THERAPY FOR PREVERBAL TRAUMA:
INTEGRATING THE ETC FOR SENSORY-BASED TREATMENT

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ABSTRACT

Art Therapy for Preverbal Trauma: Integrating the ETC for Sensory-Based Treatment

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This theoretical intervention research explores the design of a sensory-based art therapy program for children aged four to five who have experienced preverbal trauma. Grounded in the sensory level of the Expressive Therapies Continuum (ETC), the proposed model addresses the unique therapeutic needs of young children whose traumatic experiences occurred before the development of language. Drawing on trauma theory, neurodevelopmental research, and sensory integration practices, the program offers a developmentally appropriate, trauma-informed framework that supports emotional regulation, nervous system healing, and relational repair through art-making. The methodology employs a theoretical intervention research design, with a focus on formative program development rather than implementation or outcome testing. This research contributes to the growing body of literature on early childhood trauma and highlights the potential of sensory-based art therapy as a vital avenue for healing preverbal trauma.

Keywords: Expressive Therapies continuum, sensory component, art therapy, preverbal trauma

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Table of Contents

Chapter 1. Introduction

Trauma experienced during the preverbal period presents unique therapeutic challenges, as it is often encoded in the body and sensory systems rather than verbal narrative. Children who experience trauma before developing verbal skills may lack conscious memory or narrative understanding of their experiences. However, they continue to carry its effects somatically and emotionally. As a result, traditional language-based therapies can be limited in their effectiveness. Sensory-based art therapy offers a developmentally appropriate, nonverbal alternative that aligns with how preverbal trauma is stored and processed. Engaging the senses through artmaking can support emotional regulation, promote nervous system integration, and provide a safe space for expression and healing.

In my work as an art therapy intern, I have witnessed how sensory interventions can support children navigating dysregulation, dissociation, aggression, or emotional overwhelm. I noted that this was especially effective when working with non-speaking children. Therefore, my clinical experiences, along with an interest in neuroscience that began during my undergraduate studies, shaped my interest in this topic. This experience, coupled with my appreciation for and interest in practice guided by the Expressive Therapies Continuum (ETC), led me to explore its sensory component as a framework for developing interventions for preverbal trauma.

Relevance to Art Therapy

Art therapy is increasingly being recognized as a relevant and effective treatment for preverbal trauma due to its non-verbal, sensory-based, and action-oriented approach (Gantt & Tripp, 2016; Malchiodi, 2017). Because preverbal traumatic memories are stored without a coherent verbal narrative, traditional talk therapies may be limited in their effectiveness. In contrast, art therapy employs visual imagery and sensorimotor processes that provide unique access to these early, embodied experiences (Malchiodi, 2020; Gantt & Tripp, 2016). The sensory component of the Expressive Therapies Continuum (ETC) focuses on engaging both internal and external sensations through interaction with art materials, emphasizing the experience of the process over the final product (Hinz, 2020). To successfully and effectively treat preverbal trauma, clinicians are encouraged to go beyond conventional methods such as trauma-focused CBT and address the deeper sensorimotor layers of memory (Malchiodi, 2020).

Statement of Purpose

The purpose of this theoretical research is to design a series of sensory-based interventions for children with preverbal trauma to support the development of regulatory skills, healthy central nervous system development, and the treatment of dissociative symptoms, such as the inability to connect to one's feelings. Drawing upon existing trauma-informed art therapy approaches, neuroscientific evidence, and sensory components of the Expressive Therapies Continuum (ETC), this research aims to provide a theoretical foundation for treatment within this population.

Research Question

How can a series of art therapy interventions, using the sensory components of the Expressive Therapies Continuum, be designed to support children between the ages of four and five who have experienced preverbal trauma?

Definition of Key Terms

Expressive Therapies Continuum (ETC): as defined by Hinz (2020), the ETC is a classification system for understanding how individuals engage with art media to process information and create images. The ETC categorizes the formation of images and processing of information, ranging from kinesthetic experiences to symbolic representations (Hinz, 2020). This framework not only facilitates the organization of assessment data but also aids in setting treatment objectives and devising art therapy interventions (Hinz, 2020).

The Sensory Component of the ETC includes experiences which connect with materials primarily through sensation (Hinz, 2020). This component is grounded in how we physically interact with the world, whether through touch, sight, sound, smell, or taste (Hinz, 2020). The focus is less on creating something symbolic and more about experiencing the sensory qualities that materials have to offer (Hinz, 2020).

Art Therapy integrates artmaking and creative processes with psychotherapeutic principles to support self-exploration (Canadian Art Therapy Association, 2017). Engagement with artistic elements facilitates the expression of thoughts and emotions that may be challenging to articulate through language alone (Canadian Art Therapy Association, 2017).

Preverbal Trauma includes trauma that occurs in early childhood, typically before the age of three, before verbal narrative has fully developed, and is stored through bodily sensations and visual imagery as opposed to language (Gannt & Tripp, 2016). Examples of trauma in the

preverbal period include caregiver neglect, traumatic birth experience, domestic violence, and sexual and/or physical abuse (Gannt & Tripp, 2016).

Summary of Chapters

This paper is organised into five chapters. Chapter 1 introduces the topic and defines key terms relevant to the study. Chapter 2 outlines the methodology used in developing the program, including ethical considerations. Chapter 3 presents a comprehensive literature review covering preverbal trauma, including its symptoms, prevalence, and impact on neurodevelopment, as well as the challenges associated with treatment. Additionally, chapter 3 explores the use of art therapy in trauma treatment, focusing on its theoretical foundations, benefits, and application in addressing preverbal trauma. The Expressive Therapies Continuum is discussed in detail, with particular attention to the sensory component and its relevance, along with an overview of sensory-based interventions used in art therapy and other therapeutic practices. Chapter 4 outlines a proposed art therapy program, detailing its purpose, target population, location, therapeutic approaches, intake process, goals, interventions, materials, and how sessions will be structured, including opening and closing rituals. Chapter 5 includes a discussion of the findings, strengths and limitations of the proposed program, recommendations for future practice, and a concluding summary.

Chapter 2. Methodology

A theoretical intervention research design was utilized to develop a program outline that aims to provide a foundation for treatment for this population. This chapter outlines the rationale behind the chosen methodology, along with its ethical considerations, cultural perspectives, and the challenges of applying this model to a sensitive and diverse population.

Intervention Research Design

Intervention research systematically examines strategies for implementing purposeful change by focusing on both creating and refining interventions (Fraser & Galinsky, 2010). This process involves specifying the intervention, including how it is guided by defined practice principles, objectives, and structured activities (Fraser & Galinsky, 2010). Through the identification of a research gap, intervention research aims to develop interventions with practical benefits to specific populations (McBride, 2016). In the model outlined by Fraser & Galinsky (2010), there are five comprehensive steps.

The first step involves examining existing research and literature to develop a problem and program theory (Fraser & Galinsky, 2010). Additionally, this step may also be framed as the notification phase, where a clear gap and rationale for the research is outlined (McBride, 2016). Within the second step, the program is developed, and elements such as session-by-session content, goals, specific interventions, and implementation guidelines are formatted (Fraser & Galinsky, 2010; McBride, 2016). With a high level of control, small components of the developed interventions are tested in the third step to begin evaluating efficacy (Fraser & Galinsky, 2010). Based on these findings, adaptation considerations and refinements are made based on test results (Fraser & Galinsky, 2010). In the fourth step, the intervention is tested with less control on a larger scale under multiple real-world conditions (Fraser & Galinsky, 2010). In this step, the effectiveness of the intervention is established (Fraser & Galinsky, 2010). Lastly, once the intervention has been thoroughly tested and refined, the fifth step involves the publication of findings and program materials to promote widespread implementation (Fraser & Galinsky, 2010). Additionally, training materials and certificates are developed (Fraser & Galinsky, 2010). However, while the steps are ordered, this process is not strictly linear, and researchers often need to revisit and refine previous steps (Fraser & Galinsky, 2010). It is important to note that due to the theoretical nature of this research, only steps one and two of

Fraser and Galinsky's (2010) five-step model will be taken to answer the previously stated research question.

Intervention research collects qualitative data in the formative phase, which includes the gathering of information from a variety of sources in order to inform the development of interventions (McBride, 2016). Qualitative data is analyzed through content or thematic analysis to identify patterns, themes, and key messages (McBride, 2016). Additionally, quantitative data is collected in the assessment phase (steps two and three) to evaluate effectiveness and impact (Fraser & Galinsky, 2010; McBride, 2016). This quantitative data can be collected through the use of surveys, pre- and post-intervention measures, control groups, and data fidelity (McBride, 2016). Quantitative analysis involves statistical techniques that vary depending on the variable being measured and research design (McBride, 2016). Potential statistical analysis include t-tests, descriptive statistics, ANOVA tests, or regression analysis (McBride, 2016). Intervention research can yield conclusions that determine the effectiveness of an intervention, mechanisms of change, implementation factors, intervention program design, adverse effects, and generalizability of findings (Fraser & Galinsky, 2010; McBride, 2016).

Methodology Rationale

Theoretical intervention research design was selected for this project due to its emphasis on the systematic development, refinement, and theoretical grounding of targeted strategies intended to address clearly defined therapeutic goals. This methodological approach is particularly well-suited to contexts in which there is an identified gap in the literature and a need to generate new frameworks for intervention before empirical implementation. Theoretical intervention research facilitates the creation of structured, conceptually informed interventions by drawing from and integrating existing theoretical models, ensuring that the proposed strategies are both evidence-informed and contextually relevant. This approach enables a direct and deliberate alignment between identified risk and protective factors and the content of the intervention, enhancing its potential utility and coherence (McBride, 2016). Moreover, intervention research prioritizes the formative phase of intervention development, which is especially appropriate for theoretical work that is not intended for immediate implementation or empirical testing. Through employing this model, I can systematically conceptualize and articulate a series of interventions that respond to a specific therapeutic need while remaining grounded in a rigorous theoretical foundation.

Validity, Reliability, and Limitations

Once an intervention is designed, it must be implemented in pilot and real-world scenarios to test validity and reliability (Fraser & Galinsky, 2010). Therefore, reliability and validity will not be measured due to the theoretical nature of this intervention research. Limitations of intervention research include the ability to translate interventions from controlled research environments to real-world settings that contain complexities and constraints (Fraser & Galinsky, 2010). This includes generalizability limitations, which are especially relevant when working with populations such as children with preverbal trauma, who require a highly individualized approach. Factors such as cultural differences, variations in implementation settings, and unique characteristics of the target population can influence the effectiveness of an intervention (Fraser & Galinsky, 2010). A prominent limitation of this methodology is the value placed on scholarly articles, which can strengthen theoretical and scientific foundations, but vastly limit cultural considerations and lived experience. Additionally, intervention research can be resource-intensive, requiring significant investments of time, funding, and personnel (Fraser & Galinsky, 2010). This can be a barrier for researchers, particularly those working in settings with limited resources (Fraser & Galinsky, 2010). Securing adequate funding, assembling a qualified research team, recruiting and retaining participants, and conducting rigorous data collection and analysis all require substantial resources (Fraser & Galinsky, 2010). Understanding and proactively addressing these limitations allows researchers to strengthen the rigor, relevance, and impact of their work, contributing to a more robust evidence base for practice and policy.

Ethical Considerations

A primary consideration when conducting theoretical intervention research is the potential for personal bias to influence the research (Fraser & Galinsky, 2010). When addressing my own biases, it is important to acknowledge my previously formed opinion that the ETC is a valuable and practical framework. Additionally, I am approaching this research as an art therapy student who has firsthand witnessed the benefits and potential harm that sensory interventions can have. Furthermore, I identify as a cis, white female who does not have the lived experience of my research population.

Lastly, it is crucial to acknowledge that while sensory-based interventions are emerging in literature as effective treatment methods for trauma, sensory-based healing is not a new

concept and has been a part of cultural practices for thousands of years. Cultural uses of sensory healing are the original action-oriented, sensory-based forms of treatment with the purpose of returning to mental, social, and physical equilibrium (Malchiodi, 2020). One of many examples is that of the Ojibwe nation, whose healing traditions combined the medicinal and physiological aspects of care with ceremonial and social practices (McNally, 2009). Central to their approach were prayers expressed through song, dance, and drumming (McNally, 2009). When someone fell ill, it was common for the entire community to gather in a large lodge, dedicating one or two days to singing, drumming, dancing, and sharing meals (McNally, 2009). While McNally provides valuable insight into Ojibwe healing practices, it is important to note that he is not Indigenous. Much Indigenous knowledge is shared orally and through storytelling within communities rather than through Western academic publishing, which can limit direct representation in scholarly sources.

Additionally, West African culture has utilized dance in order to facilitate healing and empower the group/individual (Monterio, 2011). Rituals involving dance are especially significant in alleviating psychological distress and mitigating the effects of psychological trauma (Monterio, 2011). Additionally, parts of Northeast Africa and the Middle East have historically practiced the Zar ceremony, which entails singing, dancing, drumming, eating and drinking in order to rid the body of mental and physical illness (Monterio, 2011). Specific symptoms that are treated in these ceremonies include mental confusion, physical paralysis, and aggressive behaviours, often occurring after a traumatic experience (Monterio, 2011).

Conclusion

In conclusion, a theoretical intervention design is an appropriate methodology for conducting this research. Employing a theoretical intervention research design allows this study to lay the groundwork for creating structured, trauma-informed and sensory-based art therapy approaches. While theoretical in nature, this research aims to bridge gaps in the literature and provide a foundation for future practical applications, contributing to a growing body of knowledge in art therapy and trauma treatment.

Chapter 3. Literature Review

The purpose of this literature review is to outline the concept of preverbal trauma and explore the relevance of sensory-based treatments. It will begin by providing working definitions for trauma subcategories, symptoms, and impacts on neurodevelopment, followed by an exploration of the theoretical foundations and applications of art therapy in trauma treatment. The review will discuss the Expressive Therapies Continuum, emphasizing its sensory component. Finally, it will examine sensory-based interventions, both within and beyond art therapy, highlighting somatosensory approaches that can enhance therapeutic outcomes for individuals who have experienced preverbal trauma. Through this comprehensive analysis, the review aims to assess the importance of sensory engagement in preverbal trauma treatment, paving the way for more effective therapeutic practices.

Preverbal Trauma

Overview and Working Definitions

As defined by Levine (2008), trauma occurs when our ability to cope with and respond to a perceived life-threatening or overwhelming experience is overwhelmed. Trauma is not simply an external event that causes stress or pain, but rather an internal experience (Levine, 2010). Levine (2010) specifies that trauma is an injury to the nervous system and soul as opposed to a disorder. Levine (2008) highlights how seemingly insignificant events can cause trauma by organizing traumatic events into two categories: obvious and less obvious. More obvious causes include war, emotional, physical, or sexual abuse, neglect or abandonment, experiencing or witnessing violence, rape, and catastrophic events (Levine, 2008). Less obvious causes of trauma include minor automobile incidents, invasive medical procedures, falls and minor injuries, natural disasters, illness, prolonged immobilization, sudden loud noises, and birth stress (Levine, 2008). Additionally, a critical factor in determining whether an event is traumatic, both obvious and less obvious, is an individual's perception of the threat and their capacity to deal with it (Levine, 2008).

Childhood trauma is defined as an experience within the first 18 years of life that creates lasting negative psychological impacts (Perry, 2015). Encompassed within childhood trauma is developmental trauma, which refers to adverse experiences in critical developmental periods that cause persistent autonomic activation (Kain, Terrell, & Levine, 2018; Van der Kolk, 2014). The main difference between childhood and developmental trauma is that, unlike childhood trauma,

which can result from a single incident, developmental trauma arises from continuous or repetitive exposure to distressing experiences during critical developmental periods (Perry, 2015; Van der Kolk, 2014). When this trauma occurs early in life, especially with caregivers as the source, it becomes a relational issue that introduces complex therapeutic challenges due to its chronic nature (Heller & LaPierre, 2012). Both developmental and childhood trauma can lead to difficulties surrounding regulation, cognition, relationships, and development (Van der Kolk, 2014).

Preverbal trauma refers explicitly to traumatic experiences that occur in infancy or early childhood, before language development has occurred (Schore, 2003). These traumatic experiences are stored in the right hemisphere of the brain, where they are internally represented through bodily sensations, nonverbal cues, and psychophysiological responses rather than explicit memories or verbal expressions (Gaensbauer, 2002; Schore, 2003). These early memories are often fragmented and lack narrative context. Yet, they can still activate automatic physiological and emotional reactions that shape how a child perceives safety or threat in their environment (Wizansky & Bar Sadeh, 2021). Over time, if left unprocessed, these implicit memories may form the basis for rigid, non-adaptive patterns of response that persist throughout development (Wizansky & Bar Sadeh, 2021). Furthermore, preverbal trauma typically occurs within the first three years of life, when the right hemisphere of the brain is the most dominant (Schore, 2004).

Events that lead to preverbal trauma can also cause developmental and childhood trauma. The developmental timing of these events is the most critical factor in determining the type of trauma experienced, not the event itself (Heller & LaPierre, 2012). Therefore, when categorizing these events, childhood, developmental, and preverbal trauma can be placed under the broad category of Adverse Childhood Experiences (ACEs) (ACES Too High, 2017). ACEs can be sorted into the following broad categories: adverse childhood experiences, adverse community experiences, and adverse climate experiences (ACES Too High, 2017). Adverse Childhood Experiences encompass abuse, neglect, and household challenges, directly affecting a child's immediate environment (ACES Too High, 2017). Adverse Community Experiences include community violence, discrimination, poverty, and limited access to essential services (ACES Too High, 2017). Lastly, Adverse Climate Experiences involve natural disasters, environmental degradation, and displacement, disrupting a child's stability and security (ACES Too High,

2017). Together, these categories underscore that trauma can stem from personal, community, and environmental contexts, each influencing development and mental health (ACES Too High, 2017).

Symptoms and Prevalence

According to a study done by the Center for Disease Control and Prevention (CDC), which collected data from 264,882 U.S. adult citizens over 9 years, a substantial number of adults experience ACEs (CDC, 2023). 23.1% had one adverse experience, 23.5% had two to three, and 17.3% had four or more, demonstrating the high prevalence rate of ACEs (CDC, 2023). ACEs are prevalent among various populations, though certain groups are more at risk due to their social and economic environments (CDC, 2023). However, it is important to note that this study could be further improved through more cultural diversity, with 63.1% of the sample population being white and 60% of the population having completed or partially completed college-level degrees (CDC, 2023).

ACEs disrupt autonomic functioning by causing ongoing activation, affecting the child's ability to self-regulate and disrupting physiological and psychological development (Heller & LaPierre, 2012). This ongoing activation further impacts behaviour, cognition, and neural functioning (Perry, 2015). Observable signs and symptoms of ACEs include persistent efforts to maintain control, regression to earlier developmental behaviours, and bouts of uncontrollable anger or tantrums (Evertz et al, 2021; Levine, 2008). Children might also experience recurrent nightmares, thrashing while sleeping, or have episodes of bed-wetting (Levine, 2008). Difficulties in concentration, forgetfulness, and challenges at school can emerge, along with displays of either excessive aggression or extreme shyness and fearfulness (Levine, 2008). Some children may exhibit a heightened need for physical closeness, while others develop psychosomatic symptoms, such as persistent stomachaches or headaches (Levine, 2008). The long-term, hidden effect of ACEs is often the slow destruction of self-worth, confidence, sense of well-being, and connection to life (Levine, 2008).

Symptoms of preverbal trauma commonly manifest as regulatory disorders, not dissimilar to ACEs (Evertz et al, 2021). However, the difference lies in how this can be observed in infants. Regulatory disorders in infancy manifest as prolonged episodes of infant screaming, difficulties with sleep-wake cycles, unsettled discomfort, and feeding issues (Evertz et al, 2021). In early childhood, these may present as intense clinging to the caregiver, strong defiance, and

oppositional or aggressive behaviours (Evertz et al, 2021). Additionally, children who lack a verbal narrative for their trauma often engage in ruminative play relating to the experience or an inhibition towards play altogether (Markese, 2007). Ruminative play is often indicative of intrusive thoughts, while inhibition is indicative of trigger avoidance (Markese, 2007). Furthermore, trauma in infancy can lead to dissociation (inhibited emotional reactions) and hyperarousal (aggressive behaviours) (Markese, 2007).

Impact of Trauma on Neurodevelopment

In early childhood development, the brain's adaptability leads it to strengthen frequently used neural pathways while weakening others, meaning early traumatic experiences can shape it to expect danger and maintain activation (Perry, 2009; Van der Kolk, 2014). Trauma can lead to an overactive amygdala, making the child hypersensitive to perceived danger and impacting their ability to engage in trusting relationships (Markese, 2011; Waite & Ryan, 2019; Van der Kolk, 2014). Additionally, trauma can disrupt the hippocampus's functioning, making it difficult to form coherent narratives of experiences and distinguish between safe and dangerous situations (Kain et al., 2018; Van der Kolk, 2014). Furthermore, Polyvagal Theory explains that the vagus nerve has three branches, each activating different responses based on perceived safety or threat (Porges & Eichhorn, 2017). The ventral vagal complex supports calm and social engagement, the sympathetic system triggers fight-or-flight in response to threats, and the dorsal vagal complex activates a freeze response when escape feels impossible (Porges & Eichhorn, 2017). Trauma can disrupt this hierarchy, causing individuals to be stuck in defensive states, which may lead to persistent anxiety, hyperarousal, social withdrawal, or emotional shutdown (Levine, 2010; Porges & Eichhorn, 2017).

Treatment Challenges

When children experience trauma in the preverbal period, they lack explicit access to traumatic memories (Perry, 2015). Therefore, pushing a child to talk about a preverbal traumatic experience can be counterproductive and countertherapeutic once the child is safe from further harm (Perry, 2015). However, these early childhood memories can be accessed by the child through sensory experiences and processing, because these memories are stored implicitly (Solter, 2008). In order to address these implicit memories, there is an observed limitation in traditional talk therapy (Fleischer, 2023). Therefore, alternative, nonverbal, expressive therapies are highly effective in working with this population because they allow children to use their

right-brain to express and process traumatic material in a developmentally appropriate manner (Perry, 2015).

Art Therapy for Trauma Treatment

Theoretical Foundations

As defined by the Canadian Art Therapy Association (CATA) (2017), art therapy merges the creative process with psychotherapy to support self-exploration and insight. The use of imagery, colour, and form allows individuals to express thoughts and emotions that may be hard to put into words (CATA, 2017). Therefore, art therapy is growing as an acknowledged and valuable trauma treatment method due to the sensory, non-verbal, and graphic approach to working through trauma (Perry, 2015; Pifalo, 2006).

Art therapy is supported by theoretical frameworks such as neuroscience, attachment theory, psychodynamic theory, and trauma-informed practices (Garrett, 2020; Perry, 2015). Neuroscience perspectives highlight the neurological impact of trauma, and by using sensory and affective processes, arousal levels associated with the traumatic incident can be accessed in a non-threatening way (Garrett, 2020; Perry, 2015). Due to its inherent relational nature, art therapy can aid in repairing and strengthening attachment bonds that may have been disrupted by trauma (Perry, 2015). This repair is further supported by interventions that utilize mirroring, role-playing, co-regulation, and witnessing (Perry, 2015). Psychodynamic theories frame art therapy through the exploration of unconscious conflicts and defences that may be contributing to trauma-related symptoms (Perry, 2015). Within sessions, this is further supported by symbolism and the externalization of internal experiences (Garrett, 2020). Trauma-informed art therapy provides a client-centred and non-directive space for processing trauma and prioritises safety, trust, and client empowerment (Garrett, 2020; Perry, 2015).

Traumatic memories that are stored implicitly are somatic and sensory in nature, and as a result, they may require expressive or body-based interventions to be fully processed and integrated (Malchiodi, 2020). Therefore, art therapy is often used in conjunction with treatments such as cognitive behavioural therapy (CBT), rather than relying on CBT as a standalone method. (Perry, 2015; Pifalo, 2006). In trauma-related treatment, CBT aims to address trauma-related thoughts, emotions, and behaviours in a structured way (Pifalo, 2006). When implemented together, CBT offers specific, trauma-focused goals, while art therapy provides

non-verbal avenues for expression that can bypass limitations of talk therapy alone (Pifalo, 2006).

One structured example of how art therapy is being implemented in trauma treatment is Richardson's (2016) Four-Phase Model. It begins with Stabilization, where grounding techniques and routines help establish safety, creating a foundation for further therapy (Richardson, 2016). In Symbolic Expression, children use nonverbal forms such as drawing and visual narration to indirectly express trauma, making it easier to process difficult emotions (Richardson, 2016). Desensitization follows, with gradual exposure to traumatic memories through structured art, reducing anxiety around these experiences (Richardson, 2016). Finally, Integration focuses on building resilience and self-identity through reflective art projects, helping clients internalize their growth and regain control (Richardson, 2016). This model highlights the power of creative, nonverbal methods to support gradual trauma recovery in children (Richardson, 2016).

Benefits of Art Therapy in Trauma Treatment

Art therapy is a relational therapy that provides a safe and non-verbal space for individuals to explore their attachment styles and internal working models that are often impacted by trauma (Richardson, 2016). The therapist's attunement and empathetic witnessing of the client's creative process can mimic the nurturing relationship needed for secure attachment development (Gussak & Rosal, 2016). Through creative expression, trauma survivors can begin to make sense of their experiences, regulate their emotions, and develop a sense of agency and mastery (Hinz, 2020). They can connect with their bodies through sensory-based activities, visualize supportive relationships through art that represents their internal and external resources, and strengthen parent-child bonds through artmaking with their caregivers (Gussak & Rosal, 2016; Perry, 2015). Furthermore, art therapy can be particularly helpful for people with complex trauma because the use of imagery can help them overcome therapeutic avoidance (Skeffington & Brown, 2014).

Oscillation is a vital technique in trauma treatment, particularly within sensorimotor psychotherapy, as it enables clients to process distressing experiences in a regulated and manageable way (Ogden et al., 2006). In art therapy, this is integrated through specific intervention suggestions to guide clients through ETC levels, facilitating mindful shifts between experiences of intense emotions or sensations and states of containment or cognitive processing (Hinz, 2020). Adjustments such as transitioning from fluid, emotion-evoking media to more

resistive, control-promoting materials, or modifying task structure and complexity, support clients in safely exploring discomfort, processing overwhelming emotions, and integrating their experiences (Hinz, 2020). Through guiding clients to mindfully shift between states of discomfort and calm or resourced sensations, oscillation helps maintain emotional experiences within the window of tolerance, preventing overwhelm and retraumatization (Ogden et al., 2006). This back-and-forth movement supports the safe exploration of traumatic material while reinforcing internal stability and self-regulation (Ogden et al., 2006). Over time, repeated orientation to embodied confidence and a sense of inner core deepens access to internal resources and fosters a stronger connection to self, creating a foundation of safety necessary for deeper therapeutic work (Ogden et al., 2006).

Application in Preverbal Trauma Treatment

Arts-based methods are increasingly being recognized and utilized as a valuable approach in the treatment of preverbal trauma. One example is Wordless narrative research, which is an arts-based method that uses visual storytelling to explore and communicate complex emotional and cultural experiences that are difficult to express in words (Horwat, 2015). It is especially effective for accessing preverbal or embodied aspects of lived experience, such as trauma or repressed memories, and fosters empathic engagement through metaphor, symbolism, and visual aesthetics (Horwat, 2015). This method is beneficial because it provides a way for clients to communicate previously inaccessible complex thoughts and feelings (Horwat, 2015). There is a strong emphasis on the visual narrative being cohesive and well-organized to support authenticity and clarity (Horwat, 2015).

Art therapy is currently being employed in preverbal trauma treatment through models such as the Integrated Trauma Therapy (ITT) approach (Gantt & Tripp, 2016). ITT utilizes art therapy as a primary mode of treatment, aiming to eliminate trauma symptoms by identifying and addressing the source of trauma-related responses, known as Instinctual Trauma Responses (Gantt & Tripp, 2016). Specifically, the ITT approach supports individuals in examining early and preverbal traumatic experiences while enabling a sense of closure through the structured completion of the trauma narrative (Gantt & Tripp, 2016). Trauma often results in a split between explicit and implicit memory, leading to symptoms such as affect dysregulation, depersonalization, derealization, numbness, and amnesia (Gantt & Tripp, 2016). ITT addresses these effects using consistent techniques, including the Graphic Narrative (GN) and Externalized

Dialogue (ED), applied in a set order (Gantt & Tripp, 2016). The GN is a sequence of drawings based on the Instinctual Trauma Response, representing key aspects of the traumatic experience such as the startle reaction, blocked attempts to escape, dissociation, automatic obedience, and efforts at self-repair (Gantt & Tripp, 2016). Including bodily sensations in each drawing helps access emotional material that might otherwise remain suppressed (Gantt & Tripp, 2016). Importantly, these images are created before any detailed verbal account is given to prevent cognitive processing from overriding emotional expression (Gantt & Tripp, 2016). After the GN is completed and shared, the ED invites a conversation between parts of the self, similar to the Gestalt therapy technique of the empty chair, to foster integration and emotional resolution (Gantt & Tripp, 2016).

Although research is somewhat limited, existing literature supports the use of play therapy in addressing the effects of preverbal trauma (Finn et al, 2018). It is considered beneficial for children with various mental health challenges, offering a safe space to begin emotional processing through guided therapeutic play (Finn et al, 2018). Specifically, play therapy can support healing from preverbal trauma by offering a safe space where children express and process nonverbal memories through symbolic play and reenactment (Green et al, 2010). Since we understand that preverbal trauma is stored in the body and right brain as implicit emotional memory, play allows children to externalize and master these experiences, form coherent trauma narratives, and build secure attachment through an empathic therapeutic relationship (Green et al, 2010).

In a case study by Green et al (2010), Joseph, a 5-year-old who experienced severe early neglect and maltreatment, exhibited somatic memories and behavioural reenactments, including separation anxiety and aggression. In therapy, Joseph symbolically played out early memory fragments of nurturance versus neglect with a baby doll in danger from a wolf, with the therapist initially accepting his identification with the aggressor before guiding him toward non-destructive, protective roles (Green et al, 2010). Over two years of consistent therapy, Joseph transitioned to a protector role in play, and his sessions evolved from primarily nonverbal to largely verbally expressive, reflecting his secure attachments and the integration of his trauma (Green et al, 2010). However, clinical observations suggest that additional interventions beyond reenactment are often necessary for those children with severe preverbal trauma to help interrupt this cycle and support long-term healing (Finn et al, 2018).

The Expressive Therapies Continuum

Theoretical Overview

The Expressive Therapies Continuum (ETC) is a foundational theory in art therapy that offers a framework for organizing assessment information, formulating treatment goals, and planning interventions (Hinz, 2020). The ETC categorises how clients interact with art media to process information and form images (Hinz, 2020; Lusebrink, 2010). The ETC is not a linear model, and individuals do not necessarily progress through the levels in a fixed order (Hinz, 2020). The therapist's role is to assess the individual's preferred component processes and use this information to tailor interventions that support their growth and healing (Hinz, 2020; Lusebrink, 2010). This framework emphasizes that each level and component has its unique therapeutic benefits and that accessing and integrating all of these functions can lead to more holistic and effective treatment (Hinz, 2020). The ETC consists of three levels: the kinesthetic/sensory level, the perceptual/affective level, and the cognitive/symbolic level (Lusebrink, 2010). For the purposes of this review, a focus will be placed on the sensory component of the kinesthetic/sensory level.

The Sensory Component & Relevance to Preverbal Trauma Treatment

In the sensory component of the ETC, the main objective is to engage the senses directly through artmaking, drawing attention to the sensory properties of various media (Hinz, 2020). All senses are engaged on this level, including visual, auditory, gustatory, olfactory, and tactile input (Hinz, 2020). This approach often involves using materials with distinct smells, textures, or colours, such as scented markers, spices, natural objects, clay, paint, or tactile fabrics (Hinz, 2020). Therapists can enhance sensory engagement by prompting clients to notice specific sensory details, asking questions such as, "What can you smell?" or "How does the clay feel in your hands?" (Hinz, 2020). Furthermore, therapeutic benefits can be further supported by simultaneously engaging multiple sensory channels (Hinz, 2020). Common therapeutic goals for sensory-based art therapy may include helping clients recognize and express internal sensations, promoting mindfulness, and fostering self-soothing skills through sensory engagement (Hinz, 2020).

Traumatic experiences often involve intense sensory elements, making the incorporation of visual and sensory activities effective in therapy (Hinz, 2020). However, it is important to note

that for this exact reason, sensory material needs to be incorporated into treatment with extensive care at a gradual pace (Hinz, 2020). This is particularly important for those with preverbal trauma, as such memories are stored as sensations rather than words (Hinz, 2020). Additionally, before this work can begin, a sense of safety must be established for clients (Hinz, 2020). Without this safety, sensory exploration has the potential to cause retraumatization if not approached gradually and safely (Hinz, 2020). Working with sensory materials on this level of the ETC can aid in processing deeply embedded memories, which verbal therapy alone may not readily reach (Hinz, 2020).

For clients facing overwhelming sensory input, the perceptual component of the ETC can be incorporated to help structure their experience, supporting safer processing (Hinz, 2020). The perceptual component of the ETC focuses on the visual and structural aspects of imagery, highlighting the importance of form, boundaries, and spatial organization in artmaking (Hinz, 2020). This level supports individuals in visually containing emotional experiences and making sense of internal chaos by fostering clarity, structure, and perspective (Hinz, 2020). Therapeutic goals within this component often include enhancing emotional containment, promoting reflective insight, improving the ability to see relationships between parts of a problem, shifting rigid thought patterns, and fostering the capacity to view experiences from multiple perspectives (Hinz, 2020). Engaging with this component also encourages the development of visual language to express internal experiences, leading to deeper self-awareness and greater empathy toward oneself and others (Hinz, 2020).

Sensory-based Interventions for Preverbal Trauma

Sensory-Based Interventions in Art Therapy

The most predominant sensory-based approach to preverbal trauma treatment within the art therapy field is Clay Field Therapy (CFT) (Elbrecht, 2013). CFT is a nonverbal, bottom-up approach that does not require clients to articulate or recount traumatic events verbally (Elbrecht, 2013; Perry, 2015). CFT utilizes tactile interaction with clay, which can directly access and address foundational developmental needs and early sensory memories (Elbrecht, 2013). This approach is particularly valuable for children who may struggle with symbolic play due to limited access to cortical, verbal processing pathways (Elbrecht, 2013). While published studies are limited, one case example by Elbrecht & Antcliff (2014) demonstrates how the bottom-up approach of Clay Field Therapy (CFT) effectively addresses trauma rooted in preverbal memory.

A 35-year-old pregnant woman with chronic fatigue and anxiety participated in 11 CFT sessions (Elbrecht & Antcliff, 2014). Initially unable to touch the clay and experiencing dissociation, she gradually engaged through rest and playful interaction (Elbrecht & Antcliff, 2014). Over time, she expressed suppressed anger, established personal boundaries, and released trauma linked to early maternal separation (Elbrecht & Antcliff, 2014). The clay work fostered her sense of safety, self-assertion, and emotional integration (Elbrecht & Antcliff, 2014). Upon the conclusion of her sessions, she felt able to grieve, trust her impulses, and envision a healthier life path (Elbrecht & Antcliff, 2014). Two follow-up sessions helped manage minor postpartum anxieties, reinforcing her progress (Elbrecht & Antcliff, 2014). Throughout therapy, the clay served as a stable transitional object, aiding her connection with bodily impulses and the development of sensory awareness, emotions, and new insights (Elbrecht & Antcliff, 2014). Additionally, sand trays can be used similarly in CFT in order to support non-verbal sensory processing (Perry, 2015).

Even when sensation is not the focus of the intervention, Malchiodi (2020) highlights how stimulating olfactory and visual channels can stimulate repressed or nonverbal memories. In one case example, crayons were employed in an intervention, which would typically be categorized as rigid and having low sensory engagement (Hinz, 2020; Malchiodi, 2020). However, the olfactory sensory properties of the material were sufficient to evoke early childhood nonverbal recollections (Malchiodi, 2020). While these sensory experiences can evoke the processing of traumatic experiences, they also possess the important ability to bring forth pleasant memories (Malchiodi, 2020). Additionally, when integrating kinesthetic movement with sensory-focused therapy, specific areas, like the throat, are particularly sensitive due to their connection to the vagus nerve, which can store memories of fear (Malchiodi, 2020; Porges, 2017). To avoid triggering intense responses, therapists may start with hand and foot movements in sensory exploration, allowing them to gauge a client's comfort before progressing to more sensitive areas (Malchiodi, 2020).

Beyond Art: Other Sensory-Based Therapies

NeuroAffective Touch integrates principles from attachment theory, somatic psychology, and early developmental studies to help regulate emotions, repair attachment, and enhance self-awareness (Heller & LaPierre, 2012). Through the use of gentle, intentional touch, this method activates the body's sensory and emotional systems to release stored trauma, particularly

beneficial for those with early or preverbal trauma (Heller & LaPierre, 2012). It works to access implicit memories, stabilize the nervous system, and promote self-soothing and a sense of safety (Heller & LaPierre, 2012). One case study by Heller & LaPierre (2012) presents Emma, a woman who struggled with a lifelong fear of others, isolation, and profound loneliness stemming from early developmental and relational trauma. Emma's trauma originated from prenatal complications, premature birth without nurturing touch, and emotional neglect by emotionally unavailable parents (Heller & LaPierre, 2012). This trauma was held implicitly in her body, as she lacked conscious memories of these early experiences (Heller & LaPierre, 2012). Traditional cognitive therapies were retraumatizing for her, so NeuroAffective Touch was used to address the preverbal trauma rooted in her body (Heller & LaPierre, 2012). Therapist Aline LaPierre applied gentle, deliberate touch interventions that were always guided by Emma's responses (Heller & LaPierre, 2012). These included placing hands on her belly, engaging reflexes, and holding areas linked to safety and self-worth (Heller & LaPierre, 2012). The touch techniques, combined with psychoeducation and verbal framing, helped Emma build awareness, regulate emotions, and develop a language for her previously nonverbal experiences (Heller & LaPierre, 2012). Over time, Emma gained a stronger sense of existence, safety, trust, and internal connection (Heller & LaPierre, 2012). NeuroAffective Touch enabled her to release deep-seated fear, distinguish present safety from past neglect, and foster synchrony with the therapist, which is key for nervous system regulation and healing (Heller & LaPierre, 2012). This process transformed Emma's patterns of disconnection and fear and supported her reconnection with herself and others (Heller & LaPierre, 2012).

Additionally, Sensory Motor Arousal Regulation Treatment helps trauma-affected children regulate emotions and behaviour through sensory-motor engagement, using somatic and sensory integration techniques (Finn et al., 2018). Play-based activities with items such as crash pads and trampolines allow clients to process preverbal trauma nonverbally, often through games or dramatic play (Finn et al., 2018). This sensory engagement can help organize trauma responses in a client-led manner, gradually making them more accessible and allowing verbal expression to emerge (Finn et al., 2018).

Conclusion

This literature review highlights the significant role that sensory-based interventions can play in addressing preverbal trauma, emphasizing the use of the Expressive Therapies

Continuum (ETC) as a valuable framework in art therapy. Trauma, especially when experienced during the preverbal period, poses unique therapeutic challenges due to its implicit and sensory-based nature, which often resists traditional, language-dependent treatments (Schore, 2003; Perry, 2015). By tapping into the sensory component of the ETC, art therapy can provide an approach that aligns with how these early traumatic memories are stored and processed (Hinz, 2020; Lusebrink, 2010). This review underscores the need for further research and clinical applications of sensory-based interventions in treating preverbal trauma. Furthermore, there is a notable gap in published literature that specifically addresses the use of the sensory component of the ETC framework in preverbal trauma treatment.

Chapter 4. Art Therapy Program Outline

Program Purpose

The purpose of this theoretical program is to design a series of sensory-based art therapy interventions for children aged four to five who have experienced preverbal trauma. Grounded in the sensory component of the Expressive Therapies Continuum (ETC), this program aims to support the development of self-regulation, foster healthy central nervous system functioning, and address dissociative symptoms that arise from trauma experienced before the acquisition of language. Through the integration of trauma-informed and developmentally appropriate practices, this individualized program seeks to provide a structured yet flexible framework that promotes safety, sensory integration, and emotional connection through artmaking.

Population Identification

Those participating in the program will be children aged four to five who have experienced preverbal trauma. The intention behind this age range is to implement therapeutic interventions as early as possible to counter harmful development (Green et al, 2010).

Program Location

The program would ideally be held in a child- and family-centred community mental health clinic or wellness centre that is accessible by public transit. The ideal location would include a comfortable and welcoming waiting area for caregivers, supporting a sense of safety and inclusion. Additionally, barrier-free entrances, wide hallways, accessible restrooms, and clear signage with visual cues will be prioritized to support navigation for families with disabled children or caregivers. Sessions would take place in a closed, private room to maintain confidentiality and minimize external distractions. The space would be equipped with child-sized tables, a sink for cleanup, and durable surfaces to accommodate the messier aspects of sensory-based artmaking. Furthermore, within the therapy room, sensory accessibility would be prioritized through adjustable lighting, noise-reducing features, and access to self-regulation tools such as weighted cushions, soft materials, or fidget items. The environment would be intentionally designed to support regulation, creativity, and physical safety for both children and clinicians.

Role of the Therapist and Utilized Approaches

Much of the therapist's role centres around acting as a co-regulating presence and attuned witness, providing a safe relational container in which the child can explore sensory experiences

at their own pace. Furthermore, adopting this approach will support the strengthening of attachment bonds (Perry, 2015). It is the therapist's responsibility to assess risks and implement interventions in an ethical, trauma-informed, developmentally appropriate, and sensitive manner. Through this trauma-informed and client-centered approach, the child's safety, choice, and empowerment are prioritized. Approaches such as process-based exploration and oscillation between activation and rest are utilized to respect each child's window of tolerance while fostering integration, resilience, and emotional connection.

From a Polyvagal perspective, a felt sense of safety is central to a person's ability to engage in therapy (Porges & Eichhorn, 2017). When the autonomic nervous system is not in a defensive state, it becomes easier for the individual to access higher functions such as connection, regulation, and growth (Porges & Eichhorn, 2017). This calm state is supported by the Social Engagement System, which is linked to the ventral vagal pathways (Porges & Eichhorn, 2017). When activated, it shifts the body away from survival-based responses and toward openness, healing, and relational engagement (Porges & Eichhorn, 2017). The Social Engagement System relies on a face-heart connection, involving functions such as facial and vocal muscles, and visceromotor regulation of the heart through the myelinated vagus nerve (Porges & Eichhorn, 2017). In therapy, this means a clinician's tone of voice, facial expression, body posture, and overall presence serve as powerful cues that can either signal safety or trigger defence (Porges & Eichhorn, 2017). Safety is not communicated through words alone. It is conveyed through calm vocal tone, steady eye contact, open body language, and the therapist's regulated state (Porges & Eichhorn, 2017). When a therapist is grounded, emotionally present, and able to remain still and attentive, a state of immobilization without fear is modeled (Porges & Eichhorn, 2017). This presence invites the client's nervous system into co-regulation and helps establish a sense of calm (Porges & Eichhorn, 2017). Vocal tone and facial expression are critical because they activate the same neural pathways that support physiological regulation (Porges & Eichhorn, 2017). Activities such as singing, humming, or slow, intentional breathing can further engage the ventral vagal system and help reduce defensive responses (Porges & Eichhorn, 2017). At the same time, therapists must remember that each client's capacity to feel safe is shaped by their personal history and perception of threat. Every interaction is filtered through an individual lens. At its core, Polyvagal-informed therapy involves creating a relational

space where safety and trust can grow, forming the foundation for healing (Porges & Eichhorn, 2017).

When a child is in a dysregulated state, such as fight or flight (sympathetic activation) or freeze (dorsal vagal shutdown), the therapist supports regulation by offering cues of safety through the Social Engagement System (Porges & Eichhorn, 2017). In a fight or flight response, the child may see closeness as a threat, so it can be helpful to begin by creating physical space, modeling calm behaviour with relaxed posture and steady breath, and speaking in a low, even tone (Porges & Eichhorn, 2017). Once the child begins to settle, gentle, rhythmic activities or soft singing may support regulation (Porges & Eichhorn, 2017). In a freeze state, the child may appear withdrawn or unresponsive and needs a patient, quiet presence without pressure (Porges & Eichhorn, 2017). Consistent and gentle cues through facial expression and voice can gradually restore a sense of safety. Sitting quietly and offering subtle invitations to connect, such as a soft comment or shared silence, can encourage engagement (Porges & Eichhorn, 2017). Auditory-based interventions and playful interaction may also help support nervous system regulation. Across both states, the focus is on co-regulation and helping the child feel safe through calm, attuned presence (Porges & Eichhorn, 2017).

Additionally, the therapist plays an active role in observing and assessing how a child naturally engages with different levels of processing, using this insight to guide the selection of art media and interventions that suit the child's developmental and therapeutic needs (Hinz, 2020; Lusebrink, 2010). Through careful observation of preferred materials, manner of interaction, stylistic elements, and verbal communication, the therapist gathers valuable information about the child's dominant processing styles (Hinz, 2020). For example, a child's consistent use of fluid or resistive media can reveal affective or cognitive preferences, while their level of energy, frustration tolerance, and responses to boundaries highlight how they manage emotion and task demands (Hinz, 2020). The therapist also examines the final artwork for qualities such as line, form, colour, and symbolism to identify organizing tendencies across the kinesthetic, sensory, affective, perceptual, cognitive, and symbolic domains (Hinz, 2020). Verbal reflections during the art-making process provide further clues about which areas are more readily accessed and which may need support. With this information, the therapist can intentionally select and modify materials and instructions to match the child's sensory tolerance, emotional needs, and readiness for engagement (Hinz, 2020). This individualized approach helps

the therapist support regulation, increase sensory integration, and foster therapeutic growth by meeting the child where they are and gently encouraging movement across levels of processing (Hinz, 2020).

During artmaking, the therapist may use reflective, sensory-based questions that gently draw the child's attention to specific experiences in order to support sensory engagement (Hinz, 2020). These prompts help ground the child in the present moment while supporting self-awareness, regulation, and embodied expression (Hinz, 2020). For instance, to engage the tactile sense, the therapist might ask, "How does the clay feel in your hands?" or invite the child to focus on sensations while handling fabric or exploring objects with eyes closed. Visual engagement can be encouraged through comments like, "What do you see happening where the paints begin to make contact?" or "Look at how the colours blend." To involve the sense of smell, a therapist may ask, "What do you smell?" For auditory engagement, they might guide the child to "note the sound the clay makes when smacked". Lastly, awareness of internal sensations can be prompted by asking, "What are you aware of in your body?" Through this intentional use of language, therapists support deeper sensory processing, enhance integration across sensory channels, and foster more regulated, embodied experiences in the therapeutic space (Hinz, 2020).

Intake Process

The intake process for this program is designed to be developmentally appropriate and caregiver-inclusive. The process will begin with the completion of consent forms and an initial interview with the child's primary caregiver. This interview will gather relevant background information, including the child's developmental, medical, and relational history, current behavioural and emotional functioning, and any previous therapeutic supports. Particular attention will be given to the child's sensory profile, including sensitivities, triggers, and known strategies for regulation. The art therapist will explore the child's strengths, preferred activities, and communication styles, both verbal and nonverbal. Confidentiality and consent will be explained clearly and accessibly to the caregiver, and assent from the child will be sought through gentle, developmentally appropriate explanation and observation of willingness to engage. Ongoing consent and collaboration with caregivers will be emphasized throughout the program, with the understanding that participation is voluntary and can be adjusted or withdrawn at any time.

Therapeutic Goals

As this program is designed to be individualized, goals will be tailored to each child's unique needs, strengths, and developmental stage. However, several common goals may be explored across participants. Potential therapeutic goals will be organized according to the phase of treatment, with the stages identified as early, middle, and late in the intervention process. Potential goals and themes for the early phase of treatment include establishing physical and emotional safety through routine, containment, and predictable structure (Garrett, 2020; Richardson, 2016), supporting co-regulation and secure therapeutic alliance through attunement and empathetic witnessing (Gussak & Rosal, 2016; Perry, 2015), introducing sensory and perceptual engagement gently to prevent re-traumatization, using structured, non-directive materials (Hinz, 2020; Malchiodi, 2020), and begin noticing and labeling internal sensations, promoting early interoceptive awareness (Hinz, 2020).

Potential themes and goals for the middle sessions include the facilitation of nonverbal expression of internal states through sensory based artmaking (Richardson, 2016; Markese, 2007); supporting the reenactment and externalization of preverbal trauma through body-based sensory engagement (Finn et al., 2018); introduce relational themes and, when assessed to be appropriate, involve caregivers in dyadic artmaking to support attachment repair (Gussak & Rosal, 2016); and support the processing of dissociation (inhibited expression) or hyperarousal (aggression) by encouraging rhythmic engagement and choice (Markese, 2007; Porges & Eichhorn, 2017).

Goals and themes for the late phase of the program may include strengthening a sense of agency and self-efficacy (Richardson, 2016); facilitating a sense of continuity and mastery by using sensory-rich media to create transitional or closure-based artworks, which help children internalize feelings of safety and control (Garrett, 2020; Richardson, 2016); supporting the development of emerging identity and resilience; and fostering emotional closure and transition by emphasizing continuity, containment, and connection (Garrett, 2020).

Intervention Plan/Program Structure

The proposed program will run over five to six months, with one 45-minute session held weekly. The program length is proposed in order to provide adequate time to develop trust and rapport with the child, which is often a prolonged process when working with children who have experienced trauma. This format balances the need for structure and consistency with the attention span and emotional regulation capacity of young children. The number of sessions may

be adapted based on individual readiness, goals, and therapeutic pacing, particularly in response to trauma symptoms or sensory needs. Each session includes an opening ritual, a sensory-based art activity, and a closing transition to support predictability and containment. Although sensory-based artmaking is the foundation of this program, early sessions will emphasize perceptual engagement to promote safety and structure. This approach helps prevent potential re-traumatization by gradually introducing sensory input in a contained and regulated manner (Hinz, 2020).

Phase	Therapeutic Goals	Supporting Literature
Early	Establish safety through routine and predictability Support co-regulation and therapeutic trust Gradually introduce sensory and perceptual engagement Build capacity for awareness of internal sensations	Garrett, 2020; Richardson, 2016; Gussak & Rosal, 2016; Perry, 2015; Hinz, 2020; Malchiodi, 2020
Middle	Support nonverbal expression through sensory artmaking Support reenactment through body- and play-based engagement Explore relational themes; include caregiver if/when appropriate Address dissociation or hyperarousal with rhythm and choice	Richardson, 2016; Markese, 2007; Finn et al., 2018; Solter, 2008; Gussak & Rosal, 2016; Perry, 2015; Markese, 2007; Porges & Eichhorn, 2017

Late	Strengthen a sense of agency and self-efficacy Facilitate continuity and mastery Support agency and emotional resilience	Richardson, 2016; Garrett, 2020; Perry, 2015

Materials

Potential materials for this program include a range of tactile, visual, and olfactory items to support engagement at the sensory and perceptual levels of the Expressive Therapies Continuum. These materials may include foam clay, play dough, wet and dry sand, finger paint, soft brushes and sponges, textured paper, fabric scraps, natural materials (e.g., stones, leaves, feathers), glue, scented markers or spice-infused paint, and large-format paper. Additional tools such as stencils, tape for framing, sensory bins, and simple collage materials (e.g., tissue paper, foil, string) may be used to offer containment and sensory choice. All materials will be age-appropriate, non-toxic, and adaptable to each child's sensory preferences and developmental needs. Careful consideration will be given to the storage of materials, as having every material out and available can easily become overwhelming and hinder the therapeutic process.

Opening Ritual

Establishing consistent opening rituals is a key component in fostering a sense of safety within art therapy sessions (Moon, 2016). These rituals help create a structured and predictable environment, which is especially important when working with children who have experienced trauma (Moon, 2016). Predictability supports emotional regulation and allows the child to gradually build trust in the therapeutic space (Moon, 2016). Through repeated elements such as a welcoming routine, preparation for artmaking, and familiar transitions, the therapist provides a rhythm that children can depend on (Moon, 2016). This dependable structure helps reduce anxiety and supports the child's ability to engage more fully in the therapeutic process (Moon, 2016). Opening rituals and check-ins will be specific to each child and follow what they are interested in. Examples of potential rituals that incorporate perceptual artmaking and support co-regulation include mirror drawing, selecting favourite colours and animals, and shape tracing.

The session can either begin with the same activity each week, the child can choose from two or three suggestions, or the child can explore a self-directed activity, supporting a trauma-informed and child-led approach.

Interventions

Early Phase

Intervention	Description	Theoretical Support
Perceptual Framing Activity	Draw or paint "inside a frame" or designated area (e.g., tape border on page) to visually contain expression and support perceptual structure. Provide different figurines that the child can use to interact with the drawing.	Hinz, 2020; Malchiodi, 2020
Foam Clay Exploration	Tactile exploration using soft, malleable foam clay to encourage sensory regulation and co-regulation. The therapist may model squeezing, rolling, and squishing and mirror how the child is interacting with the clay.	Hinz, 2020; Elbrecht, 2013
Sand Tray Grounding	Use dry sand trays to bury and uncover objects. Child controls pace and pressure; therapist tracks engagement and affect.	Perry, 2015; Malchiodi, 2020
Scented Drawing	Offer a variety of essential oil scents and mix different scents with different colours of play-dough. Close the activity by placing the play-dough in different jars. Promotes olfactory-sensory grounding, orientation, and containment.	Malchiodi, 2020

Middle Phase

Intervention	Description	Theoretical Support
Clay Introduction	The child uses wet clay in a contained box to explore tactile and body sensations. Nonverbal trauma material may emerge through movement and gesture.	Elbrecht, 2013; Perry, 2015

Sensory-Based Dyadic Artmaking	Parallel or collaborative drawing/clay activity with caregiver, if appropriate. Focus on mirroring gestures, co-creating, or using a shared surface.	Perry, 2015; Gussak & Rosal, 2016
Rhythmic Painting with Music	Paint to slow, rhythmic music using large brushes or sponges. Focus on repetitive motion and regulated tempo.	Porges & Eichhorn, 2017; Hinz, 2020

Late Phase

Intervention	Description	Theoretical Support
Sensory Safety Box	Child assembles a personal sensory kit with calming textures, scents, and small objects made in sessions (e.g., clay token, soft fabric).	Perry, 2015; Garrett, 2020
Resilience Collage	Cut and paste sensory-rich materials (foil, fabrics, natural textures) to represent the child's favourite things.	Richardson, 2016; Garrett, 2020
Handprint Timeline	A series of handprints decorated with different materials to represent ways that the child sees themselves.	Garrett, 2020; Hinz, 2020
Closing Mandala	Create a circular image with chosen textures/colours to symbolize completion, safety, and self. It can be used in a goodbye ritual.	Malchiodi, 2020; Hinz, 2020

Closing Ritual

The closing ritual offers children a structured and supportive way to transition from the internal focus of artmaking back to the external environment, helping to contain the experience and signal the end of the session (Moon, 2016). To support the transition out of sensory-based artmaking and provide closure at the end of each session, perceptual artmaking will be reintroduced. One possibility could be to choose a stamp and add it to a designated sheet each week. Additionally, engaging in a shared clean-up ritual at the end of each session can support children's sense of agency, containment, and transition. For children who have experienced

preverbal trauma, predictability and structured routines contribute to a felt sense of safety (Garrett, 2020). Cleaning up together reinforces the idea that the session has a clear beginning and end, helping children internalize a sense of closure. Additionally, it can strengthen co-regulation through collaborative, purposeful action while fostering responsibility, mastery, and visual-spatial organization, all of which are key components of the perceptual level of the ETC (Hinz, 2020).

Chapter 5: Discussion

Summary of Findings

This research paper proposes a theoretical model for an art therapy program that utilizes the sensory level of the Expressive Therapies Continuum (ETC) to treat children aged four to five who have experienced preverbal trauma. The model integrates trauma theory, sensory-based interventions, and art therapy frameworks to provide a developmentally appropriate, nonverbal therapeutic approach.

Preverbal trauma presents unique therapeutic challenges due to the implicit, somatosensory nature of memory storage during early childhood. Because children in this developmental window lack a verbal narrative for traumatic experiences, traditional talk therapies often fall short in efficacy. This model offers an innovative sensory-focused intervention framework that supports regulation, attachment repair, and expression through nonverbal modalities. The theoretical program fills a critical gap in trauma care for preverbal populations by offering structured, trauma-informed, and developmentally sensitive art therapy interventions.

Children who have experienced preverbal trauma are often underserved in clinical settings due to the limitations of traditional cognitive and verbal therapeutic interventions. This model addresses that gap by offering a developmentally attuned therapeutic method that leverages the strengths of sensory engagement to access and process trauma held in the body and nervous system.

Moreover, early intervention is critical. Without therapeutic support, preverbal trauma can manifest later in life as dissociation, emotional dysregulation, and attachment disruptions (Green et al., 2010). Through targeting children during a sensitive developmental window, the proposed model fosters neural integration, co-regulation, and resilience that can alter lifelong trajectories.

Strengths of Proposed Program

One key strength of the proposed program is its developmental appropriateness. The program is designed to meet children at their developmental level by using nonverbal, sensory-rich modalities that allow for authentic expression without relying on language. The use of routine, predictability, and structured engagement helps foster a sense of safety and containment, both of which are crucial for children who have experienced early relational disruptions.

Furthermore, the program is grounded in trauma-informed principles, which prioritize safety, choice, collaboration, trust, and empowerment. These principles are embedded throughout the intervention structure, from the physical setup of the therapy space to the therapist's role as a co-regulating and non-directive witness. By maintaining an attuned, flexible, and responsive stance, therapists can help children remain within their window of tolerance while exploring sensory material. The program's integration of the Expressive Therapies Continuum (ETC) further strengthens its foundation by providing a theoretically sound, evidence-informed framework for understanding and responding to each child's unique processing needs.

Limitations

While the proposed model offers a theoretically grounded and innovative approach to preverbal trauma treatment, it is important to acknowledge several limitations. First, the model remains theoretical and has not yet been empirically tested. As such, its effectiveness, feasibility, and generalizability are currently unknown, limiting the ability to make evidence-based conclusions. Additionally, trauma manifests differently in each child depending on a wide range of factors, including temperament, neurobiology, attachment history, and environmental context. As a result, a structured program may not adequately meet the unique needs of all participants without significant adaptation. This concern is particularly relevant for children who are neurodivergent, as they may process sensory stimuli and relational cues differently, requiring tailored approaches that the current model does not yet fully address.

Cultural considerations also present a limitation, as the program is rooted in Western trauma theories and therapeutic structures. It may not fully reflect or accommodate culturally specific expressions of distress or healing practices unless deliberately adapted in collaboration with diverse communities. Furthermore, an additional barrier to implementation lies in caregiver engagement. Some caregivers may not recognize or accept the link between early trauma and current behavioural or emotional difficulties. This lack of acknowledgement can prevent children from accessing treatment altogether or limit the program's effectiveness by reducing essential caregiver collaboration (Green et al., 2010).

Additionally, time limitations would be a significant barrier when implementing this study. Much of the time allocated for the suggested interventions would likely be used to develop trust, as this process is often significantly prolonged when working with traumatized children.

Recommendations

Moving forward, it would be recommended to pilot test the program with a small, targeted sample to evaluate its safety, feasibility, and therapeutic impact. This would provide preliminary data to guide program refinement and identify unanticipated challenges in real-world settings. In addition to empirical testing, the program should be adapted with input from the communities it aims to serve. Engaging caregivers, cultural advisors, and neurodivergent advocates in the design and feedback process will ensure that the model is both inclusive and responsive to diverse needs. Incorporating flexible modules or practices that can be modified based on cultural background, developmental profile, and sensory preferences will enhance accessibility and effectiveness. Finally, expanding the program to include caregiver-child dyadic components could offer more profound relational healing. By actively involving caregivers in the artmaking and regulation processes, the model has the potential to strengthen attachment bonds and enhance outcomes for children by addressing both individual and relational aspects of trauma.

Chapter 6: Conclusion

This research set out to explore how a series of art therapy interventions, grounded in the sensory component of the Expressive Therapies Continuum (ETC), could be theoretically designed to support children aged four to five who have experienced preverbal trauma. The proposed model addresses a significant gap in trauma treatment by offering a developmentally appropriate, nonverbal, and trauma-informed approach that aligns with how early trauma is stored and processed, through implicit, sensory-based memory rather than explicit verbal recall. By integrating trauma theory, sensory-based interventions, and the ETC framework, the program provides a holistic foundation for supporting emotional regulation, attachment repair, and nervous system integration in young children. The findings of this theoretical study underscore the importance of early intervention and the potential of art therapy to serve as a powerful modality for healing preverbal trauma. While further empirical validation is needed, this model lays important groundwork for future research and practice. It advocates for continued development of trauma-informed, developmentally attuned art therapy programs that honour the unique needs of preverbal children and recognize the profound therapeutic potential of sensory engagement in early healing.

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