the children are better able to regulate their emotions and their negative behaviors are improved, then they are more likely to have a stable placement that will only further the positive effect of trauma treatment.

In a broad sense, for an intervention with traumatized children to be successful the foundation has to be rooted in trust in the world, feeling safe, and having social support. The amount of research on how social support is vital to helping traumatized children is astounding (Deeba & Rapee, 2015; Gaffney, 2006; Seiler et al., 2016; Betancourt & Kahn, 2008; Hidalgo et al., 2016). Simply having a constant caregiver in a child's life can positively impact the rates of improvement post-intervention. Simply having people surround the child that know what trauma is and how to respond to the idiosyncrasies these children produce can have monumental positive effects on these children. Simply reintroducing play into these children's day to day lives can yield a happier child.

Formalized interventions may not be possible to introduce everywhere. There are barriers to all traumatized children receiving an intervention like EMDR, PE, or TF-CBT, such as costs, access to resources, and time. An alternative would be education. Imagine if trauma informed care became more recognized and known amongst the adults who interact with traumatized children. If caregivers in traumatized children's lives are able to utilize trauma informed care through play times, healthy conversations, and trust building then it is of increased likelihood that symptomology will be reduced and resiliency built.

Limitations

There are many limitations to this study. One of the factors being time. This author had fifteen months to plan, research, and write this thesis. The restricted amount of time poses difficulty analyzing the massive amount of literature available on this topic. Therefore, this author had to limit the studies to at least seven articles per trauma type, and at least three per intervention type. This means that the picture painted in this thesis is one that is incomplete. This

author was also limited in where the articles were drawn from. This author attained some articles from interlibrary loan, but most were from EBSCO and ProQuest.

Areas of Future Research

There are many opportunities for future research in the field of trauma and children. Particularly, areas that could branch off from this literature review is a study of different trauma types. Whether that be diving into the specificities of complex trauma such as physical abuse, sexual abuse, emotional abuse, or neglect. Another route would be to exploring different traumas such as unforeseen accidents (i.e. car accidents, school violence), bereavement, and medical trauma. Also, there are many different types of interventions that could be added (ex. Trauma Focused Therapy, Psychodynamic Therapy, Group Therapy). There is also a lack of research comparing the different interventions in a clinical trial. Comparative studies help enlighten what interventions are effective for which trauma type, and unfortunately there are not many of these studies out there.

Another area of future research would be studying preventive interventions to help build resilience before a trauma strikes. The reality is it would be difficult to develop a community in which a child lives in a bubble and never faces trauma, however, it may be more realistic to craft a resilient community. This would include research on incorporating building resiliency from a young age, before trauma strikes. One could try to implement the Multi-Tiered System of Trauma Intervention mentioned previously in a community center. There are some school based interventions that attempt to build resiliency, but perhaps one could look at teaching caregivers on how to build resiliency.

This author believes the most beneficial area of future research would be a longitudinal study on the well accepted trauma-informed interventions. This would be a study that has greater

follow up times of five years, ten years, perhaps twenty, of traumatized children who received different interventions to see how those children faired in adulthood. The ACE study has proved trauma can be linked to poor health and life choices, and other studies as well have linked trauma to lower educational level and employment retention. There are plenty of studies that link trauma to long-term negative effects. A study that can connect trauma informed care and interventions to long-term positive effects would not only be encouraging, but life-altering for many children.

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Appendix A - Articles Sorted by Trauma Type

Unaccompanied Migrant Youth

Keller, A., Joscelyne, A., Granski, M., & Rosenfeld, B. (2017). Pre-Migration trauma exposure and mental health functioning among Central American migrants arriving at the US Border. PLoS ONE, 12(1), 1–11. https://doi.org/10.1371/journal.pone.0168692

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Children & Youth Services Review, 92, 65–76. https://doi.org/10.1016/j.childyouth.2018.03.050

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Manmade Disaster

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Appendix B - Interventions

Attachment, Self Regulation, and Competency (ARC)										
Article Name	**Author(s)**	**Year Published**	**Type of Therapy**	**Type of Trauma**	**Sample Criteria**	**Sample Size**	**Type of Study/Purpose**	**Results of Therapy**	**Domestic or International**	**Other Notes**
Development and Implementation of Truama-Informed Programming in Youth Residential Treatment Centers Using the ARC Framework	Hilary Hodgdon, Kristine Kinniburgh, Dawna Gabowitz, Margaret Blaustein, & Joseph Spinazzola	2013	ARC	Unspecified - Likely complex	-Age:12-22 years -Selected to be in Massachusetts intensive residential centers. Many of them may be there for abuse and neglect.	126	-The residential treatment facilities with ARC were compared to those without. -This study was trying to answer: Can the ARC trauma-informed care framework be applied to residential features, when it is normally applied in the caregiver model?	-Statistically significant changes in the overall PTSD (in reexperiencing and hyperarousal symptoms but not the avoidance and numbing symptoms). -The residential programs with ARC experienced a 54% reduction in restraints during project, compared to programs without who experienced a 20% increase. -Anxious-depressed thought problems saw a decrease that was continued through the second follow-up assessment, but only maintained by third follow up.	Domestic - Massachusetts	
Application of the ARC Model with Adopted Children: Supporting Resiliency and Family Wellbeing	Hilary Hodgdon, Margaret Blaustein, Kristine Kinniburgh, Mark Peterson & Joseph Spinazzola	2015	ARC	Complex	-Age: 6-12 -Pre or post adoptive status -2 plus lifetime traumatic exposures -Functional impairments at least 2 domains -Current PTSD symptoms	481	-One group study. -The purpose was to examine effectiveness of ARC model with adoptive kids and to see how treatment effects caregiver stress.	-At the baseline - 75.9% met criteria for PTSD and after treatment 33.3% met criteria for PTSD. -Depression, PTS, dissociation, and anger scales saw a significant reduction in symptoms through follow up period (12 months). -Parent measure used showed a significant decrease in parenting stress index and behavioral assessment system for the participating children.	Domestic - Michigan	
Treatment of Complex Trauma in Young Children: Developmental and Cultural Considerations in Application of the ARC Intervention Model	Joshua Arvidson, Kristine Kinniburgh, Kirstin Howard, Joseph Spinazzola, Helen Strothers, Mary Evans, Barry Andres, Chantal Cohen, & Margaret Blaustein	2011	ARC	Complex	-Age: 3-12 -Recruited from AK Child Trauma Center	21	-One group study. -The purpose was to study the effectiveness of ARC.	-Child Behavior Checklist scores showed a statistically significant decrease in overall scores. -There was a 19 point improvement compared to 2.5 point improvement with clients who didn't complete treatment. -92% of those who completed have a permanent placement, compared to 40% of Alaska's normal rate.	Domestic - Alaska	

Eye Movement Desensitization and Reprocessing (EMDR)

Article Name	Author(s)	Year Published	Type of Therapy	Type of Trauma	Sample Criteria	Sample Size	Type of Study/Purpose	Results of Therapy	Domestic or International	Other Notes
Effectiveness of MASTR/EMDR Therapy for Traumatized Adolescents	Leechen Farkas, Mireille Cyr, Thomas Lebeau, & Jacques Lemay	2010	Routine Therapy vs. MASTR/ EMDR	Unspecified - Trauma Variety	-Age: 13-17 -Admitted to YPS (youth protective services) in Quebec	65	-The adolescents were randomly assigned into two groups - routine therapy vs. MASTR/EMDR. -This study focused on adolescents who have been exposed to trauma and had conduct problems (CP) and what treatment proves more efficient.	Participants who received MASTR/EMDR significantly improve on 9/11 outcome variables. MASTR/EMDR proved more effective than routine therapy and the results stayed steady after follow up.	International - Quebec	MASTR - does not specify which treatment should accompany it, but it incorporates motivational interviewing (MI), CBT, coping skill development, trauma resolution, and relapse prevention/harm. MASTR is specifically focused on adolescent with trauma and CP.
A Wait-List Controlled Pilot Study of EMDR for Children with PTSD Symptoms from Motor Vehicle Accidents	Michael Kemp, Peter Drummond, & Brett McDermott	2009	EMDR	Single Event - motor vehicle accident	-Age: 6-12 -Must have scored at least 12 on Child PTSD - Reaction Index or meet at least two DSM-IV criteria for PTSD	27	-This study had a group who received the therapy and a wait list group. -The purpose was to study the efficacy of EMDR with a single traumatic event.	-After the children received four sessions of EMDR there was a 25% reduction of PTSD criteria, as opposed to the waitlist group who showed no improvement after 6 weeks. -Non trauma measures (self reported anxiety and depression, and parent ratings of behavior and depression) did not show significant improvement.	International - Australia	
EMDR Treatment for Children with PTSD: Results of a Randomized Controlled Trial	Abdulbaghi Ahmad, Bo Larsson, & Viveka Sundelin-Wahlsten	2007	EMDR	Traumatic Event & Complex	-Age: 6-16 -PTSD diagnosis -No manifest mental retardation -Experienced one trauma -Grown up in at least one socially exposed condition (family member with crime, substance abuse, etc.)	33	-There were two groups randomly selected - those receiving EMDR and those in the waiting list condition (WLC). -The purpose was to evaluate effectiveness of EMDR amongst children.	-Children treated with EMDR showed significant improvements in PTSD-related symptoms (particularly in re-experiencing symptoms but not with hyperarousal). -The children in the WLC also showed improvements in PTSD.	International - Sweden	

	School-Based Interventions									
Article Name	**Author(s)**	**Year Published**	**Type of Therapy**	**Type of Trauma**	**Sample Criteria**	**Sample Size**	**Type of Study/Purpose**	**Results of Therapy**	**Domestic or International**	**Other Notes**
A School-Based, Teacher-Mediated Prevention Program (ERASE-Stress) for Reducing Terror-Related Traumatic Reactions in Israeli Youth: A Quasi-Randomized Controlled Trial	Marc Gelkopf, & Rony Berger	2009	School Based - ERASE-Stress	Terror related	-Age: 12-14.5 -Males in a public secondary school in Beer Sheba that is part of 'national religious' school network	114	-Quasi-randomized Control Study ERASE-Stress vs. Wait List -The purpose was to evaluate the efficacy of ERASE-Stress	-"Results show PTSD severity, functional problems, somatic complaints and depression scores to be all significantly reduced in the experimental ERASE-Stress group, compared to the waiting list group" (p. 967). -No significant differences found between 7th and 8th grade group. -No significant symptoms worsened, suggesting ERASE-Stress is not detrimental.	International - Israel	Even though this town is directly exposed to as much terror as other provinces in Israel there was proven to still be much indirect/direct exposure suggesting that geographical location does not matter as greatly as the collective sense of safety of Israel. This was a weekly lesson incorporated for all students during normal class time.
Support for Students Exposed to Trauma: A Pilot Study	Lisa Jaycox, Audra Langley, Bradley Stein, Marleen Wong, Priya Sharma, Molly Scott, & Matthias Schonlau	2010	CBITS (Cognitive Behavioral Intervention for Trauma in Schools)	Exposure to violent event(s)	-Age: 11.5, 6th & 7th grade -Experienced severe violence in prior year -Current symptoms of PTSD	76	-Randomized wait list. -The purpose of this study was to evaluate the efficacy of CBITS.	-CBITS vs.wait list showed decreased PTSD, and depression. -The changes in parent and teacher reports were not significant. -The children and parents were satisfied with the therapy.	Domestic - LA	This was with a primarily Latino population (96%).
A School-based Mental Health Intervention for Refugee Children: An Exploratory Study	Mina Fazel, Helen Doll, & Alan Stein	2009	School Based Intervention	Refugee/Migrational	-Age: 5-17 -Refugee and asylum-seeking children who have arrived within the last five years and have come from countries with ongoing conflicts	47	-Compared the refugee children to a control ethnic minority group and indigenous white group. -The purpose was to study efficacy of providing school intervention to refugee children.	-Refugee children scored higher in SDQ total score compared to two control groups, but was not significant. Refugee children continued to have higher SDQ, emotional symptom, and peer problem scores than control groups. -Within the refugee groups there were children who were directly seen and those who were "consultation only". Those who were directly seen had significantly higher peer problems at baseline and showed "relatively greater improvement over the study period" (p. 303)	International - England	This study shows that it may be more effective to have direct contact with traumatized children, rather than just consultations. This model utilized a team of mental health professionals that consulted on each individual child and gave tips to the teachers on how to work with these children. The mental health professionals saw the children directly as needed. The teachers and students directly seen reported liking the program and finding it helpful.

Attention to Process and Clinical Outcomes of Implementing a Rural School-Based Trauma Treatment Program	Tonya Cross Hansel, Howard Osofsky, Joy Osofsky, Richard Costa, Mindy Kronenberg, & Marian Selby	2010	TF CBT in a School Setting	Unspecified - Trauma Variety	-Age:13.96 (mean), 1st - 12th grade -Referred from schools, court system, peer, parents, or self-referral -Students were included if level of trauma symptoms were assessed initially and at follow-up	115	-No control/comparison group. -This study was focused on the effectiveness of providing mental health services to traumatized children.	-Significantly lowered PTSD scores, intrusion, avoidance/numbing, and arousal compared to baseline scores. -Significantly lowered anxiety, depression, and PTSS compared to baseline.	Domestic - Louisiana	This study used relationship building, trauma training, then individual trauma care. The children were seen once per week for 55 minutes. Some cons of school based interventions is it's hard to dive into a trauma narrative when the child has to go back to class. It can be difficult to find a quiet space necessary for therapeutic intervention.
STAIR-A for Girls: A Pilot Study of a Skills-Based Group for Traumatized Youth in an Urban School Setting	Omar Gudiño, Skyler Leonard, & Marylene Cloitre	2016	STAIR (Skills Training in Affective and Interpersonal Regulation)-A (resiliency based) in School Setting	Unspecified - Trauma Variety	-Age: 11-16 -Racial/ethnic minority girls -Experienced a traumatic event -Enrolled in middle and high school in lower Manhattan NYC -No inclusion/exclusion criteria based on psychopathology	46	-STAIR-A group vs. assessment only group -Many studies have been focused on reducing symptomatology this study wanted to focus on building resilience, while perhaps decreasing symptomatology.	-Intention to treat analyses suggest that girls who participated in STAIR-A "had significantly improved perceptions of social engagement and locus of control". (p. 74) -They also had "marginally significant improvement in interpersonal relations." (p. 74) -There was also "significant reductions in depressive symptoms and marginally significant reductions in anxiety symptoms" (p. 74).	Domestic - NYC	This study also found difficulty with incorporating a trauma narrative in a school based intervention.

Play-Based/Creative Interventions										
Article Name	Author(s)	Year Published	Type of Therapy	Type of Trauma	Sample Criteria	Sample Size	Type of Study/Purpose	Results of Therapy	Domestic or International	Other Notes
Life is Good Playmakers on the Gulf Coast	Rebecca Cornelli Sanderson, & Steven Gross	2011	Playmaker Model	Natural Disaster	-Age: 3.5-6 -Classroom along Gulf Coast	111	-Control group was utilized -The purpose was to assess the efficacy of the Playmaker model.	-The children in the Powerplay group (group receiving the intervention) showed significant improvement whereas the control group improved slightly. -Children in the Powerplay group had better social-emotional well-being overall. -The effect sizes for the children in the Powerplay group ranged from .61-.98.	Domestic - Mississippi	This was a 15 week intervention in which preschool teachers were trained to do a Powerplay session each week. This Powerplay session had a warm up, story, a big game, and a cool down.
Promoting Collaborative Relationships in Residential Care of Vulnerable and Traumatized Youth: a Playfulness Approach Integrated with Trauma Systems Therapy	Jose Hidalgo, Melissa Culhane Mravic, Rene Milet, &James Beck.	2016	Playmaker Model & Trauma Systems Therapy (TST)	Unaccompanied Migration	-Residential shelter for unaccompanied youth -Part of the Office of Refugee Resettlement (ORR) network	4 pilot sites, 297 staff members	-No control group -The aim of this study was to see how implementing play based therapy and TST impact staff relations to the youth and their outlook on their jobs.	-Staff reported higher level of mental health capacity, increased job satisfaction, less behavioral problems, and a redefining of roles. -This redefining of roles includes improved communication with the youth, because they began to see the workers as more than staff, but as someone they could trust.	Domestic - Texas & Florida	
Making Room for Play: An Innovative Intervention for Toddlers and Families Under Rocket Fire	Esther Cohen, Ruth Pat-Horenczyk, & Dafna Haar-Shamir	2013	Mother-child Play Therapy	Manmade Disaster - Complex	-Families of young children in the area of Sderot, Israel (outside of Gaza strip with recurrent rocket and mortar attacks). -Mothers volunteered through child-care settings	70	-No control group -The purpose of the study was to evaluate how mother and child relationships through organized play effects social emotional health of the dyad.	-Through qualitative results 72% of the mothers reported the changes in the parent-child bond -68% of the mothers noticed positive changes in children behaviors through improved positive mood and expressions of excitement. -56.25% of mothers felt more competent to better understand and help their child through this complex trauma. -In a year follow up in which 53 of the mothers participated, many reported lasting impacts such as identifying their child's emotional state and their own (41.6%), and 20.8% reported they still used the techniques from the program.	International - Israel	

Play to the Whistle: A Pilot Investigation of a Sports-Based Intervention for Traumatized Girls in Residential Treatment	Wendy D'Andrea, Lou Bergholz, Andrea Fortunato, & Joseph Spinazzola	2013	Trauma Informed Sports Interventi on	Complex	-Age: 12-21 -Female -Members of residential treatment facilities	88	-Comparison group of TAU (treatment as usual) in the residential facilities (psychotherapy, group activities). -To study if sports can be effective in decreasing behaviors and trauma effects.	-Across the board DtG (Do the Good - sports therapy) showed significant, marginally significant, and improvements over the TAU group. -DtG had no significant change in restraints, whereas TAU increased in restraints. "DtG participants had a marginally significant decrease in time-out... TAU group had marginally significant increase in time-outs" (p. 744). -DtG's internalizing, externalizing, and CBCL symptoms improved. TAU's group internalizing, externalizing, and CBCL symptoms worsened. (p. 745). -DtG's "players showed significant increase in peer-to-peer helping behaviors... and a marginal increase in encouragement of peers" (p. 746).	Domestic - Across Northeastern States	Sports programs can be a good way to get older children and adolescents to play and move. This movement and play can help build social skills, improve regulation, and more. Also, one does not necessarily need therapists to lead the sports, just therapists to train coaches that then can lead a therapeutic sports group.

	Prolonged Exposure Therapy (PE)									
Article Name	**Author(s)**	**Year Published**	**Type of Therapy**	**Type of Trauma**	**Sample Criteria**	**Sample Size**	**Type of Study/Purpose**	**Results of Therapy**	**Domestic or International**	**Other Notes**
Changes in Negative Cognitions Mediate PTSD Symptom Reductions During Client-Centered Therapy (CCT) and Prolonged Exposure (PE) for Adolescents	Carmen McLean, Rebecca Yeh, David Rosenfield, & Edna Foa	2015	CCT (Client Centered Therapy) vs. PE	Sexual Abuse	-Age: 13-18 -Seeking treatment at rape crisis center -Have or threshold of PTSD resulting from sexual abuse that occured 3 or more months prior	61	-This study randomized the adolescents in to two groups - one received CCT the other PE. -This study focused on how negative trauma related cognitions affect PTSD and depressive symptoms, and the efficacy of PE therapy with adolescents.	-3-months post treatment outcomes were superior in PE compared to CCT across 3 measures (PTSD, depressive, attitudes scale). p. 67 -"Reductions in negative cognitions may be an important mechanism of therapeutic recovery for a variety of PTSD interventions" p. 68	Domestic - Philadelphia	
Direction of Influence Between Posttraumatic and Depressive Symptoms during Prolonged Exposure Therapy among Children and Adolescents	Idan Aderka, Edna Foa, Edna Applebaum, Naama Shafran, & Eva Gilboa-Schechtman	2011	PE	Unspecified - Trauma Variety	-Age: 8-18 -Recieved primary diagnosis of PTSD -Fluent in Hebrew	73	-No control or comparison group. -Study was conducted to explore the efficacy of PE therapy for PTSD, and the relationship between PTSD and depressive symptoms.	-Significantly decreased depressive and posttraumatic symptoms during treatment. p. 4 -"Reciprocal relations exist between posttraumatic and depressive symptoms, but changes in PTSD lead to changes in depressive symptoms to a greater extent than vice versa." p. 5	International - Israel	
Intensive Prolonged Exposure Treatment for Adolescent Complex PTSD: A Single Trial Design	Lotte Hendriks, Rianne de Kleine, Mieke Heyvaert, Eni Becker, Gert-Jan Hendriks, & Agnes van Minnen	2017	PE	Complex	-Age: 12-18 years -Multiple Interpersonal Traumas -Meeting diagnostic criteria for PTSD	10	-Single Trial Design (no control or comparison) -The purpose of this study was to evaluate the effectiveness and safety of intensive PE therapy for adolescents. Also to evaluate if an intensive week long PE treatment reduced the rates of dropouts.	-Reduction of adolescents meeting criteria for PTSD (pretreatment 10 adolescents had PTSD to 6, 3 & 6 month follow up reduction from 10 to 2 adolescents with PTSD). -Significant reduction in: PTSD symptoms, depressive symptoms, anxiety, and dissociative symptoms.	International - Netherlands/ Dutch	

Trauma-Focused Cognitive Behavioral Therapy

Article Name	Author(s)	Year Published	Type of Therapy	Type of Trauma	Sample Criteria	Sample Size	Type of Study/Purpose	Results of Therapy	Domestic or International	Other Notes
Complex PTSD as Proposed for ICD-11: Validation of a New Disorder in Children and Adolescents and their Response to TF CBT	Cedric Sachser, Ferdinand Keller, & Lutz Goldbeck	2017	TF CBT	Complex	-Age: 7-17 -Exposure to one or more traumatic events -At least medium severity of PTSS -Trauma occurred after age 2	155	-A multicenter randomized controlled trial. -Purpose was to see if PTSD could be a diagnosis (complex PTSD) and the effectiveness of TF CBT with CPTSD and PTSD kids and adolescents.	-Comparing pre and post levels of PTSS there was a significant difference between PTSD and CPTSD group. -The authors found that PTSD and CPTSD are "empirically distinguishable disorders in children and adolescents" (p. 165). -No difference in response rates between these two groups. -Children with PTSD showed statistically significant more PTSS at beginning and end of treatment. -The authors found that TF CBT had medium effects on PTSD symptoms of emotion regulation and large effects in negative self-concept and interpersonal problems.	International - Germany	
Moderators of Treatment Response to Trauma-Focused Cognitive Behavioral Therapy Among Youth in Zambia	Jeremy Kane, Laura Murray, Judith Cohen, Shannon Dorsey, Stephanie Skavenski van Wyk, Jennica Galloway Henderson, Mwiya Imasikiu, John Mayeya, & Paul Bolton	2016	TF CBT	Unspecified	-Age: 5-18 -Recruited from five low resource communities -Traumatic event history (one or more) -Significant levels of trauma symptoms, among orphans and vulnerable children	257	-Randomized clinical trial TF CBT vs TAU (treatment as usual). -The purpose was to evaluate how different moderators such as, gender, age, etc., effect TF-CBT treatment.	-Effect sizes of TF-CBT for trauma symptom and functioning outcomes were 2.39 and .34. -Largest effect size was among those who had both parents alive, followed by mother alive, neither parent alive, and father alive. -Significant moderators were: sexual abuse history (trauma and functioning), orphan status (functioning), and primary caretaker (trauma and functioning).	International - Zambia	These moderators suggest that having both parents alive during treatment does help with treatment success, along with having a primary caregiver in general may enhance effects.
Trauma-Focused Cognitive Behavioral Therapy or EMDR: What Works in Children with PTSS? A Randomized Controlled Trial	Julia Diehle, Brent Opmeer, Frits Boer, Anthony Mannarino, & Ramon Lindauer	2015	TF CBT vs EMDR	Single Event & Multiple Event Traumas (children did not differ in terms of CAPS-CA severity scores)	-Ages 8-18 -Dutch language -Exposure to at least one traumatic event -Last traumatic event occurred at least 4 weeks prior -Partial/full PTSD as reported by child.	48	-Randomized Controlled Trial (TF CBT vs EMDR) -The question: TF CBT is well studied and accepted is EMDR more, less, or equally effective as TF CBT?	-TF CBT & EMDR improved on all subscales of RCADS (Revised Child Anxiety and Depression Scale). -Only 6 children from each therapy showed "significant reliable change from pre- to post-treatment." -Suggests both treatments work in the same way. -In each therapy only one child remained with a full PTSD diagnosis.	International - Netherlands/ Dutch	

Comparison of EMDR, Cognitive Behavioral Writing Therapy, and Wait List in Pediatric PTSD Following Single-Incident Trauma: A Multicenter Randomized Clinical Trial	Carlijn de Roos, Saskia van der Oord, Bonne Zijlstra, Sacha Lucassen, Sean Perrin, Paul Emmelkamp, and Ad de Jongh	2017	TF CBT (Cognitive behavioral writing therapy sub method of TF CBT) vs EMDR	Single Event	-Age: 8-18 -proficient in Dutch -had a primary DSM-IV diagnosis of PTSD or subthreshold of PTSD being linked to a single traumatic event that occured at least one month prior to assessment	103	-Randomized Clinical Trial (TF CBT, EMDR, and WL - wait list). -Evaluating EMDR in comparison to TF CBT.	-The main finding was as follows: "Compared to WL, EMDR and TF CBT experienced significant pre-to-post treatment reductions in frequence of child-and parent-reported PTSD symptoms... EMDR and CBT did not differ in post treatment. Improvements in PTSD symptom severity were maintained at the 3 and 12 month follow ups. However, EMDR participants made further improvements on child- and parent reported PTSD symptoms from 3-month to 12-month" p. 1223	International - Netherlands	Both these treatments are effective in treating single event traumatic experiences. A question for further research: Is EMDR more effective in single event traumas than complex trauma?
A Randomised Comparison of CBT and EMDR in Disaster-exposes Children	Carlijn de Roos, Ricky Greenwald, Margien den Hollander-Gijsman, Erica Noorthoorn, Stef van Burrne, and Ad De Jongh	2011	CBT vs EMDR	Disaster Trauma - Specifically a firework factory exploding	-Age: 4-18 -Having firework disaster related symptoms and willingness to participate	52	-Randomized comparison. -The purpose was to compare the effectiveness between EMDR and CBT	-"Apparently both CBT and EMDR are capable of substantially reducing children's symptoms of post-traumatic stress, anxiety, depression, and behavioural problems presenting in a community mental health setting." (p. 9) -Treatment gains were found to be faster for EMDR than those in CBT.	International - Netherlands	