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# School-Based Interventions and Art Therapy for Children Exposed to Trauma

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Abstract

This literature review examined childhood trauma as a growing public health issue in the United States. Childhood trauma or adverse childhood experiences (ACEs) can lead to negative health outcomes. Adults who were exposed to trauma early in life may face challenges such as depression, anxiety, substance abuse, intimate partner violence, incarceration, obesity, and low work performance. ACEs impact key areas of development when toxic levels of stress hormones are repeatedly released in the brain. Negative outcomes for traumatized children include struggling with social relationships, difficulty with emotional regulation, low academic achievement, and behavioral problems. Grounded in child-centered therapy and an underlying theme of hope, the commonalities between methods are highlighted to support a multi-modal approach to treatment. More diverse and informed treatment options in school can aid in breaking the intergenerational cycles of trauma and better the lives of children and families. Findings included that adverse childhood experiences are common in the United States, the impact of trauma is unique to each individual, and a variety of methods can be used to begin a healing process.

*Keywords*: childhood trauma, school-based therapy, art therapy

School-Based Interventions and Art Therapy for Children Exposed to Trauma

**Introduction**

People exposed to childhood trauma have a higher risk of negative health outcomes later in life when compared to those who were not exposed to childhood trauma (American Psychology Association, 2008). Numerous areas of healthcare have used the findings on trauma and adult health outcomes to improve approaches to treatment and adapt to a more trauma informed model. More recently, trauma research shifted from primarily focusing on negative health outcomes later in life to the impact early life trauma on school age kids.

Often referred to as adverse childhood experiences or ACEs in the field of psychology, the research supported that childhood trauma negatively impacts key areas of development (Cole, 2009). When a child is exposed to trauma, stress hormones are released into their brain causing the fight, flight, or freeze response. Findings suggested nearly two-thirds of people experienced one or more ACE and of those with ACEs, 87 percent experienced two or more types of trauma (Felitti, as cited in Stevens, 2012). Children depend on adults to nurture them and help them understand the world. When young children experience the world as a dangerous place, survival automatically becomes the priority over everything, making it difficult to learn (Harris, 2015).

Rates of childhood trauma have caused an array of issues for kids in and out of the classroom. Some of the negative outcomes of adverse childhood experiences included, struggling with social relationships, difficulty with emotional regulation, lower academic achievement, and behavior problems. Adverse childhood experiences (ACEs) affect more than 34.8 million children across socioeconomic lines, putting them at higher risk for health, behavioral and

learning problems (Harris, 2017). Without intervention the negative impact of trauma has a ripple effect, tearing through families, schools, and the greater community.

With a goal to better understand how to help children cope, the complexity of childhood trauma was introduced, and school-based interventions were explored. According to neurobiologist Jane Stevens, the CDC's Adverse Childhood Experiences Study (ACE study) has "become a buzzword in social services, public health, education, juvenile justice, mental health, pediatrics, criminal justice and even business" (Stevens, 2012, p.1). Dr. Robert Anda (2012), Co-Principle Investigator of the ACE Study and author of over 70 published works since the original research continues to present findings in hopes to contribute to "halting the intergenerational transmission of ACEs at the community level and throughout all human service systems" (Anda, as cited in Robertanda, 2012, p.2). Dr. Vincent Felitti (1985), realized he may be onto something bigger when he misspoke during a routine questionnaire at the Kaiser Permanente Obesity Clinic. He discovered most of his patients struggling with weight had experienced childhood trauma (as cited in Stevens, 2012).

## Literature Review

### Trauma

Trauma is a broad term, often used to describe the many different subgroups and types of trauma. In order to best explore the interventions for trauma included in this paper, it is important to have a general understanding of what trauma means. Trauma, as defined by The American Psychology Association (APA), is the "emotional response to a terrible event" (2016. p.1). The types of trauma that cause the "greatest adverse psychological consequences are those related to interpersonal or intentional trauma" (International Society for Traumatic Stress Studies, 2018).

**Traumatic event.** A traumatic event can be one or more emotionally distressing experience that can "overwhelm a person's ability to cope" (APA, 2016, p.1). some specific examples of potentially traumatic events are car accidents, natural disasters, sexual assault, domestic violence, community violence, and medical emergencies. Any threat to one's life is considered a traumatic event (APA, 2016). Witnessing a traumatic event can also cause trauma (International Society for Traumatic Stress Studies, 2018). The immediate response to a traumatic event is usually denial or shock but, "longer term reactions include unpredictable emotions, flashbacks, strained relationships and even physical symptoms like headaches or nausea" (APA, 2016, p.1).

**Traumatic stress.** According to the International Society for Traumatic Stress Studies (ISTSS), the stress response to a traumatic event can be emotionally taxing and varies "considerably, ranging from relatively mild creating minor disruptions in the person's life to severe and debilitating" (2018, p.1). Traumatic stress can cause difficulties including coexisting physical and mental health problems. Common diagnoses associated with traumatic stress are Posttraumatic Stress Disorder (PTSD), Acute Stress Disorder, and many other possible comorbid diagnoses. Some people can cope with their trauma independently, gradually feeling their symptoms and stress levels decrease. Some people who experience ongoing or worsening symptoms of trauma and increased traumatic stress may need professional help to strengthen and practice coping skills (ISTSS, 2018).

**Coping with trauma.** Coping put simply is the conscious or unconscious effort to reduce stress, sometimes called coping skills, coping mechanisms, or coping strategies among mental health professionals (Canadian Mental Health Association, 2014). Negative coping skills included self-harm, using drugs and alcohol, avoidance, denial, ignoring emotional pain, and

aggressive or violent behavior (Canadian Mental Health Association, 2014). Harris (2016) found that similar to the adults assessed in the original ACE study, traumatized children "often find solace in food, alcohol, tobacco, methamphetamines, inappropriate sex, high-risk sports, and/or work and over-achievement" (as cited in Stevens, 2016, p.10). These behaviors are used as a way to cope with feelings of depression, fear, shame, anger, and anxiety (Stevens, 2012). Positive coping skills included exercise, hobbies such as reading or craft making, being with pets, sleep, meditation, good nutrition, and seeking support from a clinician or friend (Canadian Mental Health Association, 2014).

**Resilience.** Resilience, as defined in Psychology Today (2018) is "that ineffable quality that allows some people to be knocked down by life and come back stronger" (Marano, as cited in Psychology Today, 2018, p.3). There are many factors to consider when trying to understand the impact of trauma because each case is unique. According to Hambrick (2015), factors to be considered while assessing trauma included the intensity of the trauma, the duration of the trauma, the frequency of the trauma, the emotional stability prior to the trauma, the passivity to the trauma, the reactions to the trauma from loved ones, the reactions to the trauma from friends and the broader community, and age (Hambrick, 2015, pp.1-6).

**ACE study.** Dr. Vincent Felitti (1985), the head physician at the Kaiser Permanente Obesity Clinic, had grown concerned because his patients were dropping out of the weight loss program in high numbers (50%), despite their success in dropping unwanted pounds and reaching weight loss goals (as cited in Stevens, 2012).

During a routine intake interview, Felitti (1985) misspoke, asking a patient "how much did you weigh when you became sexually active?" rather than, "how old were you when you became sexually active?" (as cited in Stevens, 2012, p.1). When the patient responded that she

weighed only forty pounds when she became sexually active, Felitti was taken aback. He

adjusted his questionnaire and with the help of colleagues, began to look at rates of sexual and

physical abuse among patients at the obesity clinic (Stevens, 2012). He found that most of his

patients had a history of childhood trauma (Felitti, as cited in Stevens, 2012).

Felitti (1990) presented his work to members of the North American Association for the

Study of Obesity but, the sample size of only 286 patients was harshly criticized (as cited in

Stevens, 2012). Dr. David Williamson (1990), epidemiologist from the United Stated Centers for

Disease Control and Prevention (CDC), advised Felitti that if he expand his study of hundreds of

patients to thousands, he could substantiate the evidence and gain respect among his peers (as

cited in Stevens, 2012). Dr. Robert Anda (1990) who was a colleague of Williamson at the CDC,

was researching depression and coronary heart disease, he too believed Felitti was onto

something bigger (as cited in Stevens, 2012). From 1990-1994 Felitti and Anda immersed

themselves in understanding childhood trauma, they established that they would work together to

conduct a largescale study at the Kaiser Permanente Department of Preventive Medicine and

determined the ten specific adverse childhood experiences (ACEs) they would assess (Stevens,

2012). Out of 26,000 patients who were asked, 17,421 agreed to participate in research on how

"childhood events might affect adult health" (Felitti, as cited in Stevens, 2012, p.5). The original

ACE study was conducted between 1995-1997, there were 17,421 participants that were assessed

and tracked for the following fifteen years. The original ten ACEs included sexual abuse, verbal

abuse, physical abuse, having a parent who is mentally ill, having a parent who is an alcoholic,

having a mother who is a victim of domestic violence, having a family member incarcerated,

losing a  parent through divorce or abandonment, emotional neglect, and physical neglect

(Stevens, 2012).

The ACE study revealed that almost two-thirds of participants experienced one or more ACE which suggested childhood trauma was a common problem. Out of the two-thirds of participants that had ACEs, 87 percent had experienced two or more, this suggested exposure to multiple types of trauma was also a concern (Stevens, 2012). By tracking the participants, Felitti and Anda validated that childhood trauma resulted in higher rates of chronic disease, mental illness, incarceration, and work problems (Stevens, 2012). Dr. Frank Putnam (2013), director of the Mayerson Center for Safe and Healthy Children (MCSHC) said, the ACE study, "changed the landscape because of the pervasiveness of ACEs in the huge number of public health problems, expensive public health problems- depression, substance abuse, STDs, cancer, heart disease, chronic lung disease, diabetes" (as cited in Robertanda, 2013, p.1).

Limitations of the ACE study included the lack of diversity in participants and that the sole focus was on aged adults. Participants were predominantly Caucasian (75%), mostly middle-class, college educated (40%), and middle aged with an average age of 57 (Stevens, 2012). All participants were employed, possessed health insurance, and had primary care doctors at the Kaiser Permanente health clinic. Some may argue that the lack of diversity in participants was actually a strength of the ACE study as the findings confirmed that childhood trauma impacts everyone, even those who are considered privileged by American standards. Strengths of the ACE study included assessing exposure to multiple types of childhood trauma for the first time and tracking health outcomes later in life. The ACE study started a revolution in healthcare, it created a shift toward becoming a more trauma informed society. McEwen (2016) said the ACE study was able to "change our thinking about childhood. We used to believe that traumatic experiences that occurred when we were young- with the possible exception of physical violence- didn't have much effect later on in life. Now there's no doubt that adverse childhood

experiences are responsible for much of our behavior, our health and even our life span" (as cited in Stevens, 2016, p.46).

The ACE study laid the foundation for neuroscientists and pediatricians to explore how trauma impacts children. Neuroscientist Dr. Martin Teicher (2016), head of the Developmental Bio-psychiatry Research Program at McLean Hospital in Belmont, Massachusetts says "childhood maltreatment exerts a prepotent influence on brain development and has been an unrecognized confound in almost all psychiatric neuroimaging studies. These brain changes may be best understood as adaptive responses to facilitate survival and reproduction in the face of adversity. Their relationship to psychopathology is complex as they are discernible in both susceptible and resilient individuals with maltreatment histories. Mechanisms fostering resilience will need to be a primary focus of future studies" (as cited in Stevens, 2016, p.46).

## Childhood Trauma

It is especially important to consider the persons age when understanding their trauma as "we can only face a trauma with the emotional and cognitive resources available at the time we face that trauma" (Hambrick, 2015, p.4). It is essential for healthcare providers, educators, and adults that care for children to understand that, "Kids experiencing trauma act out. They can't focus. They can't sit still. Or they withdraw. Fight, flight or freeze- that's a normal and expected response to trauma" (Stevens, 2016, p.45). Using a more "trauma-informed treatment approach does not replace the activities you're already doing. Rather, it helps you to organize and sequence them for maximum effectiveness" (Greenwald, 2014, p.7).

**Childhood trauma and brain development.** Neurobiologist Takao Hensch (2016), partnered with the Center for the Developing Child at Harvard University, seeking to better understand the origin of mental illness in the brain. The study examined critical times of brain

development in areas of executive functions and self-regulation. Teicher (2016) said "The brain is dynamic and changes according to what we do and experience, and the impact of experiences is greatest when specific regions of the brain are still developing" (Teicher, 2016, p. 5).

Studies on brain development, brain plasticity, and program effectiveness can help adults develop the skills and programs needed to better understand issues affecting children and better serve children (Hensch, as cited in Center on the Developing Child at Harvard University, 2016). The data in this study was used in planning science-based practice methods in hopes to achieve significant and positive changes for vulnerable children and families. According to Hensch (2016), the innovation and application depends on the science of development (Hensch, as cited in Center on the Developing Child at Harvard University, 2016).

The research program had a guiding theory that building adult capabilities improved outcomes for children (Center on the Developing Child at Harvard University, 2016). The adult capabilities discussed included adult-child interaction and relationship, adult mental health, executive function and self-regulation in adults and children, family self-sufficiency, and stable and supportive environments (Center on the Developing Child at Harvard University, 2016).

The Center on the Developing Child at Harvard University (2017) established three  key principles to be considered in redesigning programs and policies with better outcomes for children. Principle one focused on fostering healthy relationships between adults and children. Principle two addressed how to strengthen core life skills. Principle three focused on developing skills to reduce sources of stress in the lives of children and families. Strengths of this research included involving a variety of adults that work with children including neuroscientists, practitioners and community members, it was written with an inclusive outlook and used terms

such as 'our' and 'we', and it connected science research to policy and practice (Center on the Developing Child at Harvard University, 2017).

**Complex trauma.** Complex trauma means repeated exposure to trauma or exposure to multiple types of trauma that may escalate over time. Courtois (2008) said, "in families, it is exemplified by domestic violence and child abuse and in other situations by war, prisoner of war or refugee status, and human trafficking" (p.12). Complex trauma creates complex reactions (American Psychiatric Association, 1994 as cited in Courtois, 2008). Stevens (2016) claimed, "if a child is experiencing violence, there is usually some other type of trauma happening too" (p.44). According to the National Technical Assistance Center for Children's Mental Health, there are twelve areas of child development effected by complex trauma including attachment and relationships, physical health: body and brain, emotional responses, self-concept and future orientation, dissociation, behavior, and thinking and learning (Elias & Peters, 2008, p.7).

*Childhood trauma and poverty.* Children and families dealing with ongoing economic stress are exposed to trauma at higher rates than others and have an increased risk of complex trauma (O'Hare, 2011). According to The Annie E. Casey Foundation, nearly eight million children live in areas of concentrated poverty in the United States and schools within poor communities often have limited resources to help children in need (2012).

Dealing with comorbid challenges such as childhood trauma and poverty, complicates recovery. Families living in poverty face "significant challenges related to access to services or may require services that are specially adapted for their needs" (NCTSN, 2018, p.3). People face economic struggles in all geographic locations and for diverse reasons, "Economic challenges can affect feelings of safety, the ability to remain calm, relationships with others, and the belief that things will improve." (NCTSN, 2018, p.4).

McLeod & Shanahan (1993) researched fluctuations in poverty, parental responses to poverty, and the impact of poverty on children's mental health. The research showed great variation in how families deal with economic hardship. For some families, poverty is temporary such as a sudden loss of job or divorce that resulted in short-lived economic stress. For others, poverty can last the entire lifespan (McLeod & Shanahan, 1993). When comparing children who experienced ongoing poverty to those who did not, the evidence suggested that poverty leads to higher levels of conduct disorder and depression (Valez, Johnson & Cohen, as cited in McLeod & Shanahan, 1993). Lower levels of self-confidence and limited social adaptation was also found to be a risk of childhood poverty (Goff, as cited in McLeod & Shanahan, 1993). Limitations of the research included that poverty was sometimes measured at one point in time though it usually fluctuates, and cultural differences were not mentioned.

***The KIDSCOUNT project.*** Dr. William O'Hare (2013), directed a nation-wide project called KIDS COUNT that highlighted the needs of disadvantaged populations. The KIDS COUNT project used changes in the United States child population, changes in child statuses, rates of poverty, and race to discuss the increased need for intervention within poor communities. Strengths of the research included cultural considerations and following demographic trends. The demographic trends considered were the decreased average family size and longer life expectancies. His findings confirmed that the overall percentage of the population that were children was decreasing but, the number of families living in poverty continued to rise. The research uncovered evidence that the undercount of young children and minority children in the United States census has impacted the ability to accurately track children. His data supported that the United States had become a less child centered environment (O'Hare, 2013).

***Childhood trauma and community.*** The Annie E. Casey Foundation introduced the

Making Connections initiative in the 1990's with a goal to "improve outcomes for vulnerable

children and families by harnessing the unique strengths" within the community (2011, p.3). The

Making Connections initiative worked with faith-based leaders who had a "strong commitment

to serve" but, lacked necessary resources (The Annie E. Casey Foundation, 2011, p.2). Nzinga

Misgana (2011), a consultant for the Making Connections initiative stated, "we created a

community of learners by offering trainings and bringing people from different organizations

together" (2011, p.1). She said, "by supporting organizations, you are changing the lives of lots

of people at once; it's a ripple effect" (Misgana, as cited in The Annie E. Casey Foundation,

2011, p.1). Providence In-town Churches Association expanded the food pantry program from

serving 700 people per month to over 5,000 people per month through partnership with The

Annie E. Casey Foundation (2011). Partnership with the larger, more established foundation

provided a more expansive network, resources, training, and funders.

## Presentations of Childhood Trauma

Trauma not only physically impacts the young brain, it causes behavioral problems and

can make it difficult for children to reach their full potential (National Child Traumatic Stress

Network, 2018). A child's response to trauma may result in a diagnosis of post-traumatic stress

disorder (PTSD). As explained in *Helping Traumatized Children Learn, Volume* 1 (2009), When

a diagnosis of PTSD does not cover all symptoms presented, comorbid diagnoses may include

depression, attention-deficit hyperactivity disorder, phobic disorder, oppositional defiant

disorder, conduct disorder, anxiety disorder, and more (Cole, O'Brien, Gadd, Ristuccia, Wallace

& Gregory, 2009, p.21). The research supported that "clinical manifestations of trauma are

exceedingly broad and are not captured well by traditional diagnoses" (Cole et al., 2009, p.21).

Dr. Bessel van der Kolk, author of *The Body Keeps the Score* and founder of The Trauma Center in Brookline, MA, pushed for a new diagnosis for children with a history of complex trauma called "developmental trauma disorder" (van der Kolk, as cited in Cole et al., 2009, p. 22). A diagnoses of developmental trauma disorder is intended to account for the complex neurobiological, developmental, emotional, and behavioral consequences of early life trauma (Cole et al., 2009).

**Presentations of childhood trauma in school.** According to Massachusetts Advocates for Children and Harvard Law School (2013), "obstacles traumatized children face in the classroom result from their inability to process information, meaningfully distinguish between threatening and non-threatening situations, form trusting relationships with adults, and modulate their emotions" (p.21). Behavior problems in school can lead to feelings of "despair, guilt and frustration" (Stevens, 2012, p.10). Dr. Nadine Burke Harris (2016), pediatrician and founder of the Center for Youth Wellness, stated when a child's brain is "overloaded with stress hormones and unable to function appropriately, they can't focus on learning. They fall behind in school or fail to develop healthy relationships with peers or create problems with teachers and principals because they are unable to trust adults" (as cited in Stevens, 2016, p.10).

It is important to note, not every student that has difficulties in school or displays trauma-like symptoms has a history of trauma, all possible causes of trauma-like symptoms should be explored (van der Kolk, 2005). "approaches that address only the behaviors that appear on the surface often do not respond to a student's real needs" (Cole et al., 2013, p.24).

*Case study.* With a focus on the varied responses to a traumatic event, NCTSN (2018) presented a case study about three high school boys who were jumped by a known gang. If a student does not present obvious signs and symptoms following a traumatic event, it does not

mean the trauma is not present. Some individuals may work through traumatic stress independently, with loved ones or peers, with a clinician, or in ways that others just cannot see.

Following the traumatic event, Boy 1, become reluctant to go to school, there was an increase in absences and tardiness, when he was in school he gave excuses for not doing his work, and was easily irritated. Boy 2, became more aggressive and outspoken, he often bragged about fighting and seemed to enjoy having some 'street cred', his change in behavior led to repeatedly being sent to the principal's office. Boy 3, did not present any extreme changes in behavior following the incident, though he insisted on taking an alternate route home and avoided the area where the boys were jumped.

Looking at case studies provided specific, relatable, and narrative examples. Case studies can be utilized to better understand the impact of trauma on children and how to help them cope individually (NCTSN,  2018).

 Partnerships noted by NCTSN (2018) included, the American Psychology Association (APA) and the American Professional Society on the Abuse of Children. NCTSN is affiliated with the Center for Mental Health Services (CMHS), Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services (DHHS), University of California (UCLA), and Duke University (NCTSN, 2018). The Massachusetts Advocates for Children and Harvard Law School also referenced the NCTSN data in *Helping Traumatized Children Learn Volume 1 and Volume 2* (Cole et al., 2009 & Cole et al., 2013).

**Chronological presentations of childhood trauma.** The National Child Traumatic Stress Network (NCTSN) listed common ways trauma presented in school chronologically, ranging from pre-school to high school (2018).

*Pre-school.* Preschool age children sometimes regressed, becoming unable to reach appropriate developmental milestones following a traumatic experience. Some signs and symptoms of trauma that are commonly presented by preschool age kids are an increase in dysregulated behavior, decrease in the ability to calm down when escalated, suddenly becoming withdrawn or mute, losing developmental skills around toileting, difficulty sleeping, nightmares, becoming clingy to parents, and worrying about loved ones (NCTSN, 2018).

*Elementary school.* Elementary students often experienced somatic distress following trauma. They may feel physically sick, complain of an upset stomach, have frequent headaches and other physical ailments. Some common changes in behavior observed included inconsistent moods, an increase in irritability, anger and aggression, inability to concentrate, and an increase in school absences (NCTSN, 2018).

*Middle school.* Middle school age kids presented more extreme reactions to trauma. Behaviors witnessed in middle school included expressing plans for revenge, engaging in self-destructive behavior, engaging in danger and reckless behaviors, self-harm, and substance abuse. Changes in attendance, behavior, and academic achievement were common among middle school students. According to NCTSN, as children approach middle school they sometimes obsessively ask questions about their trauma and repeatedly bring up the topic. Middle school students also presented feelings of guilt, embarrassment, and shame following a traumatic event. They sometimes felt self-conscious about having emotional reactions in front of peers (NCTSN, 2018).

*High school.* Students in high school presented an obvious change in their general worldview following trauma. Shifts in relationships with loved ones, teachers, or peers was

common. As students approach graduation and transitioning into adulthood they may present a decrease in interest around their goals, plans, and preparation for the future (NCTSN, 2018).

How trauma presents in school is complex. Trauma can disrupt education, impact a students' academic abilities, and challenge school staff. Strengths of this research included being informative in helping caregivers, parents, and educators to better understand how trauma may present in school. Limitations of this research included that the response to trauma is unique which means learning general signs and symptoms may limit the ability to keep an open mind. Factors that can cause varied responses to trauma included history of trauma, mental health issues, differences in temperament and personality, pharmacology, and history of services (NCTSN, 2018).

### Helping Traumatized Students

The Trauma and Learning Policy Initiative (2013), by Massachusetts Advocates for Children and Harvard Law School published *Helping Traumatized Children Learn, Volume 2,* which defined what it means for school to be trauma sensitive and clear instruction on how to get there. Robert Anda (2013), Co-Founder and Investigator of the ACE study, described the book as, "an exciting next step in the evolution of the cultural movement to transform our school systems into safe, supportive learning environments for all children, including those who have experienced overwhelming adversity" (Anda, as cited in Cole, Eisner, Gregory & Ristuccia, 2013, p.1). Consistency of structure and limits in school are "essential to creating and maintaining a sense of safety for all students and staff at school" (Cole et al., 2013, p.95).

According to Peters (2008) of Georgetown University National Technical Assistance Center for Children's Mental Health, trauma informed care is "changing the fundamental question from 'what's wrong with you?' to 'What happened to you?'" (Peters, 2008, p.13).

**Readiness, response, and recovery.** NCTSN (2018) used the 3R's of School Crises and Disasters: Readiness, Response, and Recovery. The 3R's can be adapted to a group or an individual student and were utilized in overcoming a traumatic event that happened in school.

*Readiness*. Readiness addressed school preparedness in dealing with trauma. Factors considered included school security, prevention of school violence, and planning effective responses to violence in school. Each institution should implement readiness based on the geographic location, physical school building and grounds, student body, number of teachers and staff, and resources available. Schools should establish relationships in their community with healthcare providers, law enforcement, emergency responders, and local religious institutions that can assist in case of emergency.

*Response.* The main goal of responding to trauma is to de-escalate the situation, make the student or students feel safe, and decrease fear before taking action. Before mental health workers address a trauma situation, law enforcement should be called if necessary. The staff and students closest and most impacted by a traumatic event should be seen before others. It is important to keep in mind that any crisis can re-traumatize individuals that may have had previous exposure to trauma.

*Recovery.* All school staff should be aware of common responses to trauma to best help recovery from a traumatic event. Examples included emotional reactions and changes in behavior. Early intervention can decrease the level of disruption in the classroom. Parents should be kept informed around how their child's school is handling trauma individually and as an institution. Working with school-based mental health professionals "allows for the expression of difficult feelings and assists the student in developing coping strategies and constructive action to deal with fear and anxiety" (NCTSN, 2018). The recovery phase sometimes included increase

security measures, reassessing the safety plan, educating staff and parents on trauma, and

working with the student's family to reinforce appropriate coping skills in and out of school.

Recovering from a traumatic experience was often an ongoing process and the rates of recovery

varied. Age, gender, degree of exposure to the traumatic event, previous traumatic experiences,

and any pre-existing health conditions should inform recovery methods. Maintained routines,

schedules, and social activities in school during all three stages provided comfort to staff and

students, strengthened the community, and increased solidarity (NCTSN, 2018).

      **Trauma sensitive schools.** A trauma sensitive school, as defined in *Helping Traumatized*

*Children Learn, Volume 2,* "is one in which all students feel safe, welcomed, and supported and

where addressing trauma's impact on learning on a school-wide basis is at the center of its

educational mission. An ongoing, inquiry-based process allows for the necessary teamwork,

coordination, creativity, and sharing of responsibility for all students" (2013, p.11). The

researched supported that school environments play a critical role in supporting students exposed

to trauma and hopefully suggested that "with careful planning, all of the adults in the school can

work together to provide a blanket of safety comprehensive enough to cover every space and

every person in the school" (Cole et al., 2013, p.95). Cole (2013) stated, "we have observed that

becoming trauma sensitive requires not only a deep understanding of trauma's impact on

learning but also a spirit of inquiry that most often starts with a small but enthusiastic group of

leaders and staff who learn together and can articulate their sense of urgency about why they feel

trauma sensitivity will provide better educational outcomes for all students" (Cole, as cited in

Cole et al., 2013, p.13).

      *Recovery school model.* Amazon Prime (2016) created a documentary called *Generation*

*Found* which explored the recovery high schools in the United States. In the documentary,

students lived in dorm style housing for varied lengths of time depending on individual needs.

The students participated in a holistic treatment for addiction that looked at ACEs in order to best

aid recovery. There are only 36 recovery high schools in the United States and four of those are

in Massachusetts but, due to trauma research and high demand, there are currently at least seven

recovery schools in the planning stages (Williamson, 2016).

### Interdisciplinary School-Based Therapy Methods for Trauma

School-based interventions allow children enrolled in school to access health services in

the school environment. Trauma research suggested that appropriate treatment methods should

be used based on the unique needs of the student.

**Occupational therapy.** A school-based occupational therapist is focused on helping

students become as independent as possible in all areas of life. Harron (2014), described

occupational therapy (OT) as a "hands-on, interpersonal treatment between a medical

professional and a child or group of children that is designed to help equip the young participants

with the skills needed to participate in everyday activities appropriate for their age" (p.9).

Benefits of OT included improved cognitive, physical, sensory and motor skills, improved self-

esteem, and increased sense of accomplishment (Harron, 2014). In addition to addressing a

child's physical needs, an occupational therapy approach can address psychological, social, and

environmental factors impacting a young person. OT can help kids with behavioral problems in

school, instead of expressing anger by hitting something, the occupational therapist may teach

positive ways to deal with anger such as writing about feelings, role play, or engaging in a

physical activity.

The American Occupational Therapy Association (AOTA) provided lists of those who

may benefit from occupational therapy, why occupational therapy is important for kids, some

examples of what occupational therapists focus on, differences in physical therapy and occupational therapy, settings that occupational therapist may work, and historical information about occupational therapy as a profession (AOTA, 2016).

Strengths of this research included presenting OT as a holistic approach to helping children in need, including how OT can be used to treat developmental delay, mental health or behavioral problems, that a school nurse or guidance counselor can help refer a child for OT based on academic or social performance.

According to Niekerk (2014), occupational therapy can support mental health and has potential to guide development. The chapter discussed how occupational therapy and clinical services aid children in identity and personality development (Niekerk, 2014, p.29). This chapter discussed how occupational therapy can benefit children with provision of language and may play a primary role in fulfilling a range of needs including children reaching full potential, fulfilling purpose, and enhancing quality of life. Strengths of this chapter include using occupational science to support occupational therapy with a focus on mental health services.

The American Occupational Therapy Association (AOTA) presented OT as an interdisciplinary method in child therapy that helps young participants reach measurable therapeutic goals, improve functioning, and better overall education experiences. Occupation therapy is an example of how intermodal work can help children exposed to trauma address unique issues that come up in school, OT helps kids become more independent with daily tasks, increase positive social interactions, increased healthy relationships, improved sense of accomplishment, and essentially lead to better quality of life (AOTA, 2016).

**Group therapy.** Niehaus & Rademeyer (2014) explored group therapy as a method of treatment to address developmental and psychosocial difficulties simultaneously. This theory

was based on the work from Yalom (1985) and highlighted therapeutic factors in group therapy (Yalom, as cited in Niehaus & Rademeyer, 2014). General information on group therapy with children provided information that is adaptable to other therapy methods. Children develop social skills in group therapy including universality, altruism, imitative behavior, interpersonal learning, and cohesion. Strengths of the research included making a clear connection between group work and child development, the overall hopeful tone that supports group therapy in aiding children in learning new skills and decreasing problem behavior, and it focused on the therapeutic aspects of group work. Limitations of the research include that in group therapy there are many moving parts, groups develop over time, so results may vary based on time, group dynamics shift with a change in members, and though the chapter separates group therapy development into phases, characteristics of each phase may be found in other phases (Niehaus & Rademeyer, 2014).

**Mindfulness.** Mindfulness is rooted in Eastern philosophical traditions and Buddhism (Follette, 2006). John Kabat-Zinn has largely influenced mindfulness entering main stream psychology through his work in Mindfulness-Based Stress Reduction (MBSR) at the University of Massachusetts Medical School (Kabat-Zinn, 2010). Mindfulness, as defined by The Association for Mindfulness in Education, is "paying attention here and now with kindness and curiosity" (2018, p. 1). Through mindfulness practices, children learned how to carefully observe their thoughts, feelings, bodily sensations, and the surrounding environment without judgement. Taking the time to become aware of these thoughts, feelings, and bodily sensations without labeling them as good, bad, positive, or negative gives children more time to "choose how to respond" (Follette, 2006, p. 1).

**School-based art therapy.** Mohr (2014) discussed an arts-based research project three-years post art therapy interventions were conducted following a devastating earthquake in Peru. In 2007, this earthquake killed over five hundred people, destroyed over eighty-eight thousand homes, and damaged fourteen hospitals. After the earthquake, faculty and students from Terapia de Artes Expresivas (Expressive Arts Therapies Peru; TAE Peru) led a nine-month art therapy intervention program with children and adolescents effected by the disaster. The goals of the research were to discover more about posttraumatic growth, how arts contributed to the growth experience, and if the arts continued to aid in processing significant traumatic events. (p.155).

Malchiodi, Steele, and Kuban (as cited in Mohr, 2014) wrote, "Children who experience posttraumatic growth have been found to show greater compassion and empathy than they did prior to the traumatic event, as well as demonstrating a more complex appreciation of ordinary experiences." (p.156). Putnam (as cited in Mohr, 2014) said, "The reaction of children to trauma differs from that of adults in that the shock and losses involved interact with the child's normal developmental stages." (p. 156).

Art therapy is a way to access the emotional reactions to trauma in a less direct way than talk therapy. Some co-researchers spoke about an increased sense of inner balance and freedom from the art making process, these experiences assisted in developing skills they are more likely to utilize in the face of future challenges. (Mohr, 2014, p.158). Viewing and reflecting on the art created around trauma can help form a connection between creative expression and memories, this is one way of processing and honoring traumatic experiences. (Mohr, 2015, p.159).

Benic (2016), reviewed seven visual arts research studies in early childhood education. The purpose of the review was to present findings of research on the arts in early childhood,

present findings of research on the arts in primary education, and present how the findings may

be applied within the education system.

The article focused on two main research methods, arts-based and arts-informed. In arts-

based research, the work is interactive with the researcher participating in the art making process

wherein arts-informed research the researcher observes the art making process (Benic, 2016,

p.56). Art "provides children with an opportunity to clearly express their opinions, which may be

difficult for them with verbal communication because they lack the vocabulary to express

everything that is on their minds" (Benic, 2016, p.62). Quantitative research "focuses on objects

and phenomena that can be objectively observed, measured and analyzed, but using art as a

communication method for teaching is a subjective experience that warrants the application of

different research methods." (Benic,  2015, p.62).

Benic (2016) discussed the differences between arts-informed and arts-based research

and the advantages arts-based research methods have over qualitative or quantitative methods

when working with children. The article highlighted that young children can communicate

complex ideas through images before they develop the ability to express these ideas verbally.

Arts-based research allows data to be collected and presented around subjects that cannot be

objectively measured. Art making can be used as a teaching tool and aid in developing

competencies, "Creativity is the most obvious competency that can be used to solve problems in

a variety of fields and can be developed through participation in the arts" (Benic, 2016, pp.62).

Mohr (2014) discussed how trauma and post traumatic growth impacts childhood

development. Art can provide a link between memories of a life altering traumatic event, creative

self-expression and processing, and aid in developing a useful coping skill for future challenges.

Sitzer and Stockwell (2015) researched art therapy in combination with CBT and DBT and found that interdisciplinary methods increased resilience, social and emotional functioning in students ages nine to twelve.

According to Costello, Erkanli, Fairbank & Angold (2002), "approximately 25% of children in the United States are believed to experience at least one potentially traumatic event in their lifetime, including natural disasters, life-threatening accidents, maltreatment, assault, and family and community violence" (Costello, Erkanli, Fairbank & Angold, 2002, p.69).Trauma in early stages of life can lead to increased maladaptive behaviors later. This study used a fourteen-week art therapy wellness curriculum that addressed behaviors and academic goals. The curriculum had flexibility to integrate many types of interventions and had an emphasis on prevention of maladaptive behaviors. Evaluation of the curriculum was done with the entire group, both quantitative and qualitative research was conducted using a pre-test, post-test, and descriptive data. The combination of research techniques provided more reliable results than only using qualitative research which can be misleading due to wording. This study was limited by a small samples size and a large variety of interventions, more research is needed to generalize across populations (Costello et al., 2002).

Green, Regev & Snir (2015), discussed four topics including the advantages of practicing art therapy in the educational system as perceived by art therapists, the difficulties encountered by art therapists in the educational system, the tools and approaches implemented by schools to assist art therapists in their work, and the tools and approaches used by art therapists to fulfill their task in the educational setting. "The aim of the study is to help develop new theoretical conceptualizations and models relevant to therapeutic practice in the education system" (p.47). The article explains the importance of having mental health services and specifically art therapy

in schools but, also highlights the many challenges that come with the educational system. In schools, it can be difficult to create appropriate and private therapeutic settings, therapy is often interrupted by days off and vacations, parental level of involvement often varies, school staff and art therapists can disagree on treatment and workload.

Moriya (2000) said, "For children, art is a medium for natural and spontaneous expression, which helps develop interpersonal and intrapersonal communication" (Moriya, 2000, p.47). A semi-structured interview process via e-mail was used for this study, this is an appropriate method for the specific goal of this study and documented the personal experiences from a clinician's perspective. This study provided the art therapist's perspective on working in the education system and explained the importance of understanding and speaking on the complex issues that come with the setting. The overall findings were that there needs to be more research conducted to better understand how art therapy in schools can be improved to better serve children in need.

Overall both articles are related and useful in my research on school-based art therapy for children exposed to trauma. Though qualitative research is an appropriate method to gather data on school-based art therapy but, these two articles show that a combination of research methods provides more information.

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**Discussion**

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This paper explored the importance of diverse, school-based therapy methods and art therapy for children exposed to trauma. This research began with general information about the complexities of trauma, traumatic events, traumatic stress, coping with trauma, and resilience. The revolutionary ACE study was examined to explore historical context. Childhood trauma was dissected into sections including brain development and complex traumas. Common comorbid

issues such as childhood trauma and poverty and trauma and community were discussed. A variety of presentations of childhood trauma were explored including common presentations of trauma by chronological age, presentations of trauma in school, and case studies. Numerous ways of helping traumatized children were explored including helping students exposed to a traumatic event in school and the cultural shift toward trauma sensitive schools. Lastly, interdisciplinary school-based therapy methods and art therapy were presented.

It is important to note that this paper provided a foundation for better understanding and treating childhood trauma using only a sample of possible scholarly resources. Trauma is intertwined with endless topics and the research that could be added to this paper is expansive.

More research is needed specific to interdisciplinary methods in therapy for children exposed to trauma to substantiate inter-modal therapy as the best option. This literature review or thesis project is important because it can be used to educate adults and continue the momentum toward a more trauma informed community. This research will create an awareness that can benefit both children and adults. This will result in a world where thriving is possible, even for those exposed to adversity.

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