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Using Trauma and Attachment-Informed Art Therapy to Promote Healing for Children in the
Welfare System: A Literature Review

Capstone Thesis

Lesley University

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Abstract

Children who have are placed in the child welfare system have often been exposed to a multitude of stressors and traumatic experiences, including: exposure to domestic abuse, sexual abuse, emotional abuse, physical abuse, neglect, in-utero substance abuse, and abandonment. In result, a child's development and overall functioning may be severely impaired, to include an inability to regulate emotions and manage arousal, attentional difficulties, chronic elevation of cortisol levels, and low impulse control. Such children may also experience deficits in working memory, executive functioning, academic skills, and social-emotional functioning. Their ability to form healthy attachments may be impaired, and they are more likely to display anxious and insecure attachment patterns in their relationships. Their internal working model may begin to reflect the belief that the world is not safe, and people cannot be trusted and may thus demonstrate higher rates of aggression and fear in their interactions with others. Research has demonstrated that, in children who are exposed to complex trauma, the prevalence of clinically significant psychological distress and impairment often persists across the lifespan. In order to meet the complex treatment needs of this population, an integrative approach to treatment may prove beneficial. The literature review revealed that early intervention may decrease psychological distress later in life. While the evidence demonstrating the efficacy of attachment and trauma-informed art therapy is scarce, several articles discussed the healing potential of using the co-engagement and consistent attunement between therapist and client during art therapy sessions to increase relational security and to serve as a replacement attachment relationship for the child. Research has shown that, after engaging in trauma-informed treatment, many children experience a decrease in trauma symptoms. Childhood trauma typically occurs before or during a child's verbal development. As a result, these memories are stored in nonverbal areas of brain.

Art therapy, an inherently nonverbal treatment modality, can offer children a safe channel in which to access and process these experiences that are beyond words. Additionally, it has been demonstrated that children respond positively to utilizing creative arts expression and play to communicate about difficult feelings, thoughts, and experiences. This thesis provides a literature review and discussion of the aforementioned topics.

Keywords: Child welfare, attachment, development, trauma-informed, art therapy

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Introduction

When children are brought into this world, the collective hope is that their basic needs for food, shelter, love, and clothing will be met. However, sometimes children are born into life circumstances in which these basic needs cannot be met, as a result of various and sometimes complex factors. The most common of which is that the “adults who care for them are barely able to care for themselves. These adults are struggling to keep food on the table. The attention to the needs of their children and even basic childcare are too often neglected” (Lindsey, 2004, p. vii). While this occurs within many different family systems and life circumstances, one study found that “80% of the foster children in California come from single-parent homes, two out of three from Aid for Families with Dependent Children (AFDC)-eligible families, and three of five from minority families” (Garland, Landsverk, & Leslie, 2004, p. 488). Felitti, Anda, and Nordenberg (1998) noted that these stressors are sometimes paired with substance abuse, domestic violence, caregiver mental illness, abuse, and criminal activities. Another troubling finding is that “between 3.3 and 10 million children witness some form of domestic violence annually, including murder” (Kaplow, Saxe, Putnam, Pynoos, & Lieberman, 2006, p. 370).

Another focus of research on the risk factors that contribute to the incidence of child abuse and maltreatment has been on the cycle of intergenerational abuse and maltreatment within families. In a cross-cultural study, Jaffee et al. (2013) sought to distinguish the factors that led certain families to remain entrenched in the pattern of intergenerational maltreatment while others successfully break this cycle. The research sample was comprised of 1,116 families in the

U.K who participated in a longitudinal twin study over the course of 12 years. Within the sample, some of the mothers but not their children had experienced maltreatment while within other families the mothers and children had experienced maltreatment. The findings indicated that mothers who possessed relationships with an intimate partner and their children that were characterized by the constructs of stability, safety, and nurturance were more likely to have broken the cycle of intergenerational abuse.

Oftentimes, the aforementioned risk factors can culminate in events that warrant a report being made to Child Protective Services, alleging that abuse and or neglect has occurred to the child. In cases where the report is substantiated, the child is placed into the Child Welfare System to prevent any further maltreatment from occurring. While the ideal plan for children in these circumstances is to be successfully reunified with their family or to receive in-home services that prevent them from being removed in the first place, Petit and Curtis (1997) found that there has been a substantial increase in the number of children that are being placed into foster care, with 547,000 cases being reported in 1999. This increase is troubling because children who are removed from their homes “represent a high-risk population for maladaptive outcomes, including socioemotional, behavioral, and psychiatric problems warranting mental health treatments” (Garland, et. al., 1992, p. 499).

Based on the most recent data from the U.S. Department of Health and Human Services, “Current national estimates suggest that children from birth to age two years old make up over a quarter of substantiated cases of child maltreatment and almost three quarters of abuse and neglect related fatalities” (Bryson, Gauvin, Jamieson, Rathgeber, Faulkner-Gibson, Bell, & Burke, 2017, para. 1). In addition, it has been found that every year there are over 3 million

children reported for abuse and neglect in the United States” (van der Kolk, Roth, Pelcovitz, Sunday, & Spinazzola, 2005, p. 390). These alarming findings call attention to the sobering reality that the mistreatment of children is a widespread epidemic. It is becoming increasingly more apparent that children within the welfare system are at a greater risk of experiencing these adverse experiences in addition to other complex stressors. Within this population, “the negative impact of maltreatment is often compounded by family disruption and multiple experiences of separation and loss. These cumulative traumatic experiences often manifest in complex symptom presentations with wide-ranging effects on children’s mental health” (Bartlett et al., 2016, p. 1).

Inspiration for this research arose from the author’s experiences interning at a psychiatric residential treatment facility that serves child and adolescent boys. In this setting, the trauma experienced by clients in the welfare system is often coupled with extreme difficulties forming healthy and secure relationships with peers and adults. Along these lines, the trauma experienced by this population was often complex and comprised of numerous events that meet the definition of trauma. These observations have led to a curiosity about which treatments and approaches are evidence-based in treating trauma and attachment disruption.

It is not enough to intuitively know that art therapy is effective or to anecdotally report that this is so. In order to increase the support of our work as art therapists in treating children who have experienced trauma, we must demonstrate how and why our approach works. In addition, we must offer clearer and more structured guidelines for what our treatment entails, so that it can be replicated. As a result of all of these realizations and reflections, this literature serves to highlight the relevant literature pertaining to children in the welfare system, childhood trauma, attachment, and both traditional and art therapy treatment approaches. The goal of doing

so is to provide a clearer course of treatment for art therapists who serve children with attachment difficulties as a result of their extensive history of traumatic experiences.

Literature Review

Trauma and its Impact on Neurological Functioning and Development

One of the most highly researched and well-known impacts of childhood maltreatment is the resulting trauma and its ancillary effects. Traumatic events may be defined as “an event that is overwhelming to the child’s senses or self-regulatory abilities, threatens the child’s well-being or that of their caregiver, indicates the world is uncontrollable and unpredictable, and/or involves stressors that exceed the child (or caregiver’s) normal resources” (Melville, 2017, p. 54). For many children in the welfare system, the trauma that is experienced is interpersonal in nature. Melville (2017) further explains that children who experience traumatic events between the ages of zero and two years of age are at greater risk of having a host of severe impairments to their cognitive, socio-emotional, health, and behavioral development and functioning. These include impairments in emotional regulation, attention, self-concept, impulse control, working memory, executive functioning, academic skills, and social-emotional functioning. In addition, “given the tremendous brain growth that takes place during the first 2-3 years of life, preschoolers may be at higher risk for adverse neuropsychological effects related to trauma” (Garro, Brandwein, Calafiore, and Rittenhouse, 2011, para. 5).

Extensive research on childhood trauma has established that children can experience the full range of symptoms that adults who are diagnosed with posttraumatic stress disorder and other acute stress disorders experience. However, Garro et al., 2011 pointed out that the

symptomatic patterns resulting from the types of childhood abuse and maltreatment that are commonly experienced by children who are placed in child protective custody are not entirely included in the criteria for current DSM-V stress disorders. The authors finding suggested that new criteria and diagnoses are needed to more effectively treat childhood stress disorders.

This discrepancy has been documented extensively by van der Kolk, Pynoos, Cicchetti, Cloitre, D'Andrea, Ford, and Teicher (2009), who have “advocated for a new diagnosis, developmental trauma disorder, encompassing the clinical presentations of children exposed to chronic interpersonal trauma” (Garro et al., 2011, para. 3) (as cited in van der Kolk et al., 2009). Without appropriate diagnostic criteria, children may be misdiagnosed and treated for externalizing conditions, such as behavioral problems or mood dysregulation, which fails to address the root of the issue. Despite the discrepancies within the DSM-V diagnostic criteria for children who have experienced trauma, most clinicians acknowledge that the treatment of any individual with trauma in their background involves addressing symptoms that have been clearly defined. Symptoms may include some or all of the following: alterations in arousal, re-experiencing, avoidance, negative cognitions and mood, and developmental problems (Malchiodi, 2008). In order to remedy diagnostic discrepancies, the DSM-V now includes a diagnosis called preschool subtype posttraumatic stress disorder, which has been added to address the difficulties clinicians have had in accurately diagnosing children with trauma based upon the limitations of previous diagnostic criteria.

Garro et al. (2011) noted that another result of traumatic stress is that the child may experience hypo- and hyperarousal of the central stress response system and the sympathetic nervous system. This can result in chronic activation of the fight-or-flight system, excessivae

secretions of stress hormones, and dissociative symptoms. These findings provide evidence that the impact of trauma on the developing brains of children is of serious concern. Also cause for concern is the finding that “critical periods for brain development occur throughout childhood, making childhood trauma particularly consequential to developing brain structures involved in executive functions and adaptive stress responsivity” (Bryson et. al., 2017, para. 3). Another concern for the developing brain of children in the welfare system is their exposure to chronic environmental stress, which can lead to an increase in the adrenal gland’s secretion of the stress hormone, cortisol, which has been associated with a host of negative effects.

Along these lines, Bernard, Butzin-Dozier, Rittenhouse, and Dozier (2010) measured the levels of cortisol present in the bloodstreams of children experiencing social deprivation or maltreatment and compared their levels with a control group of children who had not experienced these adverse childhood experiences. The researchers found that the cortisol levels of the children in the control group represented normative profiles of cortisol production. Children in the experimental group showed consistently elevated levels of cortisol, which is a marker of chronic stress. This pattern has also been observed in children who have experienced a multitude of adverse childhood experiences, including child maltreatment, being placed in foster care, and being raised in institutional settings.

While the experience of one trauma has been shown to disrupt development and cause severe distress, experiencing multiple traumas produces an even greater deficit to the child’s well-being and functioning. This occurrence is frequently referred to as complex trauma, which “characterizes children who have been exposed to multiple forms of interpersonal trauma that occur repeatedly and cumulatively, usually over a period a time and within the child’s caregiving

system” (Liu, Chu, Neo, Ang, Tan, & Chu, 2016, p. 341). In addition, it had been found that children with complex trauma “experience higher levels of trauma symptoms and psychological distress, with the number of traumas predicting the severity of symptoms” (Briere, Kaltman, and Green, 2008, p. 432).

In a cross-cultural study, Liu et. al. (2016) researched the impact of multiple, or complex, traumas on various domains of a child’s functioning. The researchers sampled 721 Singaporean children in out-of-home care with multiple trauma exposure. The results of the study showed that the children with multiple trauma exposure were found to have high levels of need in the following domains: life functioning, behavioral and emotional needs, and risk behavior, as compared with their peers who had not had these experiences. This finding offers further support for the claim that the severity of the trauma experienced has a positive correlation with the severity of the individual’s level of psychological distress and impairment.

Long Term Effects of Trauma

Felitti et. al. (2010), implemented longitudinal research that studied the correlation between adverse childhood experiences and lifelong mental health and physical illness. The researchers studied 17,000 participants who had experienced adverse childhood experiences, defined as physical, sexual, or psychological abuse. The participants had also been exposed to dysfunctional home environments which included substance abuse problems, domestic violence in which their mother was the victim, mental illness, and criminal activities. The researchers found that there was a strong positive correlation between having high rates of childhood adverse experiences and having mental and physical illness later in life.

It has been found that “histories of childhood physical and sexual assaults also are associated with a host of other psychiatric problems in adolescence and adulthood: substance abuse, borderline and antisocial personality, as well as eating, dissociative, affective, somatoform, cardiovascular, metabolic, immunological, and sexual disorders” (van der Kolk et. al., 2005, p. 390). In addition, “the neurobiological consequences of childhood physical, emotional, and cognitive abuse and neglects often contribute to enduring states of personal fear that can lead towards perpetuating violence onto others later in life and/or to being adult victims of violence” (Hass-Cohen & Carr, 2008, p. 30). These findings highlight the need to identify and offer early intervention to at-risk children as expeditiously as possible, in order to reduce the adverse long-term effects of trauma.

Attachment Theory

Attachment Theory seeks to explain the bonding patterns of children and their primary caregiver(s) and the ability of these bonds to meet the child’s need for physical and emotional safety, comfort, and regulation of arousal states. Additionally, it posits that we use the quality of our attachment with our primary caregiver to inform our relationships throughout the lifespan. This bond “has been thought to take on two different types: secure and insecure. Insecure attachment can be broken down into three subgroups: anxious, avoidant, and disorganized-disoriented” (Thakkar, Mepukori, Henschel, & Tran, 2015, p. 75).

Early Attachment Theory began with Rene Spitz, who found that infants who had been orphaned and deprived of physical touch and loving attention weakened and often died (Karen, 1998). These findings inspired Harry Harlow’s research on how disruption to attachment produced lasting detrimental impacts on the neurobiological functioning of our primate relatives,

baby Rhesus monkeys. Aiming to replicate these findings with human participants, Mary Ainsworth implemented a longitudinal research experiment called the Strange Situation, in which months of observational data on numerous infant and mother pairs' attachment patterns were collected. After a year, the children were brought to a lab and observed as their mother was intentionally separated from them for a set duration of time. The findings indicated that there are three distinct styles of attachment patterns (Karen, 1998).

Following this, John Bowlby and countless other researchers demonstrated the innate need for children to have a "safe base" that provides them the confidence to explore the world and their surroundings as well as a safe place to return to (van der Kolk, 1988). Research on other mammalian species has also demonstrated that, once the attachment relationship is formed, it is continuously maintained through complex interactional processes between the organism and the attachment figure. One such study demonstrated that "abandoned pups emit a distress cry, which stimulates complementary behaviors in mothers (and other caregivers) that promote secure development" (van der Kolk, 1988, p. 279).

Modern Attachment Theory has built upon Bowlby's work to include research on the neurobiological mechanisms governing the attachment relationship. The theory is specifically focused on explaining the fundamental role that the child and caregiver attachment plays in impressing the structural connections in the right hemisphere of the brain (Schoore, 2014). Neuroscientific research on the mechanisms of attachment have shown that "experience shapes the brain through neural plasticity, synaptic connections that are use-dependent, either become strengthened or pruned based on early interactions with caregivers" (Melville, 2017, p. 56). Modern Attachment Theory also affords clinical professionals and researchers the ability to

study the brain structures involved in attachment, notice differences in the structures of individuals who have secure and insecure attachments, and study the changes to these brain structures both across the lifespan. An additional contribution of this updated theory is that it incorporates the finding that the brain is highly adaptable and, as a result, that our attachment patterns can shift if the appropriate environmental conditions are present.

Attachment theorists demonstrated that the “safe base” created through a healthy attachment serves an adaptive function. When a child has developed a trusting and closely attuned relationship with a caregiver in which it is able to have its needs consistently and reliably met, this indicates that a sensitive and secure attachment exists. In such cases, it has been observed that “during times of intense arousal or distress, secure children will return to behaviors that center on their primary attachment figure, such as seeking attention from or proximity to their caregiver; these behaviors elicit predictable caretaking responses in secure caregivers” (Melville, 2017, p. 55). Since the attachment relationship serves to fulfill vital adaptive and regulatory needs, infants seek this attachment from their caregiver in threatening circumstances, even when the caregiver is the source of the threat. When caregivers are unresponsive to the infant’s request for attachment, the infant engages in a protest and despair reaction to restore this important connection (Bowlby, 1969).

The Impact of Trauma on Attachment Formation

Infants are unable to interpret and differentiate the different arousal states that characterize human experience. They are also unable to use verbal communication to state their needs. Thus, they are completely dependent upon their primary caregiver to interpret their surroundings for them and to keep them safe from impending danger (Melville, 2017). This

innate need for connection and safe-keeping is often not met for children in the welfare system who have experienced adverse childhood experiences, specifically trauma. A child's ability to form and maintain healthy attachments may be negatively impacted because of traumatic experiences, a lack of consistently attuned caregiving, and the experience of being removed from their home during a crucial part of human development. Research by Dwyer et al. (2010) found that children in the welfare system are more likely than other children to exhibit anxious and avoidant attachment patterns (as cited in Thakkar et al. 2015). An additional effect of early traumatic experiences is that children may also develop an internal working model for understanding relationships that is characterized by mistrust. This can result in a pattern of fearfulness and aggression in their interactions with others, even when they are being met with positive, nurturing, and supportive interactions from peers and adults in their life (Garro et al., 2011).

Liu et. al. (2012) note that trauma exposure may disrupt caregiver-child attachment relationships and impair the development of self-regulation and other essential developmental competencies. As van der Kolk et. al. (2005) explains, the development of a healthy attachment with one's caregiver within the first few years of life is crucial to the creation of a biological framework that serves to help the individual manage future stress and arousal. Thus, if a child experiences a disruption in this crucial attachment, their ability to manage arousal and effectively adapt to stress will be impaired. Research on the long-term impact of disruption to child and caregiver attachment has demonstrated that "in circumstances where the caregiver is unable or unwilling to provide early arousal modulation and basic care to young children, the child is at risk of exposure to overwhelming levels and durations of arousal. This lack of regulation risks imprinting in a child's developmental processes that emotions and arousal in general are

dangerous/frightening, leading to potential avoidance of arousal in the form of numbing and dissociation or a response in the other direction such as arousal in the form of aggressive behaviors” (Melville, 2017, p. 58). In such cases, the individual is experiencing life in a state of constant fight-or-flight.

Additionally, chronic exposure to traumatic stress may cause an individual to experience all of the input they are receiving from their environment as unsafe and unpredictable (van der Kolk et al., 2005). This belief system may in turn hinder their ability to establish healthy and lasting attachments later in life. The insecurely attached child’s behavioral choices “whether aggressive or cloying, all puffed up or easily deflated-often tries tire patience of peers and adults alike. It elicits reactions that repeatedly reconfirm the child's distorted view of the world. People will never love me, they treat me like an irritation- they don't trust me” (Karen, 1998, p.12) which then continues to perpetuate the cycle that maintains the inability to create the connection the child so desperately needs. For children in the welfare system, it is also possible that subsequent disruptions to attachment may occur when the child is placed in a foster or group home, and this cycle can continue to repeat itself each time a placement is unsuccessful.

Cross-cultural research by Thakkar et al. (2015) in New Delhi, India, studied the attachment patterns of a randomized sample of 89 children across 11 residential care homes between the ages of 4 and 19. Based on their age, the participants were given one of two surveys to measure the strengths of their attachments to peers, mentor mothers, and caregivers.

Additional data was gathered about each individual participant’s attachment style through the child’s assigned caregiver completing the Randolph test of attachment disorder. The researchers found that the participants reported stronger attachments to their peers than they did to both

caregivers and mentor mothers. Though the study includes a relatively small sample size, its findings challenge the western perspective that the attachment bond must occur between a child and caregiver. Perhaps, children who live in residential care can have their attachment needs met through other means.

Additional research has focused on the role of secure attachment as a protective factor. “Interdisciplinary studies have demonstrated that nurturing and supportive caregiver relationships provide a protective 'buffer' against the effects of childhood trauma through co-regulation of emotional stress response. In other words, relational security can reduce the effects of childhood trauma that might otherwise result in maladaptive behaviors (Bryson, et. al., 2017, para. 3). At the University of Minnesota, a 30-year longitudinal study offered further support for the claim that secure attachment relationships serve as an important protective factor for children. The research sample was comprised of 180 participants ranging in age from the last trimester of pregnancy through early adulthood. The researchers found that children who had a demonstrated pattern of secure attachment with their caregiver(s) displayed less behavioral problems during times of major familial stress, in comparison with their peers who did not have this attachment. In addition, the study provided evidence that, the participants who started out their lives demonstrating a pattern of secure attachment displayed more adaptive responses to stress through early adulthood (Hoffman, 2017).

Psychotherapeutic Models for Treating Attachment and Traumatic Disorders in Children

There has been extensive research focusing on identifying which trauma-focused treatments for children are empirically supported. Currently, the most empirically supported and widely researched are cognitive-behavioral trauma interventions. Garro et al. (2011) report that the treatments with the widest evidence base are: Trauma System Therapy, Trauma-Focused

Cognitive Behavioral Therapy (TF-CBT), and Cognitive Behavioral Intervention for Trauma in Schools (CBITS). Research focusing on the creation of a trauma narrative in TF-CBT has shown that “establishment of a verbal narrative has been shown to be a critical part of the therapeutic process in that it not only helps children to make sense of their traumatic experience, but also helps them handle ongoing effects as they emerge across the lifespan” (Kaplow, 2006, p. 372). Research has also shown that TF-CBT is the most effective therapy treatment for complex trauma (Gil, 2016).

While the aforementioned treatment modalities have proven to be evidence-based in addressing and treating the impact of trauma on children, some researchers are advocating for implementing preventive measures to reduce the likelihood of childhood abuse and maltreatment from occurring. This subset of researcher aims to offer preventive interventions to children who are at risk of adverse childhood experiences. One early childhood program called Incredible Years focuses on increasing parental involvement in the child’s school and increasing parenting skills. There is research that demonstrates positive outcomes of the implementation of this program, including “improvement of parent-child relationships in an urban, high-risk, multiethnic community, reduction of ADHD symptoms in preschool children with conduct problems, and reduction of externalizing problems and increases in maternal school involvement and supportive behaviors in socioeconomically disadvantaged, diverse families (Garro et al., 2011).

Bartlett et al. (2016) also recognized the need for treatment approaches to address the complex needs of children in the welfare system who have experienced trauma. The researchers studied the effectiveness of implementing a Trauma-Informed Care (TIC) program with children

in the welfare system. The data was collected through analyzing treatment outcomes within the Massachusetts Child Trauma Project over the course of 1 year. The objective of the program was to increase permanency, safety and well-being of children in the welfare system through offering evidence-based treatment trainings to care providers as well as psychoeducational and parenting skills trainings to foster parents. Treatment provided to the children and families was comprised of the three trauma-informed treatment approaches with the strongest evidence base; Trauma-Focused Cognitive Behavioral Therapy, Child-Parent Psychotherapy, and attachment, self-regulation, and competency. The research was conducted through a mixed-method approach and the data was collected through implementing standardized and unstandardized surveys, interviews, focus groups, file reviews, and child assessments. The results of this study demonstrated that children who received the TIC treatment demonstrated clinically significant reductions in functional impairment, and a decrease in arousal symptoms. Caregivers also reported a decrease in their child's problematic behaviors and posttraumatic symptomology.

Treatment for Childhood Attachment Disorders

The development of treatment approaches for use with individuals who are challenged with forming attachments continues to grow, as does the body of research and evidence supporting attachment theory. Another contributing factor to the widespread attention on this area of treatment is that many clinicians are recognizing the importance of providing a warm and caring relationship to clients that is often informed by Humanistic theoretical principles. In their work with vulnerable children and families, Sprinson & Berrick (2010) advocate for the adoption of a relational intervention approach in order to disconfirm the child's internal working model which informs them that attachments with others are unsafe and threatening. This approach has also been referred to as providing the client with a "corrective emotional experience" (Sprinson

& Berrick, 2010, p. 107). Within this approach, the therapist adopts a style of relating with the client that is in direct opposition to the hurtful relational experiences that the child was subjected to in the past. This approach allows the client to work through and directly face the emotional situations that troubled them in the past. However, when met with a disconfirming stance from their therapist, they are given new opportunities to react differently and to be met with a response that demonstrates unconditional care. This approach is similar to Carl Roger's concept of unconditional positive regard.

While empirical data on treatment approaches for attachment disorders remains limited, there has been some evidence of efficacious treatment approaches for use with this population. One such approach originated from Becker-Weidman (2006), who designed a treatment approach for children with trauma-related attachment disorders, called Dyadic Developmental Psychotherapy. This approach is informed by Attachment Theory and is most often utilized within outpatient therapy settings. The clinician and research conducted a study comprised of 64 research participants, between the ages of six to seventeen years of age. All participants met clinical diagnostic criteria for Reactive Attachment Disorder, or RAD, and had experienced childhood maltreatment. Childhood maltreatment was defined as abuse, neglect, or living in an out-of-home setting. The sample was comprised of two groups: a treatment group of 34 participants who were seen weekly for outpatient treatment and 30 participants who met diagnostic criteria but were not receiving Dyadic Developmental Psychotherapy at the outpatient clinic. Treatment outcomes were measured using the Achenback and Randolph Attachment Disorder Questionnaire. Children in the treatment group demonstrated a clinically significant decrease, ($p < .01$), in attachment disorder symptoms as compared with the non-treatment group.

Efficacy of Art Therapy

Art therapy can be defined as “the purposeful use of visual arts materials and media in intervention, counseling, psychotherapy, and rehabilitation; it is used with individuals of all ages, families, and groups” (Malchiodi, 2008, p. 12). The creative arts therapies, to include play, art, and expressive has been widely used with children. This can largely be attributed to the previously established finding that children often process their memories and experiences on a nonverbal level. In addition, children often learn and explore their environments through explorative play, art-making, and other expressive means. As a result, creative therapies are well-suited for use with this age demographic. Art therapists commonly report that they have witnessed the efficacy of art therapy firsthand. However, current body of research that supports these claims is meager.

Most of the studies to date on art therapy’s efficacy with children focuses on its use with specific populations, while there is a lack of metanalytic research focusing on the general efficacy of art therapy. Reynolds, Nabors, & Quinlan (2000) reviewed the effectiveness of 17 studies prior to 1999 that explored the efficacy of art therapy in treating a wide range of clinical conditions and populations. The criteria for inclusion in the study was that the study addressed the effect of art therapy on a quantifiable outcome and that the population studied was clearly defined. Within this review, very little evidence of the efficacy of art therapy in treating children with behavioral problems was included.

Attempting to add to the meager body of research on the efficacy of art therapy, Slayton, D'Archer, & Kaplan (2010) conducted a literature review of 35 research studies between 1999-2007 that focused on the efficacy of art therapy with all ages of clinical and nonclinical populations. The age demographics of the populations studied ranged from young children to the

elderly. A wide range of treatment settings were represented, including: schools, day treatment, outpatient clinics, residential homes and treatment facilities, hospitals, correctional facilities, and nonclinical settings. The results of this review established that there are now a small group of studies that provide statistically significant quantitative data that demonstrates the effectiveness of art therapy as a modality to improve a variety of psychological symptoms in a variety of clinical populations and age groups. Among the 35 studies, 14 of which focused on the use of art therapy with children ages 12 and under. Some of which demonstrated that art therapy has shown efficacy in treating children with behavioral problems.

Though the body of research demonstrating the efficacy of art therapy is growing, it remains inadequate in comparison with other scientifically researched fields. Reynolds et. al and Slayton et al. both highlighted the need to provide descriptions of the art therapy treatment that is clearer. In addition, they highlighted the need for future art therapy research to focus solely on the use of art therapy, without the inclusion of other treatment modalities and interventions infused into the research. Lastly, it was noted that “several of the complications that historically have been found in art therapy research continue to exist. There is a lack of standardized reporting and utilization of control groups, and a tendency to use anecdotal case material to demonstrate treatment outcomes rather than measured results” (Slayton et al., 2010, p. 116).

Using Art Therapy to Treat Attachment Disruption and Trauma

While the body of literature focusing on the use of art therapy to foster healthy attachment is growing, much of this research focuses on treating the child and caregiver in concert with one another to restore unhealthy dynamics in their relational patterns. For example, it has been found that “relational art activities can increase mother-child attachment patterns”

(Hass-Cohen & Carr, 2008, p. 29). However, when a child is in the welfare system, they often no longer have access to their relationship with their biological caregiver, which means that it may be impossible for the child to work within the natural parent and child dyad in treatment.

One such example of this approach is Lucille Proulx's parent-child dyad art therapy. Proulx (2002) recognized that the parent and child are constantly co-creating their interactional pattern. Over time, the parent and child develop patterned responses to one another, which results in mental representations and internal working models that govern their relationship. According to Proulx, parent-child dyad art therapy addresses "the attachment conflicts of the parents in order to reconstruct or strengthen the ties with their child" (p. 27). While working in the dyad, the child and parent worked together in the creation of an image. In addition, the approach focuses on providing the parent the opportunity to work through unresolved conflicts that are impeding the attachment relationship and allows the child to express themselves creatively in a way that is developmentally appropriate. While it may not be possible to offer this treatment to a child in the welfare system and their biological child, it may be possible to create this relationship between the therapist and client as a means of providing a replacement attachment relationship.

Another subset of the art therapy literature on attachment focuses on the use of projective drawing assessments to characterize attachment styles. One such example was provided by Harmon-Walker & Kaiser (1992). The researchers studied the efficacy of employing an art therapy projective drawing assessment, the Bird's Nest Drawing, to predict attachment security patterns in 136 adult undergraduate college students. The construct and validity and interrater reliability of the assessment was evaluated through comparing the information in the individuals' projective drawings with two additional rating scales, the Inventory of Parent and Peer

Attachment (IPPA), and the Experiences in Close Relationships Questionnaire (ECR). In order to compare the projective drawing indicators with the indicators on the IPPA and ECR, chi-square analyses were performed. The results showed that there was a statistically significant relationship between the inclusion of a family of birds and high IPPA scores, whereas a nest with no bottom was associated with low ECR scores. This study offers initial support for the use of art therapy projective measures to assess attachment difficulties.

Henley (2005) applied Attachment Theory to his work with children diagnosed with Reactive Attachment Disorders (RAD), to demonstrate the efficacy of utilizing art therapy in the treatment of children who are working to foster positive attachments. Each child participated in 60-minute art therapy sessions for varying lengths of time that were comprised of 40 minutes of individual art making and 20 minutes of time to share the art with a caregiver and therapist. For the case participant who had experienced early neglect and trauma, the use of clay and kinesthetic materials was anecdotally reported as therapeutic in allowing her to discharge aggressive energy and anxiety. Following treatment, however, there was no significant increase in her ability to form healthy attachments with others, which was the primary goal of her treatment.

In the case of an adopted twin child who experienced intense rage directed at his adoptive mother, Henley's treatment involved the boy and his twin engaging in cooperative art making, using drawing materials and creating sculpture. Observational and anecdotal evidence demonstrated that the boys had a symbiotic relationship that served as a protective factor against the trauma the boys had endured. In conclusion, the researcher posited that it may be beneficial to include the individual's treatment team into the treatment plan, thus creating a replacement

group of caregivers that can act in place of a family in order to offer the child ample opportunities to practice building healthier and more secure attachment patterns.

Another application of Attachment Theory to Art Therapy focused on using the construct of intersubjectivity to inform empathic response art. Intersubjectivity “is defined as the sharing of subjective states with another person through emotional attunement” (Franklin, 2010, p. 160). Franklin (202) posits that empathy is an intersubjective phenomenon, in which a person observes the actions of another person and experiences a fusing of their internal state with the state of the individual they are observing. This idea was further applied to the experience a therapist has when they accurately tune into the emotional state and experiences of the client in order to create empathic response art that then conveys this understanding. This application offers an example of one way in which art therapy can be used in session to further support the development of a deeply attuned and secure relationship between the client and therapist.

Along these lines, it has been suggested that, “within a couple of sessions most clients will associate the therapist’s reaching out for the art media with a purpose. The client’s mirror neurons will fire in response to the therapist’s purposeful gestures and actions. Likewise, the therapist’s neurons will most likely fire response to the client’s drawing gestures” (Hass-Cohen & Carr, 2008, p. 289). This component of the artistic process may be beneficial when a child’s traumatic experiences have interfered with their formation of healthy attachments. Along these lines, it has been stated that “repetitive experiential and self-rewarding experiences that include a positive and attuned witness are central to repairing developmental trauma” (Malchiodi, 2008, p. 19). These claims highlight the need for future research to focus on the creation of attunement between therapist and client in art therapy, specifically on a neurobiological level. Such research

could offer support for the claim that healthy attachment can be inherently worked on through the therapist and client's active engagement in the joint artistic process.

There has also been research to support the idea that children who have experienced attachment disruption may benefit from art therapy interventions that focus on exploration of sensory media. "Because infancy is preverbal, most attachment communication takes place through gesture, touch, voice tone, scent, and gaze (Franklin, 2010, p. 162). Along these lines, it has been suggested that art therapists consult the Expressive Therapies Continuum, or (ETC), to inform about the direction to take a client's creative arts treatment. In children who experienced trauma either before or during the critical early period of verbal language development, it may be beneficial to inform treatment using the Sensory Component of the ETC. This component involves engagement of the sensory channels of processing through exploring art media. The benefit of beginning trauma treatment on the sensory component is best explained by the fact that "infants and very young children process information without words through sensory channels, early experiences are stored on the right side of the brain. These right-brain memories, including early childhood trauma, are most effectively accessed through sensual nonverbal expressive art therapy experiences" (Hinz & Lusebrink, 2009, p. 60).

Kaimal & Ray (2017) designed a mixed-method quasi-experimental study on the effect of art-making in an open studio setting on affect and self-efficacy. The research sample was comprised of 39 adults, 33 female and 6 male, who were between the ages of 18 and 59. The research was gathered during 45 minute open studio art therapy session. The data on changes in affect and self-efficacy were gathered through participant completion of pre- and post-session Positive and Negative Affect Schedule and General Self-Efficacy Scale measures, as well as

brief summary narratives. Though the study was limited in the size of its sample, the researchers found that engagement in open studio art-making was linked with significantly lower negative affect scores, heightened positive affect scores, and an improvement on ratings of self-efficacy.

Gonick & Gold (1991) have utilized expressive arts therapy with foster children. Through their work, they observed that the children displayed insecure attachments and that they demonstrated a need for early intervention in the form of providing a healthy replacement attachment relationship. The researchers observed that, in providing this within the therapeutic relationship while employing an expressive therapy approach, the foster children demonstrated an increase in self-esteem as well as their ability to heal from their traumatic experiences. In their conclusion, the researchers posited that, while the replacement attachment relationship can prove beneficial for foster children in the short term, their need remains for a caring and consistent long-term relationship with an adult outside of therapy.

Trauma-Informed Art and Expressive Therapy

Some caregivers and treating professionals may believe that because the child was so young when the trauma occurred, they do not remember it. They may also be concerned that bringing up the trauma will further upset the child and will be unhelpful to them. However, this claim has proven to be unfounded. Kaplow (2006) notes that because their earliest traumatic experiences often occurred before the child has developed verbal communication abilities, young children encode and remember traumatic events on a nonverbal level. Research on how children process trauma has substantiated this claim through demonstrating that “due to less-developed verbal abilities and emotional vocabulary, young children often express trauma's effects through nonverbal means such as play, including aggressive themes when they have experienced abuse or

witnessed interpersonal violence” (Garro et al., 2011, para. 6). This explanation also parallels with the finding that trauma is detrimental to the part of the brain that is responsible for language, which can hinder the development of a child’s verbal abilities (Malchiodi, 2008). Thus, engagement in nonverbal therapies, such as art therapy, may serve as an effective means of communication in therapy.

Play therapy is a treatment modality that offers the child the opportunity to act out and work through distressing material through one of the primary modes of learning for children, play. Research on how play supports childhood development has suggested that “play is a powerful stimulant for organizing a brain that fosters the creation of joy, curiosity, and exploration” (Hass-Cohen & Carr, 2008, p. 139). In acknowledging the importance of play for children and its therapeutic potential for children who have endured traumatic experiences, Eliana Gil has had a formative role in the research and development of what is now referred to as posttraumatic play. Posttraumatic play is a type of play that tends to emerge in the play of traumatized children. This approach is referred to as “an organic choice for young children who have a desire to externalize their worries and distress. In doing so, anchored in what we know about posttrauma play, namely, its mastery intent, children may become willing and able to use this form of reparative play strategically to externalize their concerns, thus exposing themselves gradually to feared experiences and subsequent thoughts and emotions” (Gil, 2016, p. 97). Increasing a child’s sense of mastery and control over distressing past events may have a side benefit of greater resiliency. Resilience can be defined as one’s ability to cope adaptively with future stressful events (Malchiodi, 2008).

In recognizing the frequent need to adopt individualized strategies for working with children who have experienced trauma, Gil developed a treatment approach centered around posttraumatic play that is referred to as Integrated Trauma-Focused Integrative Play Therapy. This approach offers children alternative to verbal therapy, that include the facilitating the child's use of puppets, art, sand play to express and communicate worries, preoccupations, traumatic events, increase insight. The overarching goal is for the child to regain the sense of control and mastery that was lost because of their trauma (Gil, 2016).

Neuroscientific research continually provides evidence for the mind-body connection, specifically, in the way trauma is stored in the body. There has been “increasing evidence of the intimate relationship between physiological and psychological dimensions of human experience. The integration of body awareness into psychotherapy through a focus on sensorimotor processes is increasingly becoming best practice in trauma therapy” (Elbrecht & Antcliff, 2014, para. 1). This finding has been further applied to the therapeutic value of clay in the treatment of individuals who have experienced trauma. It has been found that, through engaging with clay in therapy, a person's extero- and interreceptor become stimulated, which may then “allow non-verbal access to psychological and sensorimotor processes thwarted by trauma” (Elbrecht & Antcliff, 2014, para. 1).

It has been found that “repeated sensory art experiences contribute to the formation and strengthening of memories” (Hass-Cohen & Carr, 2008, p. 42), thus art therapy may offer a tool in forming new brain pathways during therapeutic treatment. Hass-Cohen & Carr (2008) applied neuroscientific research to art therapy to understand how the brain and nervous system are impacted by artistic engagement and to provide art therapists with a framework for neuroscience-

informed art therapy treatment. This inquiry informed the CREATE Model, which entails: Creativity in action, Relational Resonance, Expressive Communication, Adaptive Responses, Transformation, and Empathy. This model can serve as a tool for organizing art therapy treatment with children who have experienced trauma and may aid the clinician in selecting interventions that are informed by neurobiological research.

In her book “Creative Interventions with Traumatized Children,” Cathi Malchiodi posited and outlined a multitude of approaches for use with children who have experienced trauma. Malchiodi describes the use of creative arts therapies with children as “brainwise, because of the ability to facilitate (1) externalization, (2) sensory processing, (3) right-hemisphere dominance, (4) arousal reduction and affect regulation, and (5) relational aspects” (Malchiodi, 2008, p. 15). The externalizing nature of art therapy allows the child to contain their traumatic experiences within the art work and affords the child the opportunity to relate with the traumatic material from an emotional safe distance. Art therapy can be used as a means of processing and working through the sensory memories of the trauma through sensory engagement in a variety of art materials. It has also been suggested that art therapy may serve as a means of integrating left and right hemispheres of the brain more fully. Art therapy can be used to teach children a coping mechanism for use in regulating stressful and overwhelming experiences. Lastly, art therapy may be used to promote healthy relational patterns.

Coholic & Eys (2016) implemented a qualitative analysis of their 12-week Holistic Arts-Based Program (HAP) group with vulnerable children. Group participants met this criterion based upon having experienced a wide range of mental health difficulties and challenges, lacking effective coping skills, and having been involved in the child welfare system. The group utilized

a strengths-based art therapy approach to increase mindfulness-based skills. The sample was comprised of 47 children aged 8-12 years, 30 of which were female and 17 were male. The data was gathered through pre-and post-test self-report measures as well as post-HAP interviews with the children and their guardians. The surveys used were the Piers-Harris Children Self-Concept and The Resiliency Scales for Children and Adolescents. The results of the study yielded a statistically significant increase in self-concept ($n2= 0.09$).

Discussion

As art therapists are a single and time-limited factor in a child's life. Along these lines, they are able to solve for all of the complex and interconnected factors that determine a child's ability to find and maintain a healthy and safe home environment and securely attached relationship, but they do have the opportunity to create a therapeutic relationship with the client in which they can provide a safe and healthy attachment with an adult who is caring and trustworthy. The literature also suggests that they able to provide children with a treatment approach that is developmentally appropriate and that allows for the processing of nonverbal traumatic memories using a modality that is itself inherently nonverbal.

The literature has pointed to compelling evidence in support for the use of TF-CBT with children who have experienced trauma (Kaplow, 2006) and (Gil, 2016). It has also been indicated that early intervention can lead to more successful treatment outcomes than intervention that is implemented later in life. The application of a trauma-informed approach to expressive arts therapy has been recorded most extensively in Integrated Trauma-Focused Integrative Play Therapy and in Cathi Malchiodi's (2008) Trauma-Informed Art Therapy approach. Both of these approaches offer art therapists some guidance and structure in our work

with children who have experienced trauma. Additionally, literature suggested that art therapy can be used to aid with emotional regulation, through introducing it to the child as a coping skill for use in managing their affectual states (Malchiodi, 2008). Another skill that can be applied to art therapy is mindfulness, as it has been suggested that artistic engagement is an inherently mindful act (Malchiodi, 2008) and (Coholic & Eys, 2016).

Another tool that can be employed in our work is the Expressive Therapies Continuum, specifically in highlighting the importance of allowing children who experienced trauma before they developed verbal abilities to work with sensory and kinesthetic media that can allow them to increase mindfulness, self-soothe and regulate painful emotions, and gain access to the preverbal material through a safe and contained means (Hinz, 2009). Lastly, the literature suggested that the therapeutic relationship between client and therapist can serve as a replacement attachment relationship which provides the client an opportunity to experience mutual attunement, mirroring, and a sense of safety in relationship to a caring adult figure. This can then possibly serve the client in future relationship, as they may begin to challenge their previously held assumptions about relationships which were inhibiting them from experiencing healthy connections (Proulx, 2002).

While there was a small body of research and helpful suggestions offered in the literature for trauma and attachment-informed art therapy with this population, there is a strong need for further literature on this topic, specifically offering further evidence for the efficacy of this treatment approach with children in the welfare system. Currently, it cannot conclusively be said that art therapy will produce clinically significant therapeutic benefits in this population. This may suggest that, when evidence-based treatment is required, it may be beneficial to utilize

an extensively researched trauma-informed approach with an integration of expressive therapies embedded within the treatment.

Another gap in the research was highlighted through observing that “there are no empirical studies evaluating the effectiveness of outpatient treatment for children with trauma-attachment disorders” (Becker-Weidman, 2006, p. 342). While there is a modest body of research exploring the use of art therapy in treating trauma and in treating attachment, these approaches are often explored separately. More specifically, minimal literature has been published linking these concepts in both the fields of psychology and clinical psychology are available. However, there is an even greater lack of literature linking attachment and trauma within art therapy. These gaps highlight a need to add to the body of literature that integrate these two often complementary concepts within both art therapy and other mental health fields.

Lastly, the research suggests that the current approach towards early childhood trauma is reactive in nature (Bryson et. Al., 2017), (Bartlett et. al, 2016) and (Becker-Weidman, 2006). This may highlight a need to provide early intervention to children and families before the trauma and abuse can occur. Perhaps this may be accomplished through taking a macro-approach that aims to prevent and reduce the occurrence of these adverse experiences through identifying vulnerable children and families early on and providing evidenced-based treatments that address and solve for risk factors, intergenerational trauma patterns, and skill deficits.

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