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The Benefits of Sensory Exploration in Art Therapy with Children with Social, Emotional and Behavioral Difficulties Through a Trauma Informed Lens

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Abstract

This thesis looks at sensory-specific art mediums with children with social, emotional, and behavioral difficulties (SEBD), interact with sensory-specific art mediums through the expressive therapies continuum (ETC) framework. This thesis acknowledges and explores how trauma and adverse childhood experiences impact a child's cognitive and developmental capabilities and their role in how individuals engage with and process their art. This thesis is based on qualitative, arts-based research. Data was collected via note-taking, self-reflective journaling, and self-engagement of sensory-based art responses. The benefits of sensory and kinesthetic art were explored with children ages seven through fourteen, in a therapeutic day school during art therapy groups. The participants are children of various cultural backgrounds, demonstrating social, emotional, or behavioral difficulties. These children were introduced to different sensory-based art materials during their weekly 45-minute art therapy groups over the course of six weeks. This method highlights the benefits of traditional and non-traditional therapeutic art materials such as paint, slime, Play-Doh, rice, and cardboard. All materials were given through both structured and unstructured directives of exploration.

Keywords: social emotional behavioral difficulties, sensory, expressive therapy continuum, art therapy, trauma-informed care.

This author identifies as a white, hetero-sexual cis-gendered female of mixed European ancestry from the northeastern United States.

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Introduction

"Some materials respond to the most delicate touch, whereas the effective manipulation of the other materials demands aggressive, embodied involvement…the sensory, physical characteristics of materials can become a powerful component of the therapeutic exchange" (Moon, 2010, p. 61).

A review of the literature suggests children with social, emotional, and behavioral difficulties (SEBD) have a high correlation to also experiencing adverse childhood experiences (ACES), which research has shown can lead to difficulty regulating emotions, increased anxiety, increased aggression or inability to maintain focus in school (Meeker et al., 2021). In this thesis, I report the results of research that investigates how children with SEBD benefit from the explorative process of sensory based art through a trauma-informed lens. In my own research, I have observed that children with SEBD exhibited increased engagement, attention, and energy when manipulating tactile, sensory-based materials such as Play-Doh, slime, rice, cardboard, and or paint. In comparison, when not engaged with sensory stimuli, I have observed the same adolescents have been shown to be dysregulated, disinterested, and off base-line behaviors. Current research suggests that the integration of sensory-based stimuli can reduce aggression, hyperactivity, and anxiety (Alamdarloo & Mradi, 2021). Still, there is a lack of research on how sensory-based art can benefit children with SEBD long-term and how progress can be measured in a therapeutic setting.

This student researcher observed how children ranging in age with SEBD were thoroughly engrossed and participating at baseline behaviors when consistently engaged with the same art

medium, slime. An inductive analysis method was utilized to explore why children with SEBD may appear to be fixated at the sensory level due to how their adverse childhood experiences (ACES) sequentially impacts one's cognitive level of process, which inherently impacts their engagement with the arts. The observation that children with SEBD showed a strong interest when manipulating sensory stimuli such as slime subsequently led to the following research question: What are the therapeutic benefits of sensory-related art materials? How are children engaging with such materials both at a sensory level, and does it elicit a kinesthetic response? The intervention engaged three therapeutic art groups, with children ages eight through fourteen. This student researcher observed how the children interact and engage with three to four different sensory-specific art mediums over the course of six weeks, while also making personal art reflections and journal responses to the proposed intervention. This method was intended to begin researching and exploring traditional and novel sensory-based mediums that exhibit positive therapeutic qualities such as playfulness, engagement, meditativeness, and kinesthetic response. This paper will establish research that requires further exploration beyond the scope of this method.

Literature Review

Understanding Sensory Stimulation

This literature review focuses on the science of sensory stimulation, how that knowledge is combined with art therapy theory, while simultaneously acknowledging how it can be utilized through a trauma informed lens to best benefit children experiencing a range of social, emotional and behavioral difficulties. Fowler (2006) defines *sensory stimulation* as activating sensory organs, including visual, olfactory, gustatory, auditory, and tactile modalities. The purpose of stimulation is to elicit arousal or behavioral response. The use of sensory stimulation either

creates an excitatory or inhibitory response. For some, the stimulation will increase their ability to be alert and attentive, while for others, it may have a relaxing effect (Fowler, 2006). Research has shown that repetitive and rhythmic motions and most sensory-based materials are able to elicit a calming reaction in the body (Prendiville, 2021).

Sensory stimulation can engage individuals differently. Andersson et al. (2021) highlight the importance of sensory stimulation for individuals with serious mental illnesses, as they may find the use of sensory stimulation to be beneficial for self-regulating behaviors. It can be acknowledged that self-regulating multi-sensory input information has been shown to be more difficult for individuals with trauma, mental illness, or behavioral difficulties, given that these individuals may struggle to identify their stress tolerance or acknowledge their sensory needs (Andersson et al., 2021). Malchiodi (2003) identified that when working with children with Autism Spectrum Disorder (ASD), multi-sensory exploration was shown to be a primary form of sensory regulation that worked for many clients Fowler (2006) explains how awareness of one's needs for sensory stimulation can benefit their daily functioning and that finding ways to self-soothe and regulate is going to enable these individuals to cope better and process their day-to-day activities. Sensory preferences can dictate what activities, movements, and materials they interact with. For an individual to be engaged and benefit from an activity, the appropriate amount of sensory stimulation must be present (Fowler, 2006).

Therapeutic Benefits of the Sensory Component

The use of sensory materials can be used to establish and facilitate grounding techniques with children when dysregulation occurs. Prevendille (2021) considers and notes the roots of understanding how sensory stimuli and sensory play are used as therapeutic tools in neuroscience. Research has shown our brains develop from a hierarchical system, looking at how

the lower region differs from the top regions. The lower region developed first at a very primal level, and the higher the brain region, the more complex and sophisticated (Prendiville, 2021). At the level of the lower region, regulation can occur through sensory-based approaches. This basis of regulation through the lower regions happens prior to more advanced processing, such as more cognitive-based approaches. When engaged with sensory-based materials, clients can experience positive emotions, engage in healthy touch, experience a sense of control, allow for open expression, access the unconscious, facilitate problem-solving development, and have a sense of catharsis through touch (Prendiville, 2021).

Alamdarloo and Mradi (2021) identified using clay as a way to decrease anxiety, stress, and hyperactivity, specifically when working with children diagnosed with autism spectrum disorder (ASD). The study focused on the effects of clay and its impact on children's emotional-behavioral problems. The results support the use of sensory integration, as it can help reduce sensory inputs, resulting in improved information processing and organization of sensory information. In return, this process of sensory stimulation can reduce the behavioral and emotional difficulties of children with ASD.

When engaging in sensory-based art directives, the purpose of directives with clients can be structured or unstructured. Structured means a specific goal is intended. Unstructured means, there is room for exploration and play with no purposeful outcome. Kimport & Robins (2012) identified a greater decrease in the mood of participants who manipulated clay in a structured task than of participants who were just given the tactile experience of squeezing a stress ball. The benefits of the material were due to both the manipulation combined with the structured directive. The malleability of the clay utilized allowed individuals to manipulate the materials, aiding in releasing impulses from meaning through physical touch (Kimport & Robins, 2012).

In contrast, Prendiville, (2021), explores the use of “messy play,” an unstructured directive that, involves the manipulation of Play-Doh, slime, and shaving cream, to evoke therapeutic play, specifically identified as helpful as a treatment for resolving traumatic experiences or exploring anxiety work with children. Rudimentarily, the children will engage with the materials solely by exploring their senses, acknowledging physical properties and what emotions and sensation stimulation can evoke on a psychological level. Later on, these experiences may develop to a higher level of processing, shifting from purely sensory to more controlled and projective (Prendiville, 2021). This form of play is unstructured and allows for purely exploratory experiences.

In parallel, the use of clay elicits a similar response. Studies have proven clay to be a beneficial tool in therapeutic work, given that it involves the body's expression and mental processes by exploring the rich, malleable material (Sholt & Gavron, 2006). Clay allows for a sensory process in which touch, regulation, and release are all work aspects. Clients can explore and engage in movement, playfulness, rupture, and repair work (Klein et al., 2020).

Therapeutic Benefits of the Kinesthetic Component

The process of sensory exploration with art materials can, at times, simultaneously elicit a kinesthetic experience. Hinz (2009) described the benefits of kinesthetic movement as often being a forgotten aspect of the therapeutic world. The term *kinesthetic* refers to the "the sensations that inform people of and accompany bodily movement, rhythms, and actions" (Hinz, 2009, p. 39). Kinesthetic activity is often one of the first modes of expression we utilize, as it is essential for non-verbal communication. Hinz (2009) states that the primary goal of the kinesthetic component within the ETC is the release of tension and energy through physical actions. As such, within the art process with a specific medium, can then initiate a kinesthetic

activity naturally. Hinz argues that the kinesthetic component may arise when utilizing various art mediums; thus an individual is engaging through pushing, squeezing, scratching, splashing, pounding, cutting, rolling, or ripping said materials. Moreover, it is through the materials' resistive qualities that the kinesthetic experience is integrated (Hinz, 2009).

Expressive Therapies Continuum

The Expressive Therapies Continuum, initially posed by Kagin and Lusebrink (1978) and further developed by Lusebrink (1990-2004), provides a framework that utilizes principles of neuroscience to inform the therapeutic benefits and process between clients and the art materials. (Hinz, 2009). By utilizing the model of the ETC, clinicians understand how individuals will engage with varying mediums, and subsequently, how that interaction will impact the way in which they process the information and construct images (Malik, 2022). Conceptualizing that the brain processes information differently given diverse art media, researchers continue to use neuroscience to explore how the brain responds to different art stimuli (Malik, 2022). The ETC lens allows clinicians to engage clients with materials that will, in return, support their needs, i.e., focusing on sensory play if the client is (Hinz, 2009).

The ETC is designed in a three-tiered, hierarchical system, moving from basic to more complex processes, which looks at three established systems of processing information: kinesthetic/sensory, perceptual/affective, and cognitive/symbolic. A fourth level is the 'creative level,' which can arrive at any level or when clients are engaged with more than one level. Within each level, i.e., kinesthetic/ sensory, which are parallel in their functioning, either right or left-brain focused. The brain's left hemisphere is where organization, speech, and problem-solving occurs (Malik, 2022). The kinesthetic, perceptual, and cognitive levels within the ETC are mainly identified with the left brain processing (Hinz, 2009). Similarly, the brain's right

hemisphere is more attuned to creativity, expression, non-verbal information, and intuition (Malik, 2022). Within the ETC, the Sensory, Affective, and Symbolic levels are mainly identified as right brain processing (Hinz, 2009). Malik (2022), notes that both hemispheres in the brain play a critical role in the art process, combining both left and right sides, as the left is needed to make sense of the creativity produced from the right (Malik, 2022). Through this framework, the creative process is seen with the evidence of neuroscience, actively acknowledging the impact of neural pathways when stimulated by different media, widening the lens of art therapy (Hinz, 2009).

Adverse Childhood Experiences

The Center for Disease Control (CDC) defines adverse childhood experiences (ACEs) as:

> Potentially traumatic events that occur in childhood (0-17 years). Such as; experiencing violence, abuse, or neglect; Also included are aspects of the child's environment that can undermine their sense of safety, stability, and bonding, such as growing up in a household with substance use problems, mental health problems, instability due to parental separation or household members being in jail or prison (Center for Disease Control, 2022).

Meeker et al. (2021) state that more recently, this definition could be expanded to include "...experiences such as peer victimization/bullying, discrimination, racial inequity, economic hardship, community violence, and parental death" (Meeker et al., 2021, p. 303). Individuals can experience adverse childhood experiences, while some may experience higher risks and increased exposure, altering one's regulation, cognition, memory, self-perception, and identity. In turn, a child's exposure to ACES affects their physical and psychological development (Arnold & Fisch, 2011). Research suggests a high correlation between children with SEBD and children who have experienced trauma (Meeker et al., 2021).

Similarly, Zhang & Mersky (2022) conducted a study to explore bidirectional relations between adverse childhood experiences (ACEs) and children's behavioral problems. The longitudinal study focused on looking at a sample of low-income children with behavioral problems from birth through 15 years of age. The study results suggested that the children's ACES did impact and affect their behavioral development during childhood and adolescence (Zhang & Mersky, 2022).

In addition, **e**xposure to adversity can impact the development of children. Research has shown that higher exposure to ACEs negatively impacts brain development (Harris, 2014). A child's developmental level can impact the ways in which they interact with art imagery, processing and creativity (Hinz, 2009). Because of this we can understand that ACE's can impact a child's developmental and behavioral levels, which in turn reflects how art is multileveled, showing a correlation between children's developmental stages and their engagement with the art process.

Art with Children Experiencing Social, Emotional and/ or Behavioral Difficulties (SEBD)

Social, emotional, and behavioral difficulties (SEBD) can refer to children experiencing mild to severe emotional distress or behavioral dysfunction, including children with diagnosed psychological disorders. Often SEBD is used as an umbrella term and has proven to be harmful in its lack of specificity in some instances (Cooper, 2006). However, Cooper attests that the general use of the term can be beneficial in its comprehensive perspective of understanding the range of children's needs given specific settings. The benefits of art with children with SEBD can be seen from a broad context to better understand how to work with the given population in a therapeutic group, which is a continuously changing dynamic.

Current research suggests the benefits of utilizing mindfulness art activities with children experiencing SEBD. Such activities have shown to be a factor in improved task performance and promoting a decrease in anxiety, stress, and headaches. These benefits result from Bokoch & Cohens' (2022) study, which utilized a mindfulness curriculum focusing on mind and body breathing, feelings, and mental states, paired with art therapy practices and continuous parental and teacher support throughout the sessions. Incorporating art therapy practices played a critical role in the study's process to help children internalize and externalize their symptoms (Bokoch & Cohen, 2022).

Additionally, art can effectively reduce impulsive behaviors in children with ADHD and comorbid intellectual disabilities. Habib & Ali (2015) examined the correlation between children's engagement with art therapy and its effect on reducing impulsive behaviors due to its ability to help children concentrate, slow down and stabilize; by reason, art allows one to engage their mind and emotions more swiftly than in other tasks. Often when individuals are fully immersed in art, they can, even just for a moment, be unencumbered with anxiety or current stressors (Habib & Ali, 2015).

Trauma Informed Lens with Sensory Based Art

According to Prendiville (2021), sensory exploration is critical when establishing safety, understanding regulation, developing play skills, fostering secure attachments, and forming meaningful relationships (Prendiville, 2021). Trauma can arise in many different ways and impact individuals differently. The trauma may not always be diagnosed, identified, or known. However, awareness of how trauma impacts the whole person is critical to arriving with a trauma-informed lens. Substance Abuse and Mental Health Services Admission (SAMHSA, 2014) defines individual trauma as the “...results from an event, series of events, or set of

circumstances that individual experiences as physically or emotionally harmful or life-threatening and that has lasting adverse effects on the individual's functioning and mental, physical, social, emotional, or spiritual well-being" (SAMHSA, 2014). The impact and effect of trauma can present differently. For some, trauma can shut down cognitive abilities, lessening a child's ability to communicate verbally. Sensory-based art directives allow for externalizing the problem (Steele & Kuban, 2013).

Method

Participants

This writer created a therapeutic intervention that engaged children in art-making in addressing their needs, and focusing on the therapeutic benefits of introducing different art media to elicit sensory experiences, through a trauma informed lens. The intervention was implemented at a therapeutic day school for children experiencing social, emotional, and behavioral difficulties. The process was conducted through weekly art therapy groups with children ages eight through fourteen, all experiencing or diagnosed with various social, emotional, or behavioral difficulties. Participants' known diagnoses range from severe to mild post-traumatic stress disorder, cognitive delay, autism spectrum disorder, attention deficit hyperactivity disorder, attention deficit disorder, disruptive mood dysregulation disorder, and adjustment disorders. Due to the range of diagnoses identified throughout the group members, this paper addresses social, emotional, and behavioral difficulties through a larger lens. It thus takes on an additional lens of observing how groups of individuals with various diagnoses can cohesively interact within the group dynamic. I led three groups: Art Group 1, Art Group 2, and Art Group 3. Each group had a range of three to seven students present at any given time. Each group session was scheduled for forty-five minutes.

Method Described

The art groups took place consistently in the space identified as the art room within the therapeutic day school building. This student researcher was the primary facilitator of all groups, with at least two to three additional staff present to give support. The groups planned to meet for an entire academic year, nine consecutive months and had been established several weeks before this method was created.

Over the course of six weeks, three art groups explored three to five different art mediums. The therapeutic intent of this method was proposed to see whether each medium introduced would elicit various cathartic releases, relaxation or overall positive experiences due to the sensory experience, with the intention of each group experiencing the same art mediums and directives throughout the six weeks. Art groups were introduced to mediums through both structured and unstructured directives. Prior to each main experiential of exploring a sensory-based art medium, the students would be prompted with a verbal check-in, reflective of how students were feeling that day or at the moment. Consistently, most students showed an inability to engage in this form of a verbal check-in. From observations, it was clear these students often struggled to process on an emotional and affective level.

Data Collection and Analysis

This student researcher used a qualitative research approach to examine students' engagement with the materials, witnessing their experiences at the sensory/kinesthetic level of the ETC. The note-taking process was structured through a template identifying sections: 'medium used,' 'behaviors observed', 'kinesthetic & sensory engagement,' and 'formulated meaning' (Table 1). This student researcher collected and tracked the data through notes taken directly during and after each art group, documenting the session and any notable experiences. In

addition to the observation chart, ‘self-reflective’ was a space to acknowledge initial responses from my lens and process thoughts as the groups continuously evolved and ongoing. I processed each group's impacts, successes, and limitations for six weeks to gather qualitative data. After each art group completed their experiential with an art medium, I engaged in self-reflective art-making with the given art mediums (i.e., slime, Play-Doh, rice, paint, and cardboard) in which I created response art of the completed groups. After all the data was completed, this writer used an inductive analysis method to highlight the key findings.

Throughout my research, I received ongoing supervision from my supervisor, ensuring the art directives planned for each art group were appropriate and intended to benefit the students involved, ensuring no bias of art directive was driven for the purpose or means of research, but to meet the needs of the students, with the space for continuous adaptation of plans when needed for the safety and containment of each group.

Each directive that was given throughout the six weeks was re-utilized and incorporated with as many groups as possible. Some directives were altered or were not an option for groups to participate in due to their behaviors at the time, indicating they were not at a baseline for highly engaging and stimulating experiences and that safety became a concern.

Art Group 1.

Medium Used	Observed Behavior	Kinesthetic/Sensory	Formulated Meaning
Play-Doh	-Ripping into small pieces, repetitively - making ball like forms & destroying - throwing pieces -not engaging with peers, focused on self	Sensory	Mindless and comforting in the use of repetition. Comforting? No expected outcome
Play-Doh	-Squeezing of play-doh -using both hands -picking up entire ball of play-dough and crushing between palms -not engaging with peers	Sensory	-Stress release -Comfort -Satisfaction of touch - pent up energy -regulating behavior
Play-Doh	-Standing & walking around while forming shapes in hands -pinching edges -poking holes -repetitive motions -talkative with staff	Sensory & Kinesthetic	-Calming / meditative -repetitive motion
Play-Doh	-***Need for gloves*** before touching play-doh -aggressive play -ripping up play-doh and throwing it -pretending to eat it -not engaging with peers *client with known diagnoses w/ ASD	Sensory & Kinesthetic	- use of sensory stimuli could be over stimulating - Client was able to engage in aggressive release through manipulation of medium -gloves for sensory overload -potentially attention seeking behavior of staff -contained energy release
Play-Doh	**Chose not to engage**	**n/a**	**n/a**
Play-Doh	-Punching full ball until depleted -smashing into the table -Picking up & ripping into pieces	Sensory & kinesthetic	-Aggressive play -Sensory outlet - Energy release -kinesthetic release, contained - contained aggression

Table 1. Note-taking Observations from Play-Doh directive. Group 1.

Specifically, rice was a chosen non-traditional material designed to be utilized in a sensory-specific directive; however, only art group 2, could engage. The objective of the rice directive was mainly focused on the tactile play of creating images in trays of rice to push participants to engage in unstructured play with materials. To further the sensory experience, students added food dye and essential oils into the trays and mixed them with their hands.

Students poured their rice into fuzzy socks when completed, tying them shut and creating a stress ball as a result.

Second, Play-Doh was used unanimously across all three groups; some groups could engage in Play-Doh for multiple sessions. The directive with the Play-Doh was both unstructured and structured. Initially, students were invited to explore and play with the material; subsequently, students were given specific shapes to create using the material; finally, students were asked to form bowls after briefly being shown the method of a pinch pot while also being encouraged to explore and find their methods to create the form.

Third, paint and cardboard were used in conjunction to create a hands-on sculpture experience. Initially, students were given the directive to explore their paint palettes and mix colors; next, students chose pre-cut organic shapes to paint. Lastly, students were to build a sculpture independently or as a group with multiple pieces of cardboard.

Last**,** slime was utilized with all groups. The incorporation of slime allotted for little structure, aside from the short step-by-step process of creating the medium. Students mixed and created their own slime, given the materials provided such as, Elmer's glue, shaving cream and saline solution. Students were directly in contact with the materials, using their hands to mix, openly explore and play with the material. Through the exploration of each medium, what I observed over the course of six weeks were themes of engagement, playfulness, meditativeness, movement and kinesthetic response.

Results

Art Group 1

Art Group 1 was a group of four to seven students, ages eleven through fourteen. Different students were present each week, continuously altering the group dynamics. This group

struggled to transition into the art space each week, hesitating and resisting group and planned directives. Each week students would transition into the group at different times and have to leave the group at varying times due to their behavioral outbursts and the safety to themselves and their peers. Students in this group often disrupted one another from the art itself, which resulted in staff needing to increase rules and structure when providing sensory-based art.

Play-Doh

Students initially showed a minimal desire to engage with Play-Doh as an art experience, causing more disruption and dysregulation from lack of engagement. Students were resistant and hesitant. From my observations, I gauged that students felt the material was childish, calling back to an activity from when they were younger. The concept was to play and explore, followed by structure. Art group 1 showed much hesitation when allowed to explore the material independently. After students' resistance, a lot more meditative engagement was seen across the board. During this time, students showed a lot of energy release and engaged in kinesthetic experiences while manipulating the material. Given the structured portion of the directives, Art Group 1 quickly completed the tasks, seeking out the next steps. Art Group 1 was focused on gauging the expectation and completing it as quickly as possible. From my observations and reflections, I felt as though Play-Doh was a material that allowed for more a mindless fidget activity, but did not elicit excitement or high quality work. Students have shown to respond better when they know there is an end product, with an end goal, and some form of reward.

Paint & Cardboard

Art Group 1 showed a high engagement with using tempera paints and using cardboard. The directives involved painting multiple pieces of cardboard and subsequently building a sculpture with the multiple pieces of painted cardboard. Students showed enthusiasm and

engagement once seeing the cardboard pieces. Students were actively involved in these directives while engaging in more conversation with peers. Students were slightly more removed from the sensory experience while painting but were able to be hands-on when building their sculptures. Group 1 showed resistance towards wanting to build and showed more engagement with mixing paints and painting cardboard pieces. Two students had to leave early due to inappropriate language and behaviors with one another. From my observations and analysis I propose the quality of the unusual and novel material elicited more engagement. The utilization of paint coupled with cardboard opened the students minds to unfamiliar and fresh ideas. They had no preconceived notions of what the experience would be and thus were more willing to engage and allow for their own explorations to emerge.

Slime

Students arrived at the group with high energy and resistance to engaging in art. Students showed enthusiasm and excitement once hearing the directive explained. From my observations, students were inappropriately commenting in response to the texture and formation of the slime process. Conversations were shifted to being more social and appropriate as the mixture and exploration of the slime continued. From my observations, students enjoyed the tactile experience but needed help to contain the mess in their own area. Students stayed seated and engrossed in the process, longer than other typical art groups. All students were able to stay for the entire group. From my observations and analysis I propose the students' engagement may persist longer when engaged in slime due to the multi-step process of creating and the continued need to utilize one's hands to create. The process of creating slime is what holds engagement, the actual process of playing and exploring the slime, post creation, should be further explored.

Art Group 2

Art Group 2 was a group of three to six students, ages nine through eleven. The group struggled to exist and remain a group each week due to the group dynamic. Students were often dysregulated due to peer conflicts that pre-date the art group. Art Group 2 had to change seating arrangements multiple times throughout the six-week groups and often ended early due to the physical outbursts between students.

Rice

Art Group 2 was eager to use novel art materials and engage in the step-by-step process of tacitly mixing the rice with their hands and creating words, shapes, and, or just fluid movements amongst the grains. This process was multi-sensory based through the incorporation of both essential oils, engaging the olfactory nerves, and subsequently, including food dye elicited a visual experience. However, students were engaged with the process for a limited time. From my observations, students ended this art directive more quickly than others, tired of the experience. The materials began to be used aggressively toward peers. The group had to be terminated early, and all students had to stop their sensory experience. Art Group 2 struggles to maintain baseline behaviors when excited or positioned with novel experiences. In addition, the students in Group 2 often dysregulate one another. I predict the students would engage with the materials very differently in a one on one setting.

Play-Doh

When given unstructured free time, the students initially resisted engaging in the art directive. Students used the free-exploration time to punch the Play-Doh and throw it continuously on the table. Some students used found objects to explore and utilize their material, others used unstructured time to create objects, and people engaged in aggressive play in their space. Other students took this time to hold their materials and walk around the room while

manipulating the medium between the palms of their hands. Students showed higher engagement and more focus when directed with a structured task with an intended goal. Through my observations, I saw students eagerly create and begin to compete with one another in how quickly they could form creations. Students were socially engaging with each other, with minimal behavioral problems and negative interactions between peers. One student had to leave the group early because they were unable to use the medium safely and remain out of their peers' personal space. Through my observations I propose a factor in the group's ability to positively engage was dependent on the specific group members present during the intervention. In addition, the freedom to be out of one's seat and utilize the entire room may have created a more open space for exploration, eliciting a kinesthetic response and thus creating a calming experience.

Paint & Cardboard

The students arrived with higher energy and were off their baseline behaviors. Students were eager to use paints and continuously asked for more during their mixing process, even once pallets overflowed. Through my observations, students engaged with the paint part of the process and enjoyed mixing, pouring, and squishing paint together. Two students began painting themselves. Through my observations, it appeared they enjoyed the sensory experience on their arms and hands. Students were both sitting and standing while engaging with paint. Students showed a lot of repetitive tapping and mixing motions when playing with the paint mixtures. Students went through the painting process quickly and were done with the directive before the allotted time. Students were unable to build the cardboard structures safely and thus could not complete that portion of the art directive.

Slime

This art group showed the most interest and engagement with the slime directive; during this time, all students could be present, and all students were independently focused on their own slime creation. Students were actively hands-on and engrossed with the materials on their hands, solely focused on their creations. Students were positively engaging with one another and positively interacting with staff. Students showed positive behaviors and collaborated to decipher the correct ingredients to form the desired texture. Students struggled to accept that the art medium would not leave the art space and became negatively impacted due to the group's ending. From my observations, this indicated that the students hoped to have more time utilizing the medium. All students present during this group were able to stay in the group for the duration of the standard group. The process and incorporation of materials allowed for students to experiment, adding in different amounts of glue, shaving cream and saline solution, giving the group members more freedom and autonomy in their art experience.

Art Group 3

Art Group 3, was a group of three to five students, ages eight through twelve. The students in this group were the most receptive and engaged with the materials from start to finish each week. The students were able to co-exist and sit at the same art table with their peers each week. Each student received additional staff support throughout the majority of all projects, and no student was able to fully and independently engage in any activity without some support. Art Group 3 was able to participate in the most art, with the longest sessions. I posit one reason Group 3 was able to engage the most was due to being the youngest group and each medium being novel in exploration, compared to Group 1 and Group 2 where they have had more art experiences in their previous years.

Play-Doh

This group was highly engaged with the incorporation and use of Play-Doh, more than any other group. They were highly focused during the unstructured exploration of the material, using imaginative play in their multiple creations. I observed that students were focused on their art process. They could simultaneously talk with peers and engage in conversations among the group. Through my observations, students appeared to be at baseline behaviors, calmly exploring the material. Likewise, during the structured portion of the directive, students continued to remain engaged and appeared to become silly in their engagement with peers, and students' energy was increased. Group 3 was able to engage with Play-Doh the longest and voiced the want to use it again in the future. I propose their longer lasting interest with the material may be in response to their deepened imaginative states, due to their developmental stages, which in turn, allows space for more play with the material.

Paint & Cardboard

This group showed high enthusiasm during the introduction of the directive. Initially, students were playing with their cardboard pieces, moving them around the table, putting them on their heads, and engaging in silly behaviors before redirection was implemented. Group members did not mix their colors prior to painting but mixed as they were painting on the cardboard. Art Group 3 decided they wanted to make a “communal” piece, passing around one pre-cut cardboard shape and each taking turns painting on it. This communal piece was unprompted but supported as a directive they chose. Group members took their time and needed extended time in an additional group to complete the painting. Students were quickly frustrated by the building process and needed one-on-one staff support to complete it. Group 3 showed high interest in the painting part of this sensory based art, and spent a lot of their time mixing paint colors, pouring paint and smudging paint on the cardboard and between their hands.

Slime

It was observed that the students had been dysregulated most of their day. Students arrived at art at different times due to their inability to simultaneously be ready for art groups. Students initially were singing loudly and ignoring staff when the group began. Students were showing high energy and struggling to transition. During the slime directive, students' attention was more focused. Students were eager to add each ingredient themselves without staff support. These students were allowed to use gloves or bare hands. Students all chose bare hands. First, one student changed their mind right before the mixing of materials. Students remained in their seats and became entranced by the squeezing, mashing, and pulling to create the slime. Students focused on their process and did not engage with peers once mixing and manipulating their medium.

Discussion

Based on the literature, I expected to see overarching themes regarding beneficial responses from the children as each new medium was introduced. The method provided contributes a novel look into how sensory based art can elicit a positive response and provide therapeutic benefit for children experiencing social, emotional and behavioral difficulties. The goal of this intervention was to ascertain similar findings from previous research, such as, increased engagement paired with reduced aggression, hyperactivity, and anxiety (Alamdarloo&Mradi, 2021). The overall goal of each art group was to engage the children in an art experiential while catering to each specific group's needs. The structure of each group was intentional to keep containment and safety as the main goals, no matter the medium or directive. When working with children with behavioral disorders, the clinicians' pre-selection of materials, as well as limiting the number of supplies and introducing the process in small steps, can aid in the structure and containment of

the group. Once the structure is ensured, more sensory stimulation and freedom can be slowly introduced (Moon, 2010). No group is the same. In conclusion, no group could be run precisely like another when the goal of the work being done is to meet the needs of the children involved. Nevertheless, the structure of pre-selecting and providing set materials for the groups helped to ensure containment during both structured and unstructured tasks.

The results indicated that children were able to experience some form of therapeutic benefit when engaged in sensory based art, even if it varied per the individual. The main themes that arose throughout the groups were: engagement, playfulness, meditativeness, and kinesthetic responses. This therapeutic day school aims to focus on working with children through a trauma-informed lens, to meet their individual needs while working in a group setting, to encourage growth, and instill positive experiences preparing them for reintegration into mainstream schools. The sensory-based art directives were able to meet the students where they were to engage in therapeutic art experiences. The results of this research support the inclusion of sensory-based art directives to show positive benefits.

Engagement

The students involved were actively engaged and participating when the materials were messy and hands-on and less engaged when there was a distance between themselves and the medium, i.e., a paintbrush between themselves and the paint versus hands filled with shaving cream between their palms. The increased engagement was a common theme amongst all groups. Students' engrossment in the sensory activities showed a decrease in their negative interactions with one another and allowed for their focus to be on themselves and the art process. The students' engagement as a main theme, is shown as a benefit for children experiencing social, emotional and or behavioral difficulties because of its ability to help reduce inattention and

impulsivity. As found in a similar study (Habib & Ali, 2015), children experiencing impulsive behaviors utilized art to reduce inattention. The reduction of inattention, and increased engagement creates an environment for children to foster better decision making and complete tasks (Habib & Ali, 2015).

Playfulness

The theme of playfulness arrived with each medium, showing up differently depending on the material, but was continuously present in the students' interactions. Playfulness was most evidently observed when students were allotted both structured and unstructured directives with the Play-Doh; however, with unstructured directives, students began to show more signs of aggressive play. The aggressive play looks like destructive, rupturing, and violent reenactments through the art mediums. However, through the art, this form of aggressive play is allotted a safe and contained place to be explored. The sense of playfulness when engaged in art making allows for a sense of security and calmness when there is no expectation to produce an end result (Klein et al, 2020).

Meditativeness

With each sensory-based art directive, the observed meditative process was standard amongst many of the materials. The way in which students exhibited mindless, repetitive motions was apparent, that the process of sensory-based directives allows a break for the mind. Through my observations, I could see this present during the unstructured directives when allowed to explore the materials. There was no force for thinking beyond the here and now, and manipulating the materials in hand was the primary goal. The meditative aspect was seen through many movements and across the board with each medium. The purpose of eliciting the meditative response is healing from a trauma response. As clients experience the tension release,

engage with their senses, and evoke a sense of preverbal bodily memories, they can create healing rhythms through their work (King, 2016). Art can become meditative in many ways, allowing the client to slow down, and be attune to the process by becoming fully immersed (Habib & Ali, 2015). As previous research has shown, the meditative qualities of art can become more an internal process, thus prompting feelings of regression, which can elicit a cathartic process in itself (Klein et al., 2020). The participants' meditative states were considered to have looked different from one another, but were observed as reaching the corresponding results.

Kinesthetic Response

As students engaged with the art materials, a common theme amongst most students was the kinesthetic engagement alongside the sensory experience. While all activities were geared to elicit a sensory experience, many found ways to interact simultaneously through a kinesthetic experience. Some of them were partially moving through repetitive tapping and dapping of materials; others were full-body experiences as they stood up and used their whole bodies to force the materials into the table or onto a pallet. Moreover, others were taken to the materials by walking around as they manipulated the medium amongst their hands. Play-Doh was a material that most clearly elicited a strong kinesthetic experience alongside the sensory-based process.

These emerging themes showed how children experiencing various social, emotional, and behavioral difficulties, coming from distinct identities and cultural backgrounds, often each with a predisposed level of exposure to various ACES, could engage with the materials similarly. The openness and versatility of sensory-specific art were a part of why the children could be present and engross themselves with the materials at hand. Through engagement with the art, they can regulate themselves and regulate that lower region of the brain prior to higher cognitive functions (Prendiville, 2021), where others may be able to engage at a higher level of functioning within

the ETC through their ability to presently connect perceptually, affectively or cognitively with their art process (Hinz, 2009).

Reflections

My reflective journaling provided a space to acknowledge my own expectations and frustrations that arose with each group, providing a space for awareness of my own bias and emotions that continue to ebb and flow with me throughout the duration of six weeks of data collection. Identifying my emotions at times consisted of nervousness, hesitation and uncertainty, paired with feelings of ease, comfort, relief and excitement. Both lists are so essential in naming the spectrum of emotions that can be experienced when facilitating a group, but are essential to name as a part of the process. A main theme I highlight and acknowledge is my own questioning of structured versus unstructured play with the art mediums. Naming the risks and hesitations with unstructured directives such as lack of engagement or purpose, uncertainty, loss of control and potentially lack of safety. In addition, it can be considered the benefits that unstructured tasks allow for, such as giving the students more autonomy, choice, space for creativity and exploration. Comparatively structured tasks allow for more concrete expectations with specific goals in mind, in turn, this process can be less daunting and less overwhelming for some.

When trying to engage students with completely unstructured art, the majority of students were not as engaged, and seemed to be too open and too overwhelmed. The use of structured directives was helpful in making clear expectations, which aligns with the therapeutic day school's behavioral process, setting clear expectations.

Reflections on the ETC

This student researcher challenges how trauma has impacted each of these students and their cognitive process to thus be able to engage with art media at a higher cognitive level

beyond the first introductory level with the ETC, the sensory/kinesthetic components. Due to the trauma, their cognitive functions are at an earlier stage, and thus result in engagement with the art materials at an earlier stage of development, engaging during preverbal stages. The concept that trauma impacts their developmental stages, which in turn, impacts how they engage with art is supported by how Prendiville explores the brain's function in a hierarchical system. Prendiville (2021) explains when an individual experiences a trauma at which point their brains can become affected. One's neural system becomes constantly activated, impacting one's amygdala and significantly impacting one's ability to regulate. At this stage, the brain is taking in sensory information from the lower region of the brain, unable to process at a higher capacity (Prendiville, 2021). Prendiville (2021) explains how the brain's function works in a hierarchical system in the way it can take in and process information, similar to the hierarchical framework of ETC. When an individual has been impacted by trauma, such as ACEs, their brain development is also impacted (Zhang & Mersky, 2022). This hierarchical system explored by Prendiville (2021) is similarly seen through the framework of the ETC. The first level is within the sensory/ kinesthetic component, where clients can engage at a preverbal stage where minimal cognitive processing is needed (Hinz, 2009). The understanding is that children experiencing ACEs have a higher probability of experiencing social, emotional, and behavioral difficulties (Meeker et al., 2021), resulting in various levels of predisposed trauma. As a result, trauma impacts a child's ability to process at higher levels of cognitive functioning, keeping them within the primary focus of exploring art strictly through the sensory and kinesthetic levels.

Why Trauma Informed Care?

The purpose of working from a trauma-informed framework throughout the entirety of the intervention was to ensure that this student researcher was eliciting an experience that best

benefited the student participants involved. Acknowledging the core principles and bringing them into the process whenever available felt critical to the process. A primary focus for each group was ensuring the safety of the children and the staff involved in the groups. Safety depended on the materials, the seating arrangements, and the structure of the groups. Physical safety was at the forefront of the focus when planning. However, psychological safety was an additional concern when approaching the group, acknowledging each individual's experiences and history prior to introducing an art experiential. Each art group was built on this student researcher, building trustworthiness and transparency with the groups. The process of listening to their responses and feedback, which meant ending groups early or pivoting the way the mediums were utilized. The purpose of using this intervention in a group setting and not individually was to build on the students' group dynamics and aid in their peer support for one another. It allowed a space for the groups to come together in a safe place and explore these new mediums collectively. Whenever available, students were encouraged to utilize the materials in their own way, encouraging empowerment, voice, and choice in their art process.

Limitations

Although the current results of this research support the use of sensory-based art directives for children with social, emotional, and behavioral difficulties, it is imperative to consider the limitations of this method. First, there was a lack of uniformity across all three art groups. Each group needed group directives catered to their dynamics, whether for individual students or for the group, which affected the possibility of having a cohesive experiential. Additionally, students were not always engaged with the art directives, which was not always in response to their response to the art but was due to various circumstances outside the art groups. Similarly, not all groups could use the same media due to the importance of ensuring safety and containment with

each group. The timing of each group was allotted forty-five minutes. However, the art group varied weekly depending on the student's readiness to engage, often resulting in late starts or early terminations during sessions.

Implications for Findings

This paper only covers six weeks of art groups, and will continue for several more weeks. The development of the groups and evolution of how the students engage with materials will continue to shift as the groups develop. The sensory based art media can be re-introduced with new directives, shifting focus and structure of the groups as they continue. This research can be used to develop a more thorough study of how students with SEBD benefit from and engage with sensory based art directives. Future research could deepen understanding of how both traditional and non-traditional art materials can be used to elicit a sensory experience for clients, as well as building a more quantifiable process in observing positive benefits over the course of treatments.

Conclusion

Despite the limitations, the findings of this study highlight the benefits of sensory-based art directives when working with children with SEBD. Through an inductive analysis method, the therapeutic art intervention was able to suggest that children react to the stimuli of sensory art in multifaceted ways that provide therapeutic benefit in a group setting. Given the current research, I hope continuous explorations will help to explain further and understand how sensory-based art can be utilized and beneficial when working with children given specific disorders and their response to the art on a more individualized level, in addition develop a quantitative analysis to deepen the findings of such behaviors. Moreover, future research could investigate how other mediums such as clay, shaving cream, sand, or rice may elicit similar or different therapeutic benefits for children experiencing SEBD. However, as it stands, the current

research contributes to our understanding of how specific art mediums can elicit positive outcomes through engagement, playfulness, meditativeness and kinesthetic response when working with children with social emotional behavioral difficulties.

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In the judgment of the following signatory this thesis meets the academic standards that have been established for the above degree.

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