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## Exploring Sensory Based Art Therapy with Preschool Students, Development of a Method

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**Exploring Sensory Based Art Therapy with Preschool Students**

**Development of a Method**

Capstone Thesis

Lesley University

May 1, 2024

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Art Therapy

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## **Abstract**

This thesis explores the use of sensory-based art therapy interventions with preschoolers with self-regulation difficulties. The mental health intern (MHI) at a preschool program conducted multisensory art therapy interventions with 11 students over eight weeks. Students participated in either social skills small groups or individual therapeutic sessions with the MHI. Students were referred for services due to social, emotional, behavioral, and developmental concerns, specifically how those issues manifested in difficulties with self-regulation. These students exhibited unexpected and persistent periods of dysregulation as evidenced by disruptive and unsafe behaviors in the classroom including aggression towards peers. Students participated in different sensory-art based interventions each week. Developmentally appropriate interventions were designed for students to experience a variety of sensations, to increase autonomy, and to offer coping skills. Varying levels of engagement and enjoyment were noted among students. Students reported positive experiences during participation in most of the interventions. Teachers reported decreased negative behaviors displayed in the classroom. Information gathered in this thesis warrants further research regarding sensory-based art therapy treatment with preschoolers.

*Keywords: sensory-based art therapy, self-regulation, preschool*

*Author Identity Statement: The author identifies as a cisgender, white female of mixed European descent from New England.*

## Exploring Sensory Based Art Therapy with Preschool Students

### **Introduction**

Imagine talk therapy with a preschooler. It does not seem very useful, does it? This is because it is not developmentally appropriate for preschoolers to be able to fully express themselves verbally. They are still in the process of developing language and their brains are not yet capable of the same critical thinking adults use to express themselves every day. That being said, preschoolers do have the capacity to express vast amounts of thought. They just have to do it differently. This is where art therapy could potentially fit nicely when working with young children. Art allows space for physical, nonverbal communication. Preschool students are constantly learning and developing rapidly, so a preschooler is not going to make a masterpiece the way a full-grown artist could. Additionally, they are still developing fine motor skills and art is a great way to help develop those skills; this would also allow them to gain a sense of agency, which can contribute to better self-regulation. Art therapy shifts the focus from art-product to art-process (Malchiodi, 2003). Sensory art does not convey a specific object or symbol, instead it conveys expression in the simplest form. It was this writer's clinical impression that sensory-based art is developmentally appropriate for preschool aged children (three to five years old). It is found that a child's social, emotional, and behavioral development will directly impact their ability to self-regulate ultimately contributing to their success in schools (Graziano et al., 2007). Self-regulation refers to the ability to control one's own behavior through self-monitoring, self-evaluation, and self-reinforcement (American Psychological Association, 2018). Therefore, this thesis intends to explore the use of sensory based art therapy with preschool students to promote healthy self-regulation.

## **Literature Review**

This literature review aims to provide a foundation of information about existing research regarding the use of art therapy in school settings, the expressive therapies continuum (ETC), sensory-based art therapy, creative development in children, art therapy with children with Autism Spectrum Disorder (ASD), and self-regulation in children. The following literature was reviewed to inform the development of this thesis project.

### **Art Therapy in Schools**

Regev (2022) assessed the effectiveness of art therapy in school settings. The study explains that art therapy can be broken down into two parts: the process and the outcomes. The process refers to the experiences of a client during art therapy sessions while outcomes refers to the resulting effects on a client's well-being, behavior, and functioning. The process looks at degree of involvement in therapy, productive behaviors (cognitive-behavioral exploration, emotional exploration, insight, and change), and resistance to therapy. The outcomes explore the effect of art therapy on the client, as measured by the Client Behavior System scale: "Client Behavior System – This scale is composed of four productive behaviors (cognitive-behavioral exploration, emotional exploration, insight, and change) and four less productive behaviors (resistance, agreement, appropriate request, and recounting)" (Regev, 2022, p. 19). By examining at both the process and outcomes, Regev assessed how school-based art therapy should be presented and found that it was effective in enhancing cognitive-behavioral exploration, improving emotional exploration, promoting therapeutic change, and fostering insight evidenced by a pre-test/post-test design.

Moula, Karkou, and Powell (2021) used a theoretical research study designed to test the effectiveness of child-focused expressive arts therapy in mainstream primary schools. This

proposed cross-over study aimed to examine the impact of various child-focused expressive arts therapy interventions in school settings on a child's wellbeing, academic performance, and social skills development by following students with mild emotional and behavioral difficulties as they received expressive arts therapy interventions. In addition, the group of students also received the school's current standard treatment, to serve as a control. Notably, this study grouped visual arts therapy, music therapy, drama therapy, and dance and movement therapy under the umbrella of expressive arts therapy, making it challenging to isolate the specific components that were most beneficial.

The McDonald, Holtum, and Drey (2019) article also explored the impact art therapy used in primary schools has on the social, emotional, and mental health of a child. This study, conducted in the United Kingdom, followed 45 students through their experience in primary-school-based art therapy to observe any changes in social, emotional, or mental health difficulties for which the children were referred. Questionnaires, focus groups, and individual interviews were used to measure any notable changes in students' presenting concerns. Teachers were asked to cite their observations of their students, and the children were asked what they found to be most beneficial in eliciting these changes. Teachers and children alike reported positive change to social, emotional, and mental health wellbeing. While teachers reported some students still experienced social, emotional, and mental health difficulties, they found that there had been a positive impact on their students' overall wellbeing due to the art therapy treatment. Students reported the use of creative and enjoyable art making in session and their increased understanding of thoughts and feelings were most helpful in eliciting positive changes in wellbeing.

McDonald and Holttum (2020) examined the impact of primary-school-based art therapy on students' learning. The study used standardized tests and evaluations in conjunction with observations and interviews. It found art therapy can positively influence a child in a variety of ways including emotion regulation, social skill development, and academic progress. This research endorses the inclusion of art therapy in school settings to help promote holistic development in primary-school aged students.

The Bokoch and Hass-Cohen (2021) study looked at 83 participants aged five to twelve and their respective parents/teachers. Participants were referred for internalized symptoms like anxiety, depression, or inattention and externalized symptoms like behavioral problems or executive functioning, and for relational problems. This study used a pretest-posttest design. Participants were placed in a Mindfulness and Art Therapy Group Program (MATG-P) or on a waitlist that made up the control group. The program used a child-centered integrated art therapy and mindfulness curriculum for schools designed by the researchers. The experiential group met for eight weeks and practiced mindfulness techniques and reflective art creation. Findings supported the study's hypothesis of improved child mindfulness, well-being, therapeutic relationship quality, parent/teacher-rated internal/external symptom reduction, parent-rated peer relationship quality, and parent-rated attention capacity. The presented research found the use of art therapy in school settings to be effective and highly encourages its use. One limitation to this research is the limited age group, there is minimal research regarding the use of art therapy with preschool aged (three to five years old) students. This warrants further necessary research with this population; this thesis explores this gap in interventions for this age group.

## **Expressive Therapies Continuum**

The Expressive Therapies Continuum (ETC), developed by Vija Lusebrink and Sandra Kagin (Graves), is used to explain the diverse levels of processing used in art therapy. Lisa Heinz, who worked directly with Lusebrink and Kagin, explains the ETC in her book *Expressive Therapies Continuum: A Framework for Art Therapy* (2020). Heinz explains that ETC consists of three bipolar levels to categorize art creation experiences: sensory-kinesthetic, perceptive-affective, cognitive-symbolic; and it includes creativity as an overarching concept. Creativity can and does occur at all levels of the ETC. Heinz explains the way the levels of the ETC are ordered, the bottom level of the ETC is the sensory-kinesthetic level. She postulates how this level is based in the body, it engages physical experiences without cognitive or emotional processing. It requires no verbal communication and can be used without any speech. This is the most accessible level because it can be done with all mediums and with all ages. The middle level of the ETC is the perceptive-affective level. This level involves information processing and image formation. The focus has shifted from experiencing stimuli to categorizing it and labeling emotional aspects. This level requires deeper thoughts and labeling than the sensory-kinesthetic level. The top level is the cognitive-symbolic level. This level requires complex cognitive processing and symbolic thinking. The focus has shifted to understanding and processing of experiences during art creation. This level requires more complex thinking than the lower levels. Creativity is also included in the ETC, but not as a separate level. Instead, creativity can be present with any and all of the other levels. Sensory-kinesthetic experiences are possible without the perspective-affective or cognitive-symbolic levels. Perspective-affective level experiences cannot occur without the sensory-kinesthetic, but can be experienced without using the cognitive-symbolic level. Cognitive-symbolic level



experiences always involve aspects of the sensory-kinesthetic and perspective-affective levels (Heinz, 2020).

### *Sensation*

To elaborate on the ETC framework and what it means to have integrative sensory-based services for young children, it is helpful to articulate the different senses. The American Psychological Association (APA, 2018) dictionary articulates the human body is capable of sensing a wide variety of stimuli resulting in eight categories of sensation: vision, hearing (audition), olfaction (smelling), gustation (taste), touch/tactile, equilibratory (vestibular), proprioception, and interoception. APA defines each sense as follows: vision is the sense of sight, it processes light input through the eyes; olfaction is the sense of smell, it processes odors through the nose; audition is the sense of hearing, it processes frequencies input through the ears; gustation is the sense of taste, it processes flavors input through the tongue with five types of taste i.e., sweet, salty, umami, sour, and bitter; tactition is the sense of touch, it processes contact of objects through the skin; vestibular sense is the sense of balance, it is processed within the inner ear; proprioception is the sense of spatial orientation, it responds to body movements and positions in space and it is processed through muscles/joints/tendons in conjunction with visual clues; and interoception is the sense of internal stimuli, processed within the body, like hunger for example. APA further delineates three recognizable types of stimuli: exteroceptive stimuli, proprioceptive stimuli, and interoceptive stimuli; exteroceptive stimuli are any stimuli that comes from the external world, resulting in sensations the five outer body senses: visual, auditory, olfactory, gustatory, and tactile; proprioceptive stimuli are any stimuli that arise inside the body in relation to outside stimuli, which can trigger the vestibular or

proprioception sense; interoceptive stimuli are any stimuli that originates from inside the body (APA, 2018).

### **Sensory-Based Art Therapy**

The use of sensory-based art is an under-researched area of art therapy. Durrani (2021) explored a sensory-based relational art therapy approach (S-BRATA) as treatment for children with Autism Spectrum Disorder (ASD). Children with ASD often experience sensory integration dysfunction (SID) and impaired attachment. This research followed three case studies that used 12 individual S-BRATA sessions with children ranging in age from three to eight, who had an ASD diagnosis, and who displayed significant SID. Seven themes emerged in these cases: “(1) sense of safety, (2) working with the child’s sensory profile, (3) art materials as entry point for engagement, (4) attachment formation through mirroring and attunement, (5) flexibility in approach, (6) structure and boundaries, (7) art product not the focus” (Durrani, 2021, p. 80). This research aimed to evaluate S-BRATA as a framework of treatment, it found it to be effective for treating children with ASD. One thing Durrani points out in the article is that an art product may not always be produced during these sensory sessions. Sensory-based art therapy is typically process oriented (Durrani, 2021). This context of S-BRATA provides contrast to the claim by Regev (2022) who noted that art therapy is typically about both the process and the outcomes.

Kearns (2004) explored the use of art therapy with a child experiencing sensory integration difficulties. The research implemented a single case study design to observe how various sensory art experiences influenced the child’s subsequent behaviors in the classroom. The study found that when the 5-year-old child engaged in art activities during sessions, his behavior in the classroom was more appropriate and he exhibited fewer negative behaviors than

on the days when he did not participate in art activities. The study examined behavioral impacts from three specific art activities: easel painting, finger painting, and clay work. It's worth noting that this article is outdated, as it uses terminology such as 'normal' to describe neurotypical children and “Asperger’s” as a diagnosis. However, the findings are still relevant to children today.

### **Creative development**

For the sake of this project, this writer leaned on the following creative development stages accepted widely by the field as normative to gauge the demographic examined in this project. According to the 1964 classic reference for art therapists by Lowenfeld and Brittain on children’s creative development, there are six distinctive stages: scribble stage, pre-schematic stage, schematic stage, dawning realism stage, pseudorealistic stage, and period of decision. According to Lowenfeld and Brittain, the scribble stage is the first stage of creative growth, it generally takes place between the ages of two and four, and the child’s creation process starts with random lines, dots, curves, etc.; Children in this stage make uncontrolled scribbles without intended form as the form is not significant to this stage; this stage allows children to explore the sensory aspect of materials (and motion). The second stage defined by Lowenfeld and Brittain is the pre-schematic stage; this stage takes place around the ages of four to seven and it occurs as the child begins to develop images in their head and their drawings begin to take form, generally resembling basic shapes; these drawings are intended to represent something tangible, i.e., people and objects, yet realistic proportions and details are not yet developed for children in this stage. These proposed stages serve as a guideline for understanding creative development in this thesis, but as noted by Lowenfeld and Brittain (1964) every child progresses in different ways at different speeds.

## **Autism Spectrum Disorder (ASD)**

Most of the available research regarding the use of sensory-based art therapy with children has a focus on children with an Autism Spectrum Disorder (ASD). This is likely because there is often a comorbidity of sensory integration problems with ASD, so it may be clinically appropriate to focus on sensory regulatory strategies.

The Schweizer et al. (2020) article piloted an art therapy treatment program for children with ASD in the Netherlands called Images of Self. The program was designed to address common problem areas experienced by children with ASD, including sense of self, emotional regulation, flexibility, and social communication. The study consisted of 12 individual case studies of children aged six to twelve with ASD diagnoses. The children met with an art therapist weekly for 45-minute sessions over 15 weeks. Although attempts were made to standardize sessions, each session was tailored to meet the individual needs and preferences of the child. Interventions used were determined based on the child's differing ability levels and referral reasons. Each participant's parent(s), teacher, and assigned art therapist completed questionnaires prior to and after treatment, found notable changes regarding improvements in flexibility and social behaviors.

The Schweizer et al. (2019) research study focused on testing the efficacy of two newly developed evaluation instruments: the Observation in Art Therapy with a Child diagnosed with ASD (OAT-A) and the Evaluation of Actions of the Art Therapist during treatment of a child diagnosed with ASD (EAT-A). These instruments aim to measure the effectiveness of art therapy treatment with children diagnosed with ASD. The OAT-A is a scale used to monitor the child during art creation through observation. The EAT-A is a self-evaluation scale for art therapists. Therapy sessions were intended to address four common areas of difficulty in

children diagnosed with ASD: sense of self, emotion regulation, flexibility, and social behavior. The research design used qualitative data i.e., comments from participants, to test the quantitative instruments and found them to be valid and reliable.

Dickie's 2009 qualitative study used parent reports to better understand the differences in sensory experiences of preschool children with and without ASD. The study found children with ASD often have a heightened sensitivity to sensory experiences, meaning they are hyper-responsive to sensory stimuli. This makes it difficult for people with ASD to tolerate the same level of sensory input as someone without ASD. The article also found that children with ASD displayed more sensory seeking behaviors and had more difficulty regulating reactions to sensory experiences than children without ASD. It is important to note that these results come from reports from parents about their children, not from the children themselves. This information is valuable, nevertheless, because it allows for the development of effective coping skills to help improve sensory experiences for children with ASD (Dickie, 2009). This research result illuminated the experiences specific to children with ASD, however the results are likely similar for children that exhibit symptoms similar to ASD but lack a diagnosis.

### **Self-Regulation**

One common area of development that children with ASD or with ASD-like symptoms struggle with is self-regulation. The 2019 study by McDermott et al. (2019) examined the development of self-control difficulties in early education among young children from under-resourced American families over four years. This study used teacher observations from the *Head Start Impact Study* to measure the development and intensity of aggressive and attention seeking behaviors in their students. It determined parental stress, family instability, access to resources, and presence of current self-regulation problems, among other features were

indicators of future dysfunction. By determining these indicators, this research aimed to uncover effective interventions to proactively support children in these under resourced families to deter future self-regulation difficulties.

Campagnoni (2020) explored how kindergarten students viewed willpower and the influence it had on their behavioral self-regulation. The kindergarteners' views regarding willpower were measured through the use of puppets that asked questions aligning with a limited view of willpower or an unlimited view of willpower. The article outlined a limited view of willpower as the belief that it is a finite resource, that it can be depleted with use and requires a break for it to replenish. Whereas an unlimited view of willpower centers in the belief that it is a boundless resource, that it does not deplete, rather it is continually replenished through use. The study found that children with a limited viewpoint of willpower struggled more with self-regulation than those with an unlimited viewpoint of willpower. This encourages the use of structured breaks for children with self-regulation difficulties to allow them to recharge.

### **Limitations in past research**

There are gaps in this research regarding preschool aged populations. Most of the research presented in this literature review focuses on students above the age of five. While art therapy has been researched with a variety of populations for a range of presenting problems, the use of specifically sensory-based art therapy intervention has not been thoroughly explored. Most articles found by this writer about sensory-based art therapy focused on a population of people with ASD. In this thesis, none of the participants have an official diagnosis of ASD, however, some do exhibit similar symptoms such as self-regulation difficulties. More research regarding sensory-based art therapy with other populations and for a broader range of referral

reasons is warranted to better assist young children and caregivers in understanding self-regulatory tools.

## **Methods**

### **Participants**

This writer developed multisensory art therapy interventions used at a preschool in a suburb of New England with a high population of low-income families. This specific school is part of a nationwide, federally funded program that offers early education and childcare services to under-resourced families. According to the data in the program's Fiscal Year report (2022), the program served around 722,000 families throughout all 50 states, the District of Columbia, and six territories. During this period, this nationwide program enrolled a total of 833,075 children. The program is divided to serve two groups: infant-to-toddler ages zero through three and toddler-to-preschool ages three through five. All participants in this research are enrolled in the preschool program mentioned. In the New England state where this project took place, 9,048 children were enrolled in this preschool program (U.S. Department of Health & Human Services, 2022).

This project took place at a preschool with a total of 110 children currently enrolled. From those 110 children, 15 have been referred for mental health services this year. Students were referred by teachers, staff, or parents for any health or developmental needs, using an In-House Referral form designed to identify concerns related to mental health, behavior, or overall development (See Appendix A). This writer, serving as a Mental Health Intern (MHI) at the school, was assigned eight children with social, emotional, and behavioral concerns by the site's Mental Health Specialist. Seven out of eight of the referrals, which were initiated by the child's teacher, and one came from a parent. Three of the students referred to the MHI were paired with

a model peer, resulting in 11 total student participants who engaged in the sensory art therapy interventions designed by the MHI. Parents provided with information (See Appendix B) prior to providing permission for their child to participate in sessions.

### **Structure**

Students met with the MHI, in either individual therapeutic sessions or small social skills groups. Groups and individuals met weekly for 45-minute sessions, in the site's therapeutic playroom. This room is a small room with a preschool sized table, chairs, and couch, with a lot of toys such as a dollhouse, toy cars, legos, and a kitchen set. It is located in the hallway amongst classrooms. These groups and individual sessions ran for 8-weeks each. Students were pulled from their classrooms during their free play period. Sessions were completed with four dyad groups, one triad group, and two individual cases. One student was in both a dyad and individual sessions due to his behavioral issues that posed safety concerns in a group setting, and another student participated in a triad group after completing 8-weeks of a dyad group to continue services.

For social skills groups, students followed the same schedule every week: walked into the playroom, greeted each other by name, set a timer for session, then participated in that week's sensory art activity. After the art activity was completed, students were welcomed to play freely with the toys available in the therapeutic playroom for the remaining time of session. Once the timer went off, students knew the group was over and they could pick a sticker before going back to class. Students were not required to clean up after the group. If a child did not want to participate in the art activity, they were not forced to. If a child wanted to adapt the intervention to their liking, they were encouraged.



Individual sessions, however, were more child led. Students still walked into the playroom, exchanged a greeting with the MHI and set the timer. Art supplies were set out on the table for children to participate in the weekly sensory art activity, but students were not explicitly instructed to complete the intervention during individual sessions. To enhance autonomy, the student could choose to participate in the art activity or not. If a student did not independently choose to do the art activity, the MHI would ask them if they would like to participate. Most weeks, with this encouragement, the student would agree to try it. If they were still not interested after three attempts at engagement encouragement throughout the session, the MHI would stop asking to participate in the project.

## Groups

**Table 1**

*Description of group dynamics*

Group	Client	Age	Gender	Ethnicity	Language	Reason for referral
1	A	5	M	Haitian	English/Haitian Creole	Social/emotional development Unexpected and persistent dysregulation Disruptive/unsafe behaviors in classroom Aggression toward peers
	B	5	M	Haitian	English/Haitian Creole	N/A (peer model)- later exhibited self-regulation difficulty
2	C	4	F	Moroccan	English/Arabic	Social/emotional development Disruptive/unsafe behaviors in classroom Aggression toward peers
	D	5	F	Spanish	English	N/A (peer model)
3	E	4	F	Haitian	English/Haitian Creole	Social/emotional development Disruptive/unsafe behaviors in classroom Aggression toward peers
	F	4	M	Haitian	Haitian Creole	Social/emotional development Suspected unstable housing English language development (immigrated from Haiti to United States <1 year ago w/ mother)
4	G	4	M	Haitian	English	Social/emotional development Persistent dysregulation
	H	4	M	African	English	Social/emotional development Persistent dysregulation
5	I	5	F	Mexican	English/Spanish	Social/emotional development Disruptive/unsafe behaviors in classroom Aggression toward peers
	J	5	F	Salvadorian	English/Spanish	N/A (peer model)
	C*	4	F	Moroccan	English/Arabic	Social/emotional development Disruptive/unsafe behaviors in classroom Aggression toward peers
INDIV 1	A*	5	M	Haitian	English/Haitian Creole	Social/emotional development Unexpected and persistent dysregulation Disruptive/unsafe behaviors in classroom Aggression toward peers
INDIV 2	K	4	F	African	English	Social/emotional development Persistent dysregulation Disruptive/unsafe behaviors in classroom Aggression toward peers

*NOTE:* \* Asterisks denote repeated clients

## Interventions

All the groups and individual sessions followed roughly the same 8-week schedule (see Table 2). The first week's session was spent in free play time. This intended to help participating students get used to the therapeutic setting before embarking on sensory based art creation in the following weeks. By allowing students to play freely they were provided space and time to explore the therapeutic playroom and the toys available to them. Some of the toys present in the playroom were familiar to students, but many were new. Intentional matching of

classroom toys and materials helped students feel more comfortable and new toys got them excited to return to the playroom the following week.

During the second week of treatment, students used Playdoh to explore the tactile sense. Playdoh was used because it is a familiar object for most students, so it was approachable because students already knew what it was used for. Students were provided a variety of colors of playdoh and tools including cookie cutters, rollers, and toys to imprint. Students were not given any explicit instructions, but were encouraged to explore diverse ways to manipulate the playdoh, i.e., with the tools, by squeezing and by cutting. This intervention was a non-intimidating, uncomplicated way to introduce the idea of sensory exploration using art. Playdoh not only provided a tactile experience, but due to its distinct smell and vibrant colors, this playdoh activity also engaged the olfactory and visual senses.

In the third week of treatment, students partook in a sensory oriented scribbling activity. This sensory art intervention used scribbling because it was considered a developmentally appropriate art creation task for the preschool-aged participants. Students were instructed to scribble, not to draw any particular representative images. Students were provided crayons and paper when they came into the therapeutic playroom. The MHI demonstrated scribbling on a paper to visually provide students with the expectation. As students were drawing, MHI asked them to pay attention to the sounds the crayons were making, “what does it sound like if you scribble fast, slow, make dots?” among other prompts. This encouraged attention to visual, auditory, and tactile senses.

In the fourth week of treatment, students participated in collaborative mural making using scented markers. A large paper was hung on the wall to purposefully have students participate while standing, and to encourage movement of their whole body. Drawing on a

small-scale would only require movement below the elbow, but to reach all sections of this large-scale format, full-body movements were required. In this case, 3 ft by 5 ft white roll paper was hung on the wall and 22 assorted colors of scented markers were made available for use. Students were given minimal instruction to encourage uncensored self-expression and to develop a sense of autonomy. The only directions given to students were “to draw” no further explanations or examples were provided. By not providing explicit drawing instructions, students were free to draw images, scribble, or write words. As they drew, the MHI prompted the students to focus on and explore the different smells of each marker. MHI led developmentally appropriate conversation about different marker scents. These scented markers consisted of a variety of smells e.g., sweet, sour, and savory including cherry, apple, blue slushie, buttered popcorn, root beer, nacho cheese, etc. This intervention was intended to engage the olfactory sense from the scent of different markers and the vestibular sense from the full-body movements required for mark making on this large-scale.

In the fifth week of treatment, students participated in sensory-oriented tissue paper collage making. Students were presented with construction paper, glue sticks, and colorful tissue paper cut into small squares. Students were not given much instruction to encourage autonomy, but they were provided with a quick demonstration by the MHI of different ways to manipulate the tissue paper to create varying textural patterns. For example, students could crumple, fold, bunch, leave flat, etc. This intervention was accessible for the provided option for those with tactile sensitivity because it did not utilize messy materials. It was purposefully left open ended to adapt to each student’s own needs. The different textures created a unique tactile experience. Additionally, the bright colors engaged the children’s visual sense.

In the sixth week of treatment, students participated in a sensory exploration based painting activity. This intervention used a variety of materials as alternative paint brushes. Students were provided paint, canvas, and a variety of alternative paint brushes including sponges, toy cars, toy dinosaurs, head scratchers, plastic forks, styrofoam balls, loofas, bubble wrap, strings of beads, ribbon, etc. Paint, canvases, and alternative paintbrush materials were set out for students when they walked into the therapeutic playroom. MHI explained the activity saying, “we are going to do a sensory painting activity today. We are going to use these materials to paint with instead of using any paint brushes.” MHI then demonstrated how some of the items could be used to paint with. For example, roll the car in the paint then on the canvas to leave tire tracks, make dinosaur footprints, show the texture the bubble wrap creates. Students were provided time to explore the materials and choose colors to increase self-expression and autonomy. This encouraged creativity through the exploration of novel uses of various materials while engaging the tactile and visual senses.

In the seventh week of treatment, students participated in a sensory exploration of slime play and bead integration. When students came to the therapeutic playroom, they were presented with premade slime. In this case, the slime was transparent blue and was blue raspberry scented. MHI let the children play with the slime, and encouraged exploration of different slime manipulation techniques. For example, stretching, squeezing, shaping, making bubbles, etc. MHI then presented students with multi-colored pony beads for them to mix into the slime. This was purposefully presented in a vague way to allow for creativity in bead integration techniques. The process of bead integration added a secondary texture and new colors to be explored. The slime and beads provided a tactile experience for students. Since this slime was also scented the activity also engaged the olfactory sense. When different colored beads were enveloped in

slime, children were asked how the colors changed, prompting a visual experience to further their sensory exploration.

In the eighth, and final, week of treatment, students participated in sensory-bottle creation. MHI introduced this intervention to students by showing examples of several types of sensory bottles. Each student was then provided with materials to make their own sensory bottle. They were given an empty plastic water bottle (with the label removed) that they then filled with water, leaving about an inch of room at the top in order to fit additional contents without overflowing. Students were given the opportunity to fill the bottle themselves, and MHI assisted their efforts as needed. They were asked to pick a color for their sensory bottle and with assistance from the MHI, a few drops of food coloring were added to their bottles. Using a funnel, students poured their own glitter into the bottle. Finally, they were asked to pick some colorful pony beads and added them to their bottles. MHI ensured bottles were properly sealed before letting kids shake their new creations. This served as a unique visual experience for them. Students were educated about the use of sensory bottles for calming down. This intervention was perfect for students' final sessions because the end product served as a souvenir to reinforce what they experienced and a transitional object for them to keep after termination. The MHI utilized sensory-regulatory strategies herself while implementing the series of interventions with young children with predilection for dysregulation. This allowed the MHI to stay aligned with students who do not always articulate themselves verbally (See Figures 1 to 7 in Appendix C).

**Table 2***Intervention Sequence*

<b>Week/Intervention</b>	<b>Objective</b>
<b>1: Free play</b>	To provide exposure to therapeutic playroom in order to foster a sense of safety.
<b>2: Playdoh exploration</b>	To introduce sensory art with familiar materials in order to foster a sense of safety.
<b>3: Sensory scribbling</b>	To practice sensory art with familiar materials in order to foster a sense of safety.
<b>4: Scented marker mural</b>	To introduce new sensory art experience with novel materials in order to foster creativity.
<b>5: Tissue paper collage</b>	To introduce new sensory art experience with novel materials in order to foster creativity.
<b>6: Sensory painting</b>	To introduce new sensory art experience with novel materials in order to foster creativity.
<b>7: Slime and bead integration</b>	To combine new sensory art experience with familiar materials in order to foster creativity.
<b>8: Sensory bottle creation</b>	To introduce new sensory art experience and to create a transitional object for termination.

**Results****Week 1: Free play**

All groups/students responded well to free play. Most students were excited to go to the playroom with MHI for the first time. One student, however, did not want to come to the playroom at that moment, so he was introduced to the room accompanied by familiar adults i.e., his mother and his teacher. Once this student got used to the playroom he was excited to come to the group every week. Students in social skills groups, separate from this project, sometimes knew each other prior to group, either from being in the same class, or by spending time on the playground together. Other groups of students had no prior interaction with each other. All students demonstrated functional, collaborative, creative play. Many students began playing independently, but with encouragement from MHI, students began to play collaboratively. They

especially enjoyed playing with cars, doll house, animals, doctor kit, toolbox, kitchen set, and legos.

### **Week 2: Playdoh sensory exploration**

All students enjoyed this intervention as evidenced by multiple requests to use playdoh during later sessions as a free play activity. Students demonstrated functional, creative, and collaborative play. They each got their own containers of playdoh but shared all available tools. Some groups combined their playdoh into one large mound that they shared, others kept them separate. When they were prompted to try using novel objects, like a toy car to make tracks or imprint objects into the playdoh, rather than just the playdoh tools, they began to show more creativity in variations of play. Students enjoyed mixing the colors together, rolling the dough flat, and stamping objects like toy dinosaur footprints and strings of beads into the dough. Students also used the playdoh in conjunction with other toys, for example, several students used it as pretend food with the toy kitchen set.

During an individual session, a student referred for severe self-regulatory difficulties reported emotions by referencing a visual aid present in the therapeutic playroom (an emotion thermometer ranging from calm to mad) saying, "I am all the way calm," during playdoh play. This student was able to calmly sit for 30 minutes of independent play. This level of self-regulation and emotion labeling had not been observed by the MHI from this student prior to participation in this intervention.

### **Week 3: Sensory oriented scribbling**

Some students enjoyed this intervention more than others noted by their level of engagement and the length of time they spent participating. Some students scribbled using short lines, others used long, curvy lines. One student repeated the same short scribble shape with



different colors over and over. Most used multiple colors, but a couple students only used one crayon before moving on to a new activity. For example, one student scribbled for less than a minute using a single crayon that said, “I made a train,” then transitioned to free play. Several other students labeled their scribbles as images as well. Multiple students made a few scribbles then requested to draw images instead. One student skipped the scribbling all together and opted to “draw a picture instead.”

Some students filled the entire page with scribbles, others only drew in a small section. One student used multiple papers. MHI prompted students to explore different colors, pressures, line lengths, and shapes. Students were provided crayons but requested other drawing materials, like markers, as well. MHI prompted students to listen to the differing sound the variety of pressures, speeds, and line lengths. One student was especially intrigued by the sound short mark-making made. To increase autonomy, MHI prompted a mirroring activity that allowed the student to lead the MHI in scribbling by imitating their mark making, hand movements, color choice, etc. One student was excited by this and ended up scribbling for 20 minutes, stopping only when the entire page was filled with scribbles. In one group, students independently began mirroring each other, without modeling or prompting from MHI of any kind.

#### **Week 4: Scented Marker exploration on a mural**

All students enjoyed this intervention as evidenced by their excitement when exploring the medium. This intervention was completed with groups, individual students, and in classrooms. Some students spent a significant amount of time drawing on the mural, but the majority of students spent more time exploring the scent of each marker and sharing it with their peers. For each marker, students would smell it, label it, and share it by putting it directly under peer’s noses, occasionally getting marker on their nose. Many students labeled the scent of each

marker as an item associated with that color regardless of the actual scent. For example, the brown, cinnamon scented marker was labeled “chocolate” and the banana scented marker was labeled “lemon.” Other students labeled the markers referring to their fragrance associations. For example, one student labeled almost all of the markers as “candy” and even tried to lick one of them. When a student suggested a label for a scent, their peers tended to agree even if it smelled nothing like their presented label. Other students did not label markers with specific scents, instead they would say if a marker was “yummy” or “yucky.”

As they drew, MHI asked prompting questions to talk about experience with different scents, for example, “what does it remind you of?” “how do you feel when you smell it?” In the classrooms, some students spent all their time smelling the markers and did not draw on the paper at all. Developmentally appropriate drawing skills for their age postulated by Lowenfeld and Brittain (1964) as scribbling stage and pre-schematic stage were demonstrated through the use of scribbles and vaguely recognizable images by students.

Many students drew short, scribbled lines. Others drew images including people, rainbows, animals, etc. Others practiced writing their names. Some students drew for a long time, but most lost interest after a few minutes. Students demonstrated a variety in the space they used to draw. In groups and individual sessions, some students immediately took up all the available space with scribbles. When students were using only a small portion of the paper MHI encouraged them to use more space. In classrooms, most students drew in small sections directly in front of them, but some drew on large sections of the paper. In one classroom, a student spent over 20 minutes scribbling using a grape scented marker to color about 30% of the 3ft by 5ft paper purple.

**Week 5: Sensory oriented tissue paper collage making**

Students had mixed reactions to this intervention; some students were engaged and enjoyed it, but most were disinterested in it. Through observation during small group sessions and individual sessions, varying levels of participation of students were recognized by MHI. Some students would take handfuls of tissue paper squares at random and glue them all at once. Some of these students used a lot of glue in which case most of their handful would stick to the paper. Other students did not use a sufficient amount of glue so only a few pieces would stick to the paper. Some students were upset when the majority of their tissue paper fell off the paper, but some were not fazed by it.

Other students took a more organized approach by gluing individual squares of tissue paper on at a time. The majority of children who did this applied glue to a large section of their paper then individually placed the squares onto the glue covered section. Other children individually glued one square at a time by only applying enough glue for one square and alternating between gluing and placing tissue paper. Of the students that used individual tissue paper application methods, most randomly selected colors, but others took the time to select specific colors. Some of the students that individually applied the squares attempted to apply one square at a time but due to a lack of fine motor skill development ended up applying small stacks of squares at a time. Most students filled about half the page with tissue paper squares, some filled the entire page and even had squares hanging off the edges, others put very few pieces on. Student A for example, glued six tissue paper squares onto his paper before wanting to move on.

**Week 6: Sensory exploration painting activity**

All students appeared to enjoy this intervention, they were energetic and tried every available material to paint with. Students demonstrated their openness to creativity when they reported a preference toward items that were used in unexpected, novel ways. For example, none of the students had used toys for paint application in the past, so, of the alternative paint brushes provided, students were especially drawn to mark making with more unconventional alternatives including toy car tire tracks, toy dinosaur footprints, string of beads. Whereas the more conventional items like sponges or cotton swabs were observed as not appealing possibly because they had prior experience using them. Some students wanted a more tactile experience and experimented with finger painting here as well.

Students were also drawn to the color changes that occurred with the mixing of paints on the canvas. The first few groups to participate in this intervention were provided with prepared palettes of red, yellow, blue, and white paint by the MHI. To encourage autonomy, later groups were allowed to choose their own colors and fill their own palettes. The color choice aspect allowed for more self-expression, but the filling their own palettes aspect took much longer than expected and created an unexpected frustration for students. All students shared the provided alternative paint brushes but received their own canvas to paint on.

**Week 7: Slime and bead integration sensory exploration**

All students enjoyed this intervention as evidenced by their excitement during participation and requests to repeat slime play in later groups. Some groups shared the slime without difficulty, distributing equal portions of slime for each child to use independently. Others kept the slime in one large pile and played collaboratively. As the students squeezed and stretched the slime, MHI prompted them to pay attention to the way the slime felt, the way it

looked, and the way it smelled. Students responded with descriptions of texture, appearance, smell including sticky, soft, cold, blue, shiny, yummy, etc. Students were given time to play with the slime then selected beads to integrate into it. Again, they were asked to describe the slime, they then included new descriptors including lumpy, colorful, etc.

Some students responded more stereotypically to this intervention than others. As students were given more time to play with the slime and beads, one group got into an argument about sharing the slime and a student ended up with slime in her hair. Other students exhibited functional, creative play. One group put the slime in a doll house bathtub to pretend it was full of water and put a doll in it. Others stuck with a strictly sensory play experience. One individual student added every single bead provided into the slime, others only put a small handful. This activity was purposefully left without detailed instructions from the MHI to observe student reactions to open-ended interventions.

### **Week 8: Sensory bottle creation**

Most students reacted positively to this intervention. To encourage autonomy, students were able to independently complete most steps. Students personalized their sensory bottles via color choice; they chose a color to dye their water, and color(s) of beads to add. Students demonstrated creativity when they chose to add extra materials; two students requested extra glitter, one used extra beads and one even added other objects including pompoms and ripped paper. Most students were fully engaged in this intervention demonstrated by their excitement and active involvement during this group. One student, however, appeared uninterested and only demonstrated minimal engagement when explicitly prompted by MHI. For example, he only dumped cups of glitter and beads into the bottle once the MHI physically prompted him by placing them in his hand and positioning the bottle and funnel directly in front of him. This

student did not want to keep his sensory bottle, all other students took their sensory bottles with them as a parting gift at termination.

**Table 3**

*Responses to Intervention*

<b>Week/Description of Intervention &amp; Material</b>	<b>Findings of Common Response</b>	<b>Surprising Responses</b>
Week 1. Free play	High level of participation and enjoyment of most students	Hesitation/dysregulation of student F
Week 2. Sensory work with playdoh	High level of participation and enjoyment of all students.	Became regulating activity for student A in times of dysregulation
Week 3. Sensory-orientated scribbling with crayons	Varying level of participation and enjoyment of students. Higher levels observed with encouragement from MHI.	Some students uninterested
Week 4. Mural with scented marker	High level of participation and enjoyment of all students.	Students preferred smelling markers rather than drawing with them as intended
Week 5. Tissue paper collage	Varying levels of participation and enjoyment of students. Higher levels observed with encouragement from MHI.	Dysregulation with student C
Week 6. Sensory-oriented painting	High level of participation and enjoyment of most students	Dysregulation with student C
Week 7. Slime and bead integration	High level of participation and enjoyment of all students	
Week 8. Sensory bottle creation	High level of participation and enjoyment of most students	

### **Discussion**

Based on the literature, this writer expected the practice of sensory based art therapy interventions with preschool students with self-regulation difficulties to enhance their preschool experience by providing a developmentally appropriate outlet for self-expression as an effective coping skill. Self-exploration and autonomy development were included in all intervention rational to help promote creativity. This research found some interventions to be more effective

than others, but what was most apparent from this research is the differences in individual student experience with each intervention.

Intervention sequence was designed to help students ease into participation. The first week used free play with no directives given to provide space for students to take time to get used to the therapeutic playroom, their peer(s), and the MHI. The second week used playdoh because it was already a familiar object for students, so it was a non-threatening way to introduce the idea of sensory experiences to the students. The third week used scribbling with crayons for similar reasoning, the non-intimidating intervention was accessible and familiar to students. The fourth week used scented marker murals to offer a new sensory experience to students. This intervention allowed for engagement of senses other than tactile and visual experiences the students had done in session thus far; the large-scale paper encouraged whole body movement and the scented markers introduced an olfactory experience to students. By this point, the group dynamics were set and the focus of interventions shifted solely to sensory experiences of students. This is why the fifth week aimed to introduce different textures into students' sensory experiences by using tissue paper collage. The sixth week's painting activity allowed students to explore new uses of familiar materials to exhibit student creativity. The seventh week used slime because it was highly requested by participating students to use this preferred object. Beads were used to call attention to differences in texture. The eighth week concluded group with sensory bottle creation to practice self-regulatory coping skills that could be utilized outside of the therapeutic setting. Students were encouraged to practice shaking the bottle when they became upset to release bodily tension and by watching the beads and glitter settle to act as a timer for a stimulation break. Additionally, the sensory bottles served as a transitional object for students to take home at termination.

One commonality amongst all practiced interventions is the inclusion of tactile and visual sensation exploration. Each art intervention integrated color choice and/or manipulation. This gave students a sense of autonomy regarding visual stimulation. Tactile sensory engagement with different textures served as an enriching experience for students. Overall, students seemed to prefer the interventions that used messier, more fluid materials like slime, or painting. There was no clear preference for interventions with or without tangible end products observed by the MHI. Students seemed to focus more on the creation process rather than the resulting product. This supports art therapy's process oriented mindset outlined by Malchiodi (2003). Sensory level engagement is more forgiving than other ETC levels because there are no expectations outside of a kinesthetic experience, the simplest way to process information. (Heinz, 2020).

A focus regarding the sensory level of ETC is developmentally appropriate for the preschool students used in this research. Heinz (2020) explains the benefit of sensory level art making in non-verbal communication. While preschool students are beginning to develop language skills, they do not have the capacity to fully express themselves with words. From the MHI's observation, as noted by Blair (2002), children's brains are still developing, at this early age, they are not yet capable of complex thought and therefore cannot express themselves cognitively/symbolically (Blair, 2002). Students were introduced to the perceptual/affective level of the ETC when they made specific images, and when they were encouraged to recognize their emotional experiences before, during, and after art interventions. Interventions tried to encompass as many sensations as possible. Visual, tactile, auditory, and olfactory senses were adequately explored using these interventions. Gustatory, vestibular, proprioception, and interoception were more difficult to include and may be valuable areas of future study. For



example, using an intervention utilizing food items to make art could easily engage the gustatory sense, but per the school site's policy, no outside food can be brought in due to allergy and safety restrictions. The school where this project took place also discourages the use of food materials in sensory or play activities to be mindful of possible food insecurities in the community. More movement based activities are accessible and would emphasize vestibular and proprioception sensory experiences. Interoception may be difficult to center an arts-based activity around, but conversation around the interoceptive sense could be pertinent as students are continuing to learn how to label and respond to these experiences, i.e., labeling their hunger and asking for food.

Other limitations to this study include a small sample size of a very specific population, preschool students from low-income families in a suburb of New England. The sample consisted only of students who were specifically referred for mental health services regarding social, emotional, and behavioral development concerns and self-regulation difficulties. How would these interventions differ with a different population?

The small space available and minimal access to materials could also have an effect on the outcome of this research. Sessions were conducted in a room designed for play therapy services, which was not conducive to art making due to a lack of space and an excess of distracting toys that may have interfered in some ways with students' sensory intake. As stated above, more fluid and messy materials were preferred by students, but there was no access to a sink or large tables for the ability to use these fluid mediums that would facilitate sensory stimulation. More tactile art experiences would have been included if the space were more mess-friendly. For example, activities like finger painting or shaving cream play would have been difficult because there was no sink for students to wash their hands after. There was a rug

in the therapeutic playroom which added another layer of difficulty regarding cleanup of these types of fluid materials. Further research conducted in a better-suited space for art material exploration is advised. Access to materials was another limitation. This site made standard school supplies available, but more sensory specific materials, for example, scented markers, sensory alternative paint brush tools, slime, etc. had to be independently purchased by the MHI, an unpaid intern. Having a wider variety of art mediums could open up the possibility for more flexibility in response to students' needs with a variety of interventions practiced.

All groups were centered in social skill development with a specific focus on classroom skills like sharing and self-advocacy. Needs based advocacy was encouraged by continual prompting of students to ask for what they need. In the simplest form, students were prompted by the MHI to ask for help. When a child was struggling MHI would ask "what do you need?" often times the child would not answer, so the MHI would further prompt "do you need help? You could say, 'I need help.'" Then, when the child repeated "I need help" the MHI would say, "Okay, I can help you. Thanks for telling me, now I know what you need." and would help the child complete the task.

Student progress was measured through observation from the MHI as well as students' teacher reports. MHI noted most beneficial interventions promoted autonomy for students through the use of novel experiences with tactile and fluid materials. Each student participated with their own unique style, but trends in response revealed student preferences. When asked about observed development, most teachers were able to label some kind of growth for each student. For example, student C's teacher noted her improved functional play skills. Student F's teacher noted he was more talkative in the classroom. Student E's teacher noted her new-found

interest in collaborative play. Student A has been naming his emotions during periods of dysregulation which was not observed prior to the start of group.

All students seem to have had an enjoyable experience during their eight week sessions as evidenced by their excitement to participate in a group each week and via teacher reports. As a result, intentional inclusion of sensory based art activities has been adopted by teachers for use within classrooms. As an anecdote, this writer was informed by a teacher that one participant/student from the proposed program shared his newly learned technique from the week-5 module in his classroom; he glued on one square at a time in neat rows stating that he made an iPad because the colorful squared looked like apps. In so doing, the student demonstrated his creativity, but also learned to be present to multiple levels of sensory stimuli including exteroceptive sense from outside world to conceptualize symbolical image, proprioceptive sense that engaged his creative impulses, and vestibular sense to translate those impulses to structured movement to engage in meaning-making process. Similarly, several students in another classroom reportedly showed their expansiveness in creativity by using markers to draw on top of their tissue paper collages. In conclusion, sensory based art therapy interventions proposed in this thesis for preschool age children could be introduced as effective self-regulatory coping skills to aid in social, emotional, and behavioral development of this population. More studies such as this will be beneficial to fill the gap in research for the field serving this population.

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## Appendix A

### In-House Referral SY 2023-2024

Child's Name: \_\_\_\_\_ DOB: \_\_\_\_\_ Classroom: \_\_\_\_\_

Who raised the concern?    \_\_\_ Parent                      \_\_\_ Staff

\_\_\_\_\_  
(Name and position)

Concern discussed with Parent:    \_\_\_ Yes    \_\_\_ No    Date :(if applicable) \_\_\_\_\_

Concerns: (Check all that apply)

**Child Health and Development**

- \_\_\_ Communication
- \_\_\_ Motor Skills
- \_\_\_ Cognitive
- \_\_\_ Social/Emotional/Behavioral
- \_\_\_ Self-Help
- \_\_\_ Other
- \_\_\_ Mental Health Needs

**Family Development**

- \_\_\_ Emergency (food, shelter, etc.)
- \_\_\_ Substance Abuse
- \_\_\_ Domestic/Family Abuse
- \_\_\_ Health/Medical
- \_\_\_ Parenting/Child Management
- \_\_\_ Financial
- \_\_\_ Nutrition
- \_\_\_ Dental

**Briefly describe concern:**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Follow-Up/Next Steps:**

All referrals should be given to Education Supervisor:

*\*Disabilities/Mental Health Referrals- Electronically to Intervention Support Specialist*

*\*Other Concerns send to direct component area-*

Date referral was sent: \_\_\_\_\_

Signed by (Name and Position): \_\_\_\_\_

Date: \_\_\_\_\_

Date Intervention Support Specialist Responds: \_\_\_\_\_

## Appendix B



# Social Skills Group

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## What is it?

Head Start offers groups that help your child develop and practice appropriate social skills. Groups are run by a member of the Mental Health Team who works with 2 to 3 children at a time in the playroom once a week for 8 to 12 weeks throughout the school year.

## Why participate?

Children under five have rapidly developing brains, so they need a stimulating environment to play and learn. Playgroup is a great way for your children to learn about the world, make friends, and develop social skills.

### **Benefits of group:**

Social Skills Groups help...

- Provide an environment for social interaction.
- Provide an opportunity for children to learn and play.
- Assist in language development and communication.
- Provide a stimulating environment for children to acquire new skills.
- Assist children in school readiness development.

**Please let us know if you have any questions. We would be happy to meet with you.**





### Appendix C

Figure 1

*Example of Art - Week 2 by the MHI, writer*



Figure 2

*Example of Art - Week 3 by the MHI, writer*



Figure 3

*Example of Art - Week 4 by the MHI, writer*



Figure 4

*Example of Art - Week 5 by the MHI, writer*



Figure 5

*Example of Art - Week 6 by the MHI, writer*



Figure 6

*Example of Art - Week 7 by the MHI, writer*



Figure 7

*Response Art - Week 8 by the MHI, writer*



**THESIS APPROVAL FORM**

**Lesley University  
Graduate School of Arts & Social Sciences  
Expressive Therapies Division  
Master of Arts in Clinical Mental Health Counseling: Art Therapy, MA**

**Student's Name:** Elizabeth Ferrara

**Type of Project:** Thesis

**Date of Graduation:** May 18<sup>th</sup>, 2024

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

**Thesis Advisor:** Madoka Urhausen

?