

Dance as a Vehicle for Expression in Children with Autism Spectrum Disorder:
Discovering Personal Expression for Their Creative, Physical Being

by

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ABSTRACT

This study intended to provide people diagnosed with autism spectrum disorder a creative outlet to experience dance and other art forms as a way of expressing themselves. Other potential benefits were observed throughout the exploration, including social interaction, coordination, and confidence. An interpretive phenomenological research model analyzed participant and parent verbal reflections, written feedback, and video recorded movement sessions to understand and interpret the participant's experience and the potential value of creative movement. The study was conducted over a seven-week period, which included 13, 30-minute movement sessions held biweekly along with interviews, discussions, surveys, and journaling. The research revealed dance empowered each participant to explore his/her creativity and exercise personal expression. The feedback received from the participants and parents through interviews and reflections revealed the participants did exercise and discover social, physical, emotional, and creative expression throughout the study.

Keywords: autism spectrum disorder, creativity, dancing

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CHAPTER 1

Introduction

Dance as a Vehicle for Expression in Children with Autism Spectrum Disorder:

Discovering Personal Expression for Their Creative, Physical Being

Autism spectrum disorder (ASD) is a developmental disability found in one of every 68 births in the United States (Baio, 2014). Many researchers have tried to determine a cause of ASD since the diagnosed cases are increasing every year, however it's cause is currently undetermined. Autism remains a behavioral disorder with methods of treatment focused on the behaviors the person with ASD exhibits (Randall, personal communication, October 25, 2014). Whether the ASD cases keep increasing in number or the means of diagnosis are improving, the reported cases of ASD continue to rise.

Diagnoses occur in all racial, ethnic, and socioeconomic groups but are actually five times more common in males than females (Baio, 2014). While the commonality of ASD in the US population rises, the behavioral characteristics and symptoms remain unique to each individual diagnosed. No two people with ASD have the exact same symptoms, which is why it is considered a spectrum disorder. People with ASD may share common behavioral characteristics: a deficit in social and communication skills, obsessive absorption in a special interest, poor coordination, need for solitude, need for sameness, lack of impulse control, perseveration, sensory sensitivity, and/or sensory dysfunction (Grandin, 2014).

While treatment methods remain unique to the individual's needs and abilities, a common thread runs throughout treatment programs. Discovering and exercising personal expression is a goal incorporated into many rehabilitation and therapy programs for ASD.

No matter the setting, engaging in activities that promote expression can improve social, mental, and physical well-being for people with ASD (Myles, 2007). Occupational therapy is a common resource that is offered to people diagnosed with autism to assist in improving self-help skills. It can aid people in refining coordination, body awareness, social interaction, and communication skills while focusing on individual needs in order to function more efficiently. It is commonly paired with speech therapy so the participants can improve communication skills while adopting the new self-help skills. The individual may focus on dressing, grooming, eating, and social development while working on vocabulary, answering questions, and completing a cohesive thought. Both of these common therapies engage in activities that aid in building expression in the participants (Myles, 2007).

I have worked with people diagnosed with ASD through respite and habilitation care for years and have built a trusting relationship with the people I serve. Through my work, I have seen the struggle and frustration that comes with the inability to express and communicate effectively. When expression is difficult, anxiety begins to build as the emotion the person is feeling is not released or shared. This anxiety is often articulated by pacing back and forth throughout the room or by repetitively asking questions and perseverating on a topic. I am an ongoing witness of expression being a tool for fulfillment in the clients I work with. An example I experience weekly is when I pick up a client from her therapy sessions and observe her contentment as we drive home. Her typical racing mind and verbal preservation is quieted because of the expressive opportunities she experienced in her therapy sessions. Another client I work with finds ease in walking around the room in repetitive patterns. The physical movement paired

with the predictability of the pattern created an environment where he was able to cope with his ASD behaviors. Witnessing the ease that resulted from expressive and physical activity in these two clients left me wanting to research more opportunities for the people I work with.

Having experienced a physical, expressive outlet most of my life, I wanted to research the potential benefits it could also provide for people with ASD. Dance is an expressive outlet that has been an integral medium for me to release tension and stress while exercising my physical self. Dance has been recognized as a therapeutic practice since 1966 and continues to provide people with an outlet to exercise personal expression. Dance assists people, regardless of physical capabilities, to find expression in a nonverbal manner while potentially enabling social, mental, and physical development. In an explorative environment, dance integrates the physical self as a functioning part of the whole social being (Scharoun, Reinders, & Bryden, 2014). The integration of movement has aided many people with developmental delays and behavioral health impairments to discover a higher quality life. This study aimed to provide further research about incorporating dance into the autistic community.

Purpose Statement

The purpose of this study was to provide people with ASD a creative outlet to experience art and movement as a way of expressing themselves. This type of exploration may lead to other benefits including social interaction, coordination, and confidence. The goals of the sessions were to empower the participants to discover personal expression by exercising and edifying their social, mental, and physical well-being. Through my experience of dance and personal discovery of self-expression, I aimed to create

awareness of the potential benefits of dance and how these benefits may impact one's personal, home, and social life. Exploring and assessing what participants experienced in the movement sessions may bring insight to parents, professionals, and individuals that work and live with the behaviors of ASD.

By working with participants ranging from low functioning to high functioning ASD, the study also assessed the effectiveness of movement protocols in ranging abilities. Assessing this wide scope of ASD aimed to illustrate the transparency of movement effectiveness as a beneficial expressive outlet.

The central research questions that guided this study included the following: Can creative movement provide an outlet for expression for the participants involved in the study? Does creative movement application influence the following behaviors and abilities: attitude, anxiety, confidence, eye contact, listening, verbal communication, decision-making skills, creativity, and/or coordination? Does the severity of the participant's ASD impact his/her experience of finding expression through movement and other art forms? Will creating an integrative art experience with dance, music, drawing, and sculpting enhance the experience for the participants or deter it?

CHAPTER 2

Literature Review

Autism Spectrum Disorder

Autism spectrum disorder is defined as “severe and pervasive impairment in several areas of development: reciprocal social interaction skills, communication skills, and/or the presence of stereotyped behavior, interests, and activities” (American Psychiatric Association, 2000, p. 69). Autism can also be referred to as a pervasive developmental disorder (PDD), which acts as an umbrella category for more specified diagnoses within the autism spectrum. Specific diagnoses under ASD include: autistic disorder, Asperger’s disorder, PDD-NOS, Rhett’s disorder, and childhood disintegrative disorder (Volkmar & Wiesner, 2009). Understanding the umbrella of the spectrum aids in recognizing why autism is known for the uniqueness in each person’s manifested behaviors and treatment programs. What works well as a routine, form of expression, or therapy for one person, may not work well for another.

The unique characteristics present in autistic behaviors are also carried into the unique anatomy of the autistic brain. Research continues to try to pinpoint biomarkers associated with ASD but not a single biomarker has been apparent in all autistic brains. Commonalities have been discovered in populations, but the exactness of a biomarker remains unachievable at this point. Common abnormalities in the autistic brain have been found in the corpus callosum, cerebellum, cerebral cortex, and amygdalae.

The cerebral cortex in a typical brain has four lobes: frontal, occipital, parietal, and temporal. The frontal lobe is the largest portion of the cortex and controls the decision-making and planning portion of the brain. The occipital lobe is the smallest lobe

and aids in recognizing color and visual perception. The parietal lobe helps the occipital with visual perception but also identifies pain sensation, spatial orientation, and assists with cognition and speech. The temporal lobe assists in organizing sensory input. The autistic brain commonly illustrates abnormalities in the size of the cerebral cortex lobes. One lobe may be larger than normal using space from another lobe which oftentimes results in dysfunctions in the smaller lobe. Research has found that the variance in size can also lead to overconnectivity and underconnectivity. The brain may compensate for a shortage in activity of a smaller lobe and generate more connective matter. The same can happen with underconnectivity as the brain attempts to create a balance. This is where the term, savant, may relate (Grandin, 2014). An autistic savant is a person that demonstrates profound and prodigious abilities far in excess of normal. A savant may have an extremely low IQ but have impeccable memory of books, places, pictures, and people he/she has met. This ability is an example of overconnectivity, a compensation for a dysfunction in the brain (Myles, 2007).

The parietal lobe is a portion of the cortex commonly exhibiting abnormalities in people with autism. As a result of this, speech, cognition, and visual perception are impacted, abilities that typically contribute to social skill impairments (Coleman, 2005). Social skills are defined as “socially acceptable learned behaviors that enable a person to interact with others in ways that elicit positive responses and assist in avoiding negative responses” (Elliot, Racine, & Busse, 1995, p. 1009). The range in social deficits for people with ASD is similar to other spectrum behaviors as the deficit may be slightly present in one person and socially debilitating in another. One person may exhibit a social dysfunction through the inability to make sufficient eye contact when carrying on a

conversation in a one-on-one setting. Another person may be entirely nonverbal, only having the ability to communicate by pointing and making repetitive vowel sounds. Both cases would be classified as social skill impairments, even though the abilities of each person vary greatly (Volkmar & Wiesner, 2009).

Gresham and Elliot created a list illustrating the contributions to social skill deficits in ASD. The five-step list helps identify the origin of the deficit, thus creating an action guide of what is needed for improvement no matter the severity: (a) lack of knowledge, (b) lack of practice or feedback, (c) lack of cues or opportunities, (d) lack of reinforcement, and (e) the presence of interfering problem behaviors (Myles, 2007, p. 352). The work of Gresham and Elliot (2007) is significant, as four out of the five origins relate to opportunity, and only one relates to circumstance. This shows that if more opportunities are offered to educate, practice, and reinforce appropriate social skills in people with ASD, social interaction and communication may likely improve.

Another category associated with ASD relates to restrictive behavioral patterns. This could relate to the enlarged amygdala commonly found in the autistic brain. Some amygdalae have been recorded as high as 22% larger than a typical-sized amygdala. The amygdala houses many emotional functions. It is important for processing fear, which if heightened or enlarged may explain the common outcome of chronic anxiety and distress that is oftentimes apparent in autism (Grandin, 2014). A common response to anxiety is the need to complete restrictive behavioral patterns. Some behavioral patterns may release tension and anxiety while others may be the cause. Restrictive behavioral patterns can include repetitive motor movements, ritualized patterns, fixated interests, and hyper or hypo-reactivity to sensory input (DSM-5 Diagnostic Criteria, 2014). These behavioral

patterns can be debilitating, resulting in a person sitting in the corner self-soothing by swaying back and forth and repeating idiosyncratic phrases. It can also be high-functioning, which may only include the insistence on keeping an organized schedule throughout the day. Although behavioral patterns are a self-developed outlet for the person with ASD to cope, other coping mechanisms can be introduced and learned (Volkmar & Wiesner, 2009). A person I work with exhibited a repetitive behavior of chewing on objects as a way of coping with stress, anxiety, and at times even boredom. This fixated interest consumed her at times to the point where she could not participate in any other activities as she was hyper-focused on the repetitive chewing. A coping mechanism was introduced in her therapy sessions and was also provided as a form of positive reinforcement. When she refrained from chewing on her clothes, backpack, shoes, and other objects in the room, she was rewarded with a chewy. This chewy was her favorite color and she was often excited that she was allowed to chew on something. The natural tendency of her repetitive chewing behavior aided in the creation of a coping mechanism that permitted her to exercise this behavior in a more positive manner.

Creating more educational opportunities for people with autism builds an avenue for appropriate social skills and behavioral patterns to develop. By working on individual goals in various settings, therapists and guardians hope to see generalization occur. Generalization refers to a “performance of skills across settings, personal situations, and time” (Myles, 2007, p. 353). In working with people with any developmental or mental disability, the outcome sought for in therapy and various exposures is generalization. An example of generalization is illustrated with the fictitious character Bobby. Bobby is unable to understand the appropriate time to enter a conversation unless his mother is

there to prompt him. Bobby would be able to generalize this skill by being exposed to more social opportunities with people at school, home, work and other settings to isolate the appropriate behavior without his mother present. The need for reinforcement in various settings is vital for understanding appropriate behavior and expectations for people with ASD (Myles, 2007).

Dance as a Therapeutic Expression

Dance therapy or movement therapy is a psychotherapeutic use of movement to further the cognitive, emotional, physical, and social integration of the mover (American Dance Therapy Association, 2009). Movement is an inherent outlet for some people with ASD and can be a learned coping mechanism that feels natural to them. Non-functional physical routines are a common behavioral characteristic people with ASD perform to ease anxiety (Dawson & Watling, 2000). One participant in this research study, Brett, accomplishes this by winding shoelaces through his fingers repetitively throughout the day. He keeps shoelaces in his pocket, throughout his room, and in the shower so he can complete this non-functional physical routine. It “eases his mind and relaxes his body,” his father stated to me in an interview (Randall, personal communication, October 25, 2014). Fostering this natural tendency through dance may enhance personal expression and reduce common frustration associated with the inability to express or communicate effectively.

Dance is a sensory-filled experience that may aid in easing excessive anxiety and frustration often found in the overstimulation of the senses. An atypical temporal lobe in an ASD cortex may assist in creating a Sensory Input Dysfunction (SID). This is defined as the “inability of the sensory system to interpret the sensory input coming in from the

environment in a manner that is usable” (Myles, 2007, p. 335). People with ASD may experience SID through the seven sensory modalities: the vestibular system, tactile system, proprioception, auditory system, olfaction, vision, and the gustatory system. These systems work together to interpret the senses the body experiences and then converts the information so the body can use it. A person experiencing SID may become overwhelmed when exposed to an overactive sensory system, as it is unnecessary stimulation that is difficult to interpret. I experienced an example of this working with a girl that is terrified of dogs. It is not the animal that causes the fear but the unpredictability of the noise when it barks. She has overstimulated auditory senses and unpredictable auditory activity is difficult to cope with. She plugs her ears until she feels the environment is safe again. Pairing overstimulated senses with under-stimulated senses may create a balance, bringing useable information back into the body. In order to accomplish this, an activity would need to occur involving multiple sensory work (Myles, 2007). Dance channels five out of the seven senses with ease. Tactile, vestibular, proprioception, visual, and auditory systems are exercised and explored in typical movement lessons. This leaves two sensory systems, taste and smell, which are not typically explored but could be added if needed. This research consistently exercises the five sensory systems to potentially ease overstimulated senses that cause difficulty in functioning (American Dance Therapy Association, 2009).

Proprioceptive sense memory is one of the senses responsible for internal functioning. It is a position sense that allows people to control body parts without looking at them. An example of this can be seen in a professional pianist that closes his eyes as he performs the intricate patterns of a music composition. He can still perform the music

because of the proprioceptive precision he has developed within the movement of his fingers (Surve, 2009). The proprioceptive sense is commonly undeveloped among people with ASD resulting in clumsiness and a lack of coordination throughout the body. The proprioceptive sense memory has been researched and explored since 1978. This memory was researched by Maureen Costonis through a movement exploration called mirroring. Mirroring is when two people face each other and perform the same movement simultaneously; illustrating the idea of one person being the other's mirrored reflection. In 1978, Costonis developed the Synchronous Movement Profile (SMP), which assessed changes that occurred within the body when synchronous movement, such as mirroring, was performed. Since then, researchers have used the SMP model and further discovered a direct relationship between viewing an activity and performing an activity. When viewing an action, the mirror neuron system contains neurons that fire an active response. If I were to watch someone throw a football, the neurons in my body would fire the same active response as if I had thrown the football myself. This neuronal response illustrates the potential benefits in completing a mirroring movement activity (Scharoun, S. M., Reinders, N. J., & Bryden, P. J., 2014). If the person with ASD does not reciprocate the exact joint positioning the instructor demonstrates, the above research could argue that the mirror neuron system is communicating the same activity to the ASD brain. Even though the movement may not look exactly the same in both people performing the activity, the neuronal response is firing to maintain senses and positioning recall while the person performs the movement exercise. This makes it possible for people with ASD to experience the full benefit of a therapeutic movement exercise even if their

proprioceptive sense is dysfunctional. Mirroring is a common practice used in Dance Movement Therapy (DMT) and will be discussed further in chapter five.

Alongside the potential benefits dance can bring to a person's social and mental well-being, dance can also provide a physical outlet that many people with ASD need. Research with teenagers has shown there are many benefits that come with increased physical activity for people with ASD (Pan & Frey, 2006). Studies have compared fit children to unfit children and found that exercise increased the growth of neurons and cell survival, enhanced memory and learning, and increased molecules involved in the plasticity of the brain. Fit children also demonstrated more efficient use of oxygen circulation throughout the body (University of Illinois, 2010).

Joanne Lara developed Autism Movement Therapy Inc., offering workshops for people with ASD and certification classes for teachers interested in becoming a certified autism movement therapist (AMT). Lara teaches how dance can potentially build social communication skills and illustrates this by emphasizing the anatomy of the autistic brain. The corpus callosum is a thick band containing over a million nerve fibers that divide the cerebrum into two hemispheres, right and left. The right hemisphere of the brain controls the left side of the body and is responsible for creativity, imagination, motor skills, feelings, and rhythm. The left hemisphere of the brain controls the right side of the body and is responsible for logic, mathematics, language, facts, and analysis. The corpus callosum contains nerve fibers that fire back-and-forth stimulating communication and collaboration between hemispheres. The corpus callosum is known to be smaller and even absent in the autistic brain. Because of this abnormality, tasks that require the partnership of the left and right side of the brain do not have as many connecting nerve

fibers to make collaborative tasks easy. Temple Grandin, an author diagnosed with ASD, and Lara have discovered that movement and music together exercise the visual, gross motor, and audio processing parts in the brain (Lara, 2011). Participating in activities that require full-brain collaboration encourages the brain to build connective tissue assisting in more efficient collaboration between hemispheres. An example of a collaborative activity Lara has researched analyzes the start and stop of music and the impetus to move when the music is on. The prompt for the movement lesson would be to dance when the music is playing and to freeze the body when the music stops. The right hemisphere controls the creative movement choices of the physical activity, and the left hemisphere processes when the music is on or off, recognizing the correct time to freeze. Lara discovered that the two hemispheres working together in this particular exercise helped with speech and language skills for people with ASD (Lara, 2011).

Cole Duggan, a dance therapist, explored specific movement patterns to aid in creating awareness and acceptance in the environment for a seven-year-old boy with ASD. Movement explorations were performed integrating opening and enclosing movement patterns. The opening movement involved the expanding of the upper body with the arms and torso to demonstrate openness to the surrounding environment. The enclosing movement showed a contraction of the body retreating into itself, typically resulting in rounding the upper body. When the boy performed the opening and enclosing movement explorations, the therapist observed an increase in his awareness of the surrounding environment. He accommodated the facilitator and other objects throughout the space with less prompts than in other movement explorations. Duggan also recorded an improvement in the participant's social behaviors and a decrease in emotional

instability, which often accompanies the exploration of a new environment. These movement patterns, opening and enclosing, will be explored in this study to potentially aid the participants in adapting to the new environment, decreasing the common anxiety that is paired with change. (Scharoun, S. M., Reinders, N. J., & Bryden, P. J., 2014). Further discussion of this movement tool and others will continue in chapter five.

Integrating Other Artistic Mediums

Making it Personal

As a person diagnosed with ASD, Temple Grandin has become a great advocate for autism and has provided insight to parents, professionals, and people living with ASD. Grandin says that the exploration of art saved her life (Grandin, 2014). The arts are where people with autism generally excel, and exploring an artistic medium is something that may come easy for them. Grandin created a collaborative documentary, *Generation A: Autism in the Arts*, celebrating people with ASD who excel in the arts. “Art is not a challenge for them. It’s something they can do. When it’s presented to them, they already have that gift to be able to organize their environment in an artistic way. Whether it be painting, movement, music, or sculpture, they are able to do it and get a positive benefit from it,” says Lara (2011) As in Grandin’s life, this study incorporates the artistic mediums of music making, drawing, and sculpting to enhance creativity and inspiration for dance.

CHAPTER 3

Pedagogical Framework

Interpretive Phenomenology

This research aimed to understand and interpret the participants' experiences through qualitative enquiry using interpretive phenomenology. Interpretive phenomenology encompasses the reflection on the life-world existential themes that allow researchers to reflect on how people experience the world. The four existential themes are, "lived space, lived time, lived body, and lived human relation" (Tuohy et al., 2013, p. 19).

The participants' difficulty in expressing their social, mental, and/or physical self, illustrated the need for interpretive phenomenology to understand the data. One of the participants, Lily, was nonverbal in most sessions, as she rarely said words and mostly voiced noises or rhythms. She occasionally repeated a word I said but the connection seemed to be echoic rather than a request or reflection. Another participant, Molly, was verbal and could provide feedback verbally but was limited in her ability to reflect. When asked if she liked moving more with the orange ribbon or the blue square immediately following the exercise, she responded, as she did to every reflective question, saying, "I don't know." The final participant, Brett, would be considered the highest functioning out of the three participants and could provide verbal feedback well. He could understand most emotions and identify if there was tension present in certain areas of his body. He could also make connections, critically think, and reflect verbally in movement experiences. Through interpretive phenomenology, I could interpret participants' experiences even though they were not capable of providing much written or verbal

feedback. Other mediums of reflection: direct observation, video recording, journal writing, parent interviews, and surveys assisted in providing more information for the reflection process.

Role of the Researcher

As the researcher, my role was to provide people with ASD a creative outlet to experience art and movement as a way of expressing themselves. I aimed to empower the participants to discover personal expression by exercising and edifying their social, mental, and physical well-being. I also assumed the role of a facilitator for movement explorations, teacher for movement concepts, and an observer.

A facilitator and teacher can be seen as interchangeable terms having similar meanings in some situations. In this study, the two terms promote an entirely different learning environment through the delivery and exploration. To explain the difference, I will use a teaching example with the dance movement, plie. The word plie means to bend and is commonly known in ballet as a bending movement at the knee joint. As a teacher, I would approach teaching a plie by demonstrating a plie, bending the knees, with my body and then asking the class to mimic the movement. If adjustments needed to be made then I would go and help the students so they physically reflected my movement. As a facilitator, I am focused on providing an environment where the students can construct their own meaning of a plie. I would begin the class with an improvisational exercise exploring plies. Each dancer would be encouraged to explore independently and focus inwardly, tuning into his/her own body. Verbal prompts would encourage the dancers to explore bending movement, plies, in all hinge joints in their bodies. The music, along with verbal prompts, would encourage various movement qualities: strong, delicate, light,

quick, slow, and heavy. These prompts would encourage the dancers to discover how plies can look different and feel different in the body. After the movement exploration the dancers would be encouraged to record their discoveries from the movement experience in their journals. All of the discovered information would assist in better understanding the movement, plie. Throughout the study, my role as teacher and facilitator was fluid and ever-changing. The approach varied with each session, participant, and exploration.

Observations were recorded during the sessions as well as reviewed after the movement sessions through a video recording. The parents provided verbal and written feedback in surveys after each movement session as well as two comprehensive surveys at the beginning and end of the workshop. The surveys recorded the parent's observation of the participants social, mental, and/or physical reactions to the movement exploration that day. Since verbal communication was difficult for most of the participants, parent feedback and the researcher's observations were the primary sources used to collect and analyze data.

Assumptions of the Study

It was assumed that the participants were not familiar with dance and would be uncomfortable being involved in the beginning of the study. Any change in routine brings anxiety to people with ASD, so the assumption that the participants would have difficulty adjusting was taken into consideration. It was assumed that the previously created and organized lesson plans would need to be evolved to meet the needs of each unique participant. It was a likely possibility that each person would require entirely different lesson plans to meet individual goals, needs, and behavioral challenges. In the surveys and interviews, it was assumed that the parents would be honest and not withhold

information even if it challenged the goal of the study. Since the study was volunteer-based and the participants' parents agreed upon their participation, it was assumed that the parent or guardian saw that the potential value from the exploration outweighed the risk.

Limitations of the Study

Working with children diagnosed with ASD had the potential of many limitations, given that they often experience outbursts, anxiety, attitudes, short attention spans, poor coordination, dynamic emotions, varying physical capability, and other behavioral patterns. Each participant had unique needs, and those needs changed every time I met with him/her. I never knew what to expect and was prepared to discard my lesson plan and improvise if the needs of the participant were not being addressed that day. In the workshop, two out of the three participants had a difficult time verbally expressing themselves and their needs. This resulted in frustration for the participant at times making me rely on the parent or guardian for the majority of the feedback and reflection. Since none of the participants could drive, the participants were reliant on their parents to remember the session, drive them there, and to be on time. The sessions were only 30 minutes long so if the parent was 5-10 minutes late it significantly impacted the exploration and material covered within the session. The space that was rented for the workshop was in a public city library, and since it was available to the public, the scheduling of the space was difficult. I tried to keep all sessions in the same room throughout the entire seven-week workshop, but we had to switch rooms for two session days. This change in environment caused anxiety in the participants, making some sessions seem unproductive. For some participants, it took an extra session to recover

from the change in environment. In retrospect, scheduling the session on a different day may have been a better option as long as it did not throw off another routine for the participants. Due to funding and scheduling conflicts, I had to schedule the sessions back-to-back, leaving no transition time between participants. As I was wrapping up with one participant's session, another child was knocking on the door waiting to come in. With the help of the parents, the organization of transitions between sessions did work out with practice. The back-to-back scheduling also made it difficult for me to transition from one person's specific needs and lesson plan to the next. I learned a lot about preparation and what I needed to do as a facilitator in order to accomplish all three sessions successfully. Typically, the room location served as a secluded, uninterrupted environment for each session, but an occasional screaming child, knock at the door, or other random disruptions did occur. This is difficult to avoid in most environments, but with attention spans that are already challenged, this proved to be an issue in some sessions.

CHAPTER 4

Methodology

Objective of Workshop Study

The objective of the workshop was to document three participants' experiences throughout a seven-week movement study. The lesson plans for each session created an experience encouraging individual expression through dance. The art mediums—music, drawing, and sculpting—were provided for further exploration and aimed to deliver more opportunity to connect and inspire movement expression. Past research has shown that expressive capabilities are available through movement exploration for people with ASD. Much of this research provided movement expression for people with ASD in a social setting, offering interaction and expression with a group of moving bodies (Lara, 2011). The research conducted in this workshop intended to build upon existing research by offering individual movement exploration in a one-on-one setting. The integration of art mediums intended to analyze whether incorporating various art mediums supported or hindered the individual movement expression. By involving a wide scale of participants, from low-functioning to high-functioning ASD, the study intended to assess the effectiveness of movement application in ranging abilities. The study intended to empower the participants to discover personal expression and in return aimed to exercise their social, mental, and physical well-being. By soliciting parent involvement through interviews and surveys, the study proposed to illustrate the potential impact on the participant's personal, home, and social life.

Participant Demographics

The participants were recruited by word of mouth through my family and friends. All three participants involved in the study knew me prior to the research study. Some participants knew me better than others, but all of them had met and interacted with me through family, friends, and my church community. The intention of choosing participants already familiar with me aimed to benefit the study by having some trust established prior to working with them. For people with ASD, controlling their environment is foundational in establishing a safe and comfortable place to be (Myles, 2007). Having any level of trust established prior to the workshop exploration served to alleviate some anxiety expected to surface with the new experience.

The age of the participants ranged from 10-23 years old. The age was not as important to the study as the participant's ASD severity. For example, if the 23-year-old participant involved in the study was the lowest functioning participant, his abilities may be less than the ten year old involved in the study. The severity of ASD was the focus when deciding which participants would work best for the research. I wanted to work with participants diagnosed at different severities on the spectrum scale, low functioning to high functioning, to see if the severity of the ASD had an impact on the efficacy of the movement experience. The Institutional Review Board (IRB) approved the study to allow participant involvement. After receiving approval through the IRB, participants were contacted, and written permission was obtained through the legal guardian of the participant prior to the study. The three participants chosen were Brett, 23 years old; Molly, 10 years old; and Lily, 10 years old.

I knew Brett the best out of the three participants since I worked as his respite care provider for three years. I knew of the behaviors and idiosyncrasies he worked with daily and had developed a strong, trusting relationship with him over the years. Brett enjoys telling stories, reading about business and accounting, and writing. Although change creates anxiety for Brett, I knew he would put great effort into exploring and experiencing what the workshop had to offer. He tries to maintain a positive outlook about life in general. I knew that he would embrace each lesson plan, trusting there was something positive he could gain from the experience.

I worked with Molly as her habilitation care provider for a year prior to the research workshop. As a habilitation care provider, I receive insight on specific goals—short term and long term—the child is working to improve in his/her personal, home, and social life. When working in habilitation, I meet with the child one-on-one and build skills to help achieve personal goals. By working with Molly in habilitation care, I developed insight about her typical behaviors and tendencies associated with ASD. In previous situations, she had difficulty with impulse control, staying focused, and following through on tasks. Sometimes she would change her mind before we even began the activity she previously requested. For example, I was working with Molly at my home, and my baby, Brigham, was home with us as well. Molly wanted to go for a walk with her baby dolls in a small stroller like the one Brigham rides in when we go out. Molly and I prepared for a walk by gathering strollers, sippee cups, and baby dolls, buckling the dolls and Brigham into the strollers. We exited out the front door of my home, Molly first, pushing the stroller in our front walkway. Before I was able to get out the front door and shut it, Molly said, “I don’t want to go for a walk anymore. Let’s go

play house.” With all the effort we put into preparing to go on a walk, I always encouraged her to follow through on the task we had prepared for. Sometimes this encouragement would end in us taking the walk, but other times she refused and wanted to move onto the next idea. Like Brett, Molly has difficulty with change, and I expected that changing her routine for the workshop would cause anxiety. She is a happy girl that is known throughout the neighborhood for her sweet smile. Judging by her character, I expected her to try hard to work through her behavioral tendencies but also expected those tendencies to rule at times, overpowering the movement exercise and objective.

I knew Lily from our local church and had observed her behaviors and conversed with her sporadically in the children’s church classes. I did not have a previous working relationship or personal relationship with Lily like I had with Molly and Brett prior to the workshop. I knew very little about her besides my observations of her physical and behavioral characteristics at church. Lily toe walks, equinus gait, which is a behavior associated with autism linked to a dysfunction in the vestibular system. This system provides the brain with feedback on the body’s position and movement. It can also be associated with neurological immaturity (Edelson, n.d.). She always has a happy glow in her countenance, walking around on the balls of her feet with her focus remaining inward. She oftentimes looks down or away when a person is speaking to her. Her mother explained to me that she also has a difficult time communicating verbally. Although I was unsure of her exact abilities, I knew verbal communication through prompts would be difficult for her in the workshop.

Space and Time of Workshop

The space chosen for the research study was a room located in a public library in Queen Creek, Arizona. The library and recreation annex rents out available space to members living in the community. The space for the study was small in size, 15 ft. x 20 ft. but was sufficient for the individual sessions. The sessions took place after school every Tuesday and Friday and extended over a seven-week period. Each participant completed 13, 30-minute movement sessions.

Documentary and Sharing with Families/Committee

At the end of the seven-week workshop, the recorded sessions, interviews, and reflections were compiled into a short documentary to share with the families of the participants as well as my committee members. Keeping the workshop session consistent was important for the participants to maintain a safe and comfortable environment to experience the material to the fullest. Because of this, no family members, peers, or committee members visited the workshop sessions. With the participants' honest effort to attend the sessions twice a week and their parents' dedication in completing surveys and transporting them back and forth, I wanted to provide a way for everyone involved to see a culminating product of the experience. The video was created and made available on a shared website for the families and committee members to see the experience and share it with family and friends.

Data Collection

Data collection for the study involved direct observation, discussions, interviews, journal reflection, drawings, sculptures, video reflection, post-session surveys, and pre- and post-workshop surveys. Every session was video recorded to provide me with further

insight on each participant's experience. Some participants required my full involvement throughout the sessions, making direct observation difficult at times. The ability to review the session later and see each participant's reaction to the material provided specific data on what was working and what needed to be altered. Drawings, sculptures, music composition, and movement exploration provided visual and audio material that contained immediate feedback. Based on his/her artistic creation, I used that information to either provide further prompts encouraging a different outcome or positive feedback rewarding the completion of the task. One participant, Brett, found joy in reflecting through writing. As a part of his reflection process, a journal was distributed to him to record thoughts, feelings, drawings, and anything else he wished to record after each session. Brett wanted to compile his observations into an overall reflection of his experience. This reflection is shared later in chapters six and seven. The other participants were not able to read or write, so reflecting through journaling only worked well for Brett. Molly was able to participate in some discussions and interviews but, as mentioned, her ability to express herself verbally was limited. She could respond to a question with a yes or no and could sometimes provide feedback on what she enjoyed about a specific experience. She loved to tell stories, and a reflective answer would oftentimes get lost in another story or side-tracked thought. When trying to redirect back to a question, she would ignore it and change the topic until the question was either dropped or a yes or no answer would suffice. In discussions and interviews with Lily, she could typically respond yes or no to questions and would also repeat sounds and occasional words I said in an echoic manner. Speaking past a yes or no was difficult for her, and we never had a verbal conversation throughout the seven-week workshop. Parent

surveys, discussions, and interviews provided information on the impact of the sessions on the participants' personal, home, and social life. The parents completed a pre-workshop survey prior to the start of the workshop and a post-workshop survey after the workshop was completed, with similar information being assessed for comparison. The parents also completed a reflection survey after each session (13 total), analyzing the participant's behaviors before and after attending the session. The feedback received from the parents paired with the facilitator's observations provided the majority of the information for analysis.

Data Analysis

The data was analyzed comparatively and holistically. The comparison of the means between the parents' pre- and post-workshop surveys was analyzed through a paired T-test. A paired T-test quantitatively analyzes the difference between two related variables to see whether the difference is significant or not. This quantitative analysis provided statistics on whether a significant change occurred in the listed ASD behavioral characteristics: attitude, anxiety, confidence, eye contact, listening, verbal communication, making decisions, following directions, creativity, and coordination. The qualitative data collected for each participant was analyzed holistically to identify common themes and connections that would otherwise be missed through comparative analysis alone (Mason, 2002). Analyzing this data qualitatively allowed the researcher to look behind the numbers and see the richness of the expressive experience. Analyzing the whole is always understood to be greater than the sum of its parts (Burgess & Bryman, 1999).

The participant's experiences were categorized into four main categories: *social expression, physical expression, emotional and mental expression, and creative expression.*

CHAPTER 5

Session Development and Pedagogical Methods

Introduction

In the creation of the lesson plans and objectives for the seven-week workshop study, I was interested in how the plans needed to be evolved over the 13 sessions. Through prior research and experience with people with ASD, I knew each person's abilities, needs, and triggers were unique (Grandin, 2014). The likelihood of the same lesson plan working for all three participants was doubtful. However, prior research with dance and autism has shown common movement concepts that may help engage most participants with ASD when applied. Rocking motion and pauses integrated into movement are used in dance therapy practices with the intention to activate the whole brain during the exercise (Lara, 2011). Mirroring exercises have shown significance in building social skills by aiding in the understanding of social cues and empathy in others. (McGarry & Russo, 2011). Exploring opening and enclosing movement can help prepare students to be more accepting of change. Discovering the participants' psychological kinesphere may aid in acknowledging tendencies as well as avenues for potential development (Hackney, 2002). All of the above movement concepts were integrated into the lesson plans for the session to see if any were effective in promoting self-expression.

Creating a safe environment is another element that needed to be addressed in delivering the lesson plans and objectives. Building material that was student-centered in an adaptable environment helped achieve this goal and meet the unique needs of the participants. A constructivist pedagogical approach was applied to maintain a student-centered environment focused on student-led construction and exploration throughout the

study. This created an environment that allowed each participant the ability to construct his/her own knowledge in the process of self-discovery and expression.

Constructivism

To create an environment that promotes self-discovery, reflection, and expression, a constructivist pedagogical approach was applied throughout the sessions. In an interview, Randall Gray spoke to me about the importance of a person with ASD constructing his/her own knowledge. Gray is the CEO for Marc Community Resources, a company that provides opportunities for people with behavioral health and developmental disabilities, and has served as a powerful voice for this population for over 45 years. Gray told me a story about his son, who is diagnosed with ASD, and their experience commuting to and from work together. His son asked his dad the same question every day regarding the construction of a building on the side of the freeway. Every day Gray would respond to his son's question, explain the history of the building, the company, and the business that would move into the building upon completion. He and his son would then continue the conversation about the building until they arrived at work. On their way home from work, they drove past the building under construction and his son asked the same question as if the conversation that morning never happened. Gray would tell his son again about the building, company, and business, hoping the repetition would aid in his cognitive understanding. After repeating the same conversation every morning and afternoon for several weeks, Gray decided to try something different. When they drove past the building and his son posed the same question regarding it, Gray posed a question back to his son. "What do you think it is?" Gray asked. His son paused and then constructed his answer, including the information discussed on previous mornings

regarding the building. Gray and his son continued to pass the building in their commute to work, and the conversation was not brought up again. Gray was shocked. It was not until his son was asked to reflect and construct his own knowledge about the building that he felt he understood. Using the pedagogical approach of constructivism encouraged reflection and the ownership of new knowledge for the participants. This approach also promoted participants to stay actively engaged in the movement session, physically and cognitively (Workshop: Constructivism as a Paradigm for Teaching and Learning, 2004).

Exercising Agency

Participants were provided with multiple opportunities in each session to make choices allowing them to maintain control over their environment. A maximum of four choices were given depending on the participant, session, and prompt. Some participants could only follow through with a decision between two choices as four required too much processing. Exercising agency empowered the participant to own his/her response to the prompt and encouraged the choice to follow-thru on making his/her decision. Helping someone to understand he/she has the power to determine the outcome also affects his/her attitude in approaching the exploration (Taylor, Lord, Bond, 2009).

Creating a Safe Space

While constructing the lesson plans and pedagogical methods, I also needed to consider ways to establish an environment that translated to a safe, consistent space for all participants. A common source of anxiety among people with ASD is the need for sameness and consistency (Grandin, 2014). Developing consistency throughout the workshop was imperative so that the exploration of new things was not anxiety driven. To help in the creation of a safe and consistent environment, the sessions began and

ended with the same exercises throughout the entire workshop. They were predictable and intended to fulfill the need for sameness in the sessions. When the participants arrived to the session, they were greeted with a familiar, consistent movement exercise to prepare them for an exploration of something new. After exploring a new concept the session ended with a familiar cool-down exercise allowing the mind and body to return back to a familiar, safe place. Most of the time this approach was successful, but there were sessions in which the participants demonstrated high anxiety and could not handle the exploration of a new concept. In these sessions, new concepts were not introduced and only the familiar exercises were performed to maintain a trusting, positive environment.

Positive Reinforcement

Positive reinforcement is a powerful behavioral tool used to reinforce positive behavior. It can help increase working memory in children who have ASD and also helps create a positive atmosphere when applied (Baltruschat, 2011). It can be used in various ways but was applied in this study by reinforcing good effort in completing a task. Oftentimes, a participant would get sidetracked with other things in the environment and had difficulty focusing and following through on a specific prompt. When the participant applied effort toward a prompt or a social cue was provided, such as eye contact, a positive comment such as, “Yay! Thank you for seeing my eyes, Lily! Now can you copy my shape?” Positive reinforcement served as a behavioral tool to motivate the participants to stay present with the hope of receiving another congratulatory response.

Lesson Plan Construction

A set of lesson plans was created for committee approval prior to the workshop start date. Upon approval, the lesson plans served as an example of potential explorations each participant could use to further his/her personal expression. Concepts were built from these plans to begin the exploration with each participant. If the participants reacted favorably, then the movement concepts became part of a consistent and predictable class outline to help establish a safe environment. Somatic exercises, mirroring, apparatus use, and the exploration of other art mediums were applied to see if any resonated with the participants.

Somatic Practice

The exploration of a somatic exercise was offered to participants providing them with another opportunity to discover expression in the body. Somatic exercises are participant-directed and work with the idea of connecting the body and mind together, developing a deeper sense of self and its relationship to the environment. To aid in understanding oneself and his/her relationship to the environment, somatic exercises can aid in understanding personal kinesphere. A kinesphere can be defined as a mover's personal space surrounding the body. A kinesphere can be determined physically and psychologically. The physical kinesphere is the distance that can be reached around the entire body without taking a step. The psychological kinesphere is the space the mover senses within himself/herself or the space that is actually affected (Hackney, 2002). In this study, the participants' psychological kinespheres were interesting to witness. A common behavior associated with ASD is the overstimulation of tactile senses, which causes fear and anxiety when establishing physical contact with people and/or objects

(Myles, 2007). As a result of this behavior, a person's psychological kinesphere may be very large to create a great space surrounding him/her that can be controlled. This can be related to the common saying that someone is, "invading my space", or "in my personal bubble". Each of the participants had a clear psychological kinesphere, which informed me of how the explorations needed to be constructed to maintain a comfortable environment. In the workshop, Molly had a very large psychological kinesphere and showed signs of anxiousness if I came within five or six feet of her. If her baby dolls were present in the session, her personal kinesphere also included them, and the same anxiousness was exhibited if the babies' space was challenged. As later explained in chapter six, I developed an exercise that explored the relationship of her body and the space surrounding her. At times her psychological kinesphere was altered during the exercise and she was able to be closer to me and other objects in space showing no signs of anxiousness.

Exercises derived from a somatic practice, ideokinesis, were offered in each session to see if the exercise engaged the participant favorably. Ideokinesis focuses on providing imagery to enhance movement exploration. There is substantial evidence that ideokinesis enhances movement expression and the kinesthetic knowledge of the body. In this study, ideokinesis was explored with the application of anatomical imagery, creating awareness of certain body parts, and embodying images to better sense movement potential (Williams, 2011). Brett responded well to a somatic exercise that included anatomical imagery bringing more awareness to specific body parts. Brett habitually holds a lot of tension in his shoulders. Oftentimes, this tension is visible as he does not release his shoulders and allow them to drop down in a more relaxed position. For work,

Brett types at a computer and said that he feels like he “lifts his shoulders up by his ears” most of the day. This tendency was visible in the workshop sessions as well. At the beginning of each session, Brett laid in a constructive rest position, a common position in somatic practices, to help release tension in the body. The constructive rest position consists of three major steps: 1) lie on the back on a firm surface; 2) elevate knees so they are pointed to the ceiling and apart aligned with hip bones; 3) create light support under the head (Williams, 2011). Brett enjoyed lying on his back for the somatic exercise as he felt the position allowed him to release a lot of tension in the body. We kept experimenting whether or not to elevate his knees and add a small support under his head. While these concepts are exercised to promote further relaxation typically, Brett felt that elevating the knees and supporting the head inhibited his relaxation. He preferred lying on his back, legs extended, and sometimes with a blanket under his head. When in the adapted constructive rest position, Brett closed his eyes and followed the verbal imagery I said to him throughout the exercise. I had Brett complete a body scan starting with the top of his head, mentally scanning through every part of his body down to his toes. Once he hit his toes he would complete the body scan back up his body to the top of his head. I named body parts to help guide his scan and keep him focused in the exercise. During the body scan, if he discovered an area of tension or tightness, he was coached to take a deep breath and direct that breath toward the tension, visualizing it dissipating with his exhale. He enjoyed this exercise and shared further insight on how he now enjoys completing this exercise at home when he feels excess tension or stress. His full written reflection is shared later in chapter six.

Imagery was also used to help the participants sense movement potential more fully throughout the study. Images were used to assist Molly in experiencing different movement qualities. Molly's natural movement vocabulary consisted of quick, small movement, and when prompted with words to move differently she had difficulty grasping other movement qualities. To challenge Molly to move differently, I gathered different props and images and placed them in the 'discovery bins' for her to explore. The 'discovery bins' were plastic containers provided in every movement session containing new explorations for the participant to choose from. The 'discovery bin' exercises were student-led and they chose what bins they wanted to explore and for how long. For this particular session, I placed peanut butter and pictures of people swimming in deep water in one of the bins. We talked about what Molly's dancing would look like if she were dancing in peanut butter or water. Describing words like slow and gooey came up when talking about movement with these images. Molly then illustrated the words slow and gooey in her body challenging her body to move in a new way. The imagery of moving through peanut butter and water provided more information than words alone for Molly to complete this movement exercise. She enjoyed the use of imagery and it typically had a positive impact on her explorations.

Mirroring

Mirroring is a practice used in dance therapy to build social cues and enhance empathy (McGarry & Russo, 2011). To explore mirroring, the participant faced the instructor and mirrored the movement as it was simultaneously performed. This exercise intended to create participant awareness of the instructor's body language, shape, timing, and the effort explored. Mirroring exercises were used in all of the participants' warm-up

and cool-down sequences and were also a movement outlet when verbal cues were not understood. Similar to other disabilities, when working with people who have ASD, there are good days and bad days. This occurred in the sessions as some days were just bad days for the participants. Verbal cues were not being recognized and the only way the participant would engage was through a mirroring exercise.

Mirroring also intended to build the participants' proprioceptive senses as they had a specific shape they needed to kinesthetically create. As explained, a common behavior apparent in people with ASD is a dysfunction in the proprioceptive senses. The receptors for these senses are located in the muscles, joints, ligaments, tendons, and connective tissue. It is what communicates joint and body positioning to the brain for a complete understanding of shape and movement throughout the body (Myles, 2007). One of the participants in the study, Brett, rolls and sprains his ankles often since his coordination is challenged in various settings. This can be a common situation for people with ASD. The use of mirroring exercises challenged the participants to mimic the exact shape I performed in their bodies. This task required joint recognition and kinesthetic awareness of the body in relationship to the space.

Apparatus Use

The use of apparatuses, or props, is common in therapeutic settings for people with ASD as a means of channeling what information speaks to the individual. Props were used in the study to enhance the senses in the body: kinesthetic, visual, and auditory. Musical instruments were provided to explore texture and sound. Drawings, sculptures, fabric, ribbons, balloons, tape, colorful tubes and other props were offered to stimulate visual senses and provide further feedback to enhance the participant's

exploration. Embodying specific characteristics of a prop was encouraged in some settings to help stimulate kinesthetic awareness of certain qualities and shapes. Overall, the use of apparatuses in the study intended to provide an additional outlet to explore creativity and enhance personal expression.

Lesson Objective Construction

The lesson objectives outlined a specific behavior or goal that changed weekly in the study. The primary goal of the exploration was to discover and exercise the participant's personal expression, but other concepts were added to potentially aid with common ASD behaviors. The objectives aimed to organize behavioral skills that could be exercised and developed from the exploration. The objectives outlined potential for physical and cognitive embodiment by applying movement that could exercise behaviors along with expressing the body. Each week's objective paired a movement concept with a cognitive concept. Just as each participant is unique in his/her abilities, lesson objectives were altered to meet the needs of the individual.

Lesson Objectives

Week 1- Discovering Body

Week 2- Building Confidence

Week 3- Exercise Decision-Making Skills

Week 4- Understanding Emotions and Body Language

Week 5- Following Directions

Week 6-7 Social Awareness and Interaction

CHAPTER 6

Results

Introduction

As stated in chapter four, the data for the study was compiled from various observations, interviews, and surveys. The quantitative data was analyzed comparatively and the qualitative data holistically. The qualitative data was organized and will be illustrated in four main categories: *social expression, physical expression, emotional and mental expression, and creative expression.*

Quantitative Results

Comparative Analysis of Pre- and Post- Survey Results

A quantitative analysis compared the pre- and post- workshop parent surveys for each participant to determine whether an overall significant change occurred with these behaviors: anxiety, confidence, listening, attitude, eye contact, verbal communication, making decisions, following directions, creativity, and coordination. The two surveys listed the 10 behaviors on a Likert-scale of 1-5 (5-Excellent, 4-Good, 3-Neutral, 2-Poor, 1-Very Poor). The parent was to circle the number that best represented the child's embodiment of the behavior at that time.

The specified level of probability, alpha level, chosen to measure significance was .05 meaning the likelihood of a significance occurring by chance was 5 in 100 ($p < .05$). A two-tailed t-test was used to measure the type of significance that occurred, whether it was negative or positive. For each participant's pre- and post-test, the mean and standard deviation was determined and recorded for reference. The mean for each test illustrated an average between the recorded numbers of the test. The standard deviation score

determined if the numbers on the test were similar in score or varied. A low standard deviation score indicated the numbers in the test were similar and close to the mean. A high standard deviation score reflected numbers that were spread out and varied in values. The value p reports the critical t value. If the value of p was lower than the obtained value of t , the null hypothesis was rejected and the results were significant. If the value of p was higher than the obtained value of t , then the null hypothesis remained and the results were not significant. The df value illustrated the degrees of freedom.

The results recorded in the posttest for Molly (M=3.9, SD=.54) showed significantly higher levels of improvement in the behaviors after completing the seven-week workshop (pretest Molly (M=2.4, SD=1.1), $t(10)=4.88$, $p=2.26$, two-tailed, $df=9$.) The posttest for Brett (M=3.8, SD=.74) showed significantly higher levels of improvement in the behaviors after completing the workshop as well (pretest Brett (M=3.2, SD=1.16) $t(10)=2.25$, $p=1.83$ two-tailed, $df=9$.) The posttest for Lily (M= 3.4, SD=1.11) recorded no significant levels of improvement in the behaviors after completing the workshop (pretest Lily (M=2.9, SD=1.37), $t(10)=1.16$, $p=1.83$, two-tailed, $df=9$.) The two-tailed t-test also determined that there was no significant difference between Lily's pre- and post-test scores either way. This means that the study did not significantly impact Lily negatively or positively according to the scores recorded.

The scores from the pre-test and post-test were combined to determine an overall significance between the 10 recorded behaviors: anxiety, confidence, listening, attitude, eye contact, verbal communication, making decisions, following directions, creativity, and coordination. Further testing could be completed to determine the significance the workshop had on a specific behavior comparing the pre- and post-test scores recorded for

each behavior. Additional connections are made in the conclusion comparing quantitative and qualitative results.

Qualitative Results

Social Expression

Throughout the study, the movement explorations offered many opportunities to exercise the participant's social expression. The one-on-one instructional setting offered a safe space to exercise skills for socialization without having to manage an overwhelming, overstimulated environment with many people. Each of the participant's parents appreciated the one-on-one atmosphere as they felt it provided their child with more potential to improve social expression within the focused setting. Over the course of the study, participants demonstrated improvements in communication and decision-making skills, which were embodied in the workshop and at home.

Communication

An increase in awareness and expressive nature in the participant's listening, verbal, and body language skills were observed throughout the study. I questioned if the improvement stemmed from the application of movement concepts in the sessions or from the participants settling into the new environment. Feedback from the parents confirmed my observations that the awareness and expressive nature had changed in each participant throughout the study.

Brett

Brett's communication was already considered high-functioning prior to the study. His verbal expression is advanced as he was commonly able to express his feelings and experiences sufficiently. He enjoys writing and was given a journal to assist his

reflection process by recording his thoughts on paper. Since Brett's verbal and writing skills were so high, I focused on enhancing his listening skills by encouraging less talking and quicker action in the movement sessions. I observed that Brett's natural reaction when a prompt was given was to excessively talk it out before moving. The excessive talking seemed to promote over-analysis; this anxiety paired with speech could be discouraged by moving first. The tendency for overanalyzing is a common behavior with autism as the unknown often causes anxiety (Myles, 2007). Sensitivity was required in exercising a new way to approach understanding in this area. To accomplish this task, I gave Brett one prompt at a time so he could practice moving immediately after the prompt was given without overanalyzing it. Brett was typically able to follow through with three prompts at a time so the intention of narrowing down the information to one prompt was to promote quicker action with an easier task. By the end of the study, we worked up to two prompts at a time without excessively overanalyzing the tasks. I feel that Brett embraced this challenge and his listening skills improved in this exploration.

Molly

Molly's improvement in communication was largely seen at home. Her mother excitedly reported changes she had seen in Molly from week to week and shared her overall reflection in the post-workshop survey.

The thing that stuck out to me most over the six-week sessions was that when Molly came home she was content. She was able to sit down at the table with us and not get up and down 20 times. She was also able to participate in a conversation with my other daughter and myself without being anxious and interruptive. I feel she was able to think more clearly and when speaking, her thoughts were more on topic.

The sessions provided a way for Molly to unwind so she was more present and less anxious in conversations. I saw Molly's verbal communicative skills improve in certain areas throughout the study. Molly has a difficult time reflecting and sharing her feelings on past experiences. When asked a question reflecting on the past such as, "Did you like moving with the green tube or the blue star more?" her common response was, "I don't know." Occasionally with further prompting, she would respond with a one-word reflection. She would answer most yes-and-no questions, but the typical response to an open-ended question was, "I don't know". In the workshop, I observed an increase in Molly's verbal skills while she was moving in a mirroring sequence. While performing this sequence with me, she could articulate herself in a more clear, complete manner. She gave complete answers to my questions, told me stories about her day, and stuck to the conversation topic longer.

Lily

Lily's mother reflected in the post-workshop survey how Lily's emotional contentment aided in more effective communication between her and her family. Her mom said, "I think she was very happy after the sessions which made it easier to get information from her." Lily's verbal communication skills are "not good" her mother explained. She speaks minimally at home, typically only when she wants something. In the sessions, Lily said less than 10 words in the seven-week period. The majority of the words vocalized were "no" which was her typical response when I asked her to make a choice. Since Lily's verbal communication was not strong, I had to rely on other information to measure how the experience was progressing for her. Lily is very expressive in her body language and facial expressions. While her eye contact is poor at

times, it is clear when she is engaged or disconnected. The best communicative feedback from Lily was her little giggles when she was enjoying the exercise. She is a happy girl and expresses this happiness when she enjoys something.

Lily's reaction to verbal prompts increased positively throughout the study. During the first four weeks of the study, she needed multiple verbal prompts before a physical response would occur. Her average reaction time after a verbal prompt was given was approximately five seconds. By the end of the workshop, Lily was able to act within three seconds of receiving a verbal prompt. Getting used to the environment and movement phrases probably played a large role in the improvement of her listening skills and reaction time. Over time, the foreign environment was less stimulating, thus allowing her to focus on the session material more.

Decision-making

Over the course of the study, some participants demonstrated an ability to follow thru and complete tasks with less effort. Some participants also exercised the ability to make decisions more quickly and followed thru on his/her decision. Movement served as a medium to exercise decision-making skills potentially improving social expression.

Brett

Brett's parents indicated in the surveys that he has difficulty processing the information needed to make a decision. I observed this in the workshop with his tendency to overanalyze the details in the prompts I gave him. In addition to encouraging Brett to move before he speaks, we also worked in a self-guided atmosphere requiring minimal verbal prompts for direction. An example of this was when we explored spatial pathways in week three. After exploring and demonstrating three different spatial pathways:

straight, curved, and zigzag, I gave Brett tools to explore further without the typical guidance from me. I laid down six pieces of paper, each containing two spatial pathways and two locomotor movements on the underside of each page. Brett was encouraged to pick a paper, flip it over, and choose which pathway and movement he would like to experience. He directed the exploration. While verbal brainstorming still occurred, the extent of analytical talking was less in self-guided explorations such as this.

Molly

Molly's dual diagnosis of ADHD and autism, makes it difficult for her to follow through on decisions. Oftentimes distractions occur before she successfully follows through on a task. When exploring mirroring movement exercises, I found that doing the same movement in each session was too predictable for Molly. I lost her attention. While the other participants enjoyed the sameness of the movement explored in the exercises, Molly needed the mirroring movement to be less predictable. I kept the same movement concepts for Molly in the mirroring exercises such as opening and closing and shifting weight forward and backward but continually switched the order so it became unpredictable for her. She would giggle at the unpredictability of the phrases and maintained her attention to the three-minute warm-up and cool-down exercises with little distraction.

Lily

Lily resisted making decisions in the first four sessions of the workshop. I created "discovery boxes" that had special props to further explore a movement concept. As part of this exploration, the participant was required to make choices about which box and what items to explore first. Each time she was prompted to make a choice between two

boxes she replied, “no”. I kept verbally prompting her with the same question until she pointed at a box making a choice. In this situation, she was intrigued by the boxes and wanted to explore them but was resistant to making the decision. Lily became more comfortable making choices with less resistant “no” responses during the last three weeks of the workshop. I see this improvement as an indication that she was becoming more comfortable with the session explorations and environment.

Physical Expression

The movement experiences in the workshop allowed the participants to find expression in their physical self by exploring physical activity in a creative way. Their physical expression was explored by exercising coordination, proprioceptive senses, mirroring, movement qualities, and spatial awareness. The participants’ overall physical expression showed an improvement with repetition of the exercises.

Mirroring

As mentioned above, the proprioceptive sense of the body can be skewed for people with ASD resulting in difficulty reciprocating a mirrored reflection. Over the seven-week study, each participant showed an improvement in his/her joint reflection shape and timing throughout mirroring exercises.

Brett

Brett’s kinesthetic sense of body positioning was fairly accurate prior to the workshop study. In the first session, he was able to mirror movement with accurate shape and also appropriate intensity or movement quality. Where Brett could improve was in his coordination and allowing the body’s alignment to assist movement tasks with less strain and effort. Some of his joints, including knees and elbows, were hyperextended and

outward torsion was also apparent in his knee joints. This hyperextension and torsion in the knees affected his gait and his ability to understand limits within the joints.

Continually pointing out appropriate alignment when stretching and in constructive rest position served to further his understanding and prevent unnecessary tension within the joint. By the end of the study, the repetitive feedback on alignment promoted self-awareness and reflection with fewer verbal prompts.

Molly

Molly's tendency when mirroring was to reflect the movement on the opposite side. When I would clap my hands leaning to her right, she would clap her hands leaning to her left side. I reinforced the correct side with verbal prompts such as, "this side," or "to your left, to your right" to increase her awareness. By the end of the study, Molly required less verbal prompts to perform the appropriate reflection when mirroring.

Lily

Lily embodied an accurate understanding of mirroring and completed the exercises reflecting the same timing as demonstrated. Where Lily was able to improve was in her kinesthetic awareness of how big or small the movement translated in her body. In the mirroring exercises, I would show a vast stretch in the wingspan of my arms by extending them fully to the left diagonal and then to the right. Lily's reflection of this large movement was completed on a smaller scale, pinning her upper arms to her side while her lower arms illustrated the diagonal angles to the left and right. Exaggerated verbal and physical prompts were given to cultivate larger movement with her. I would say, "Stretch your arms real big" to her to encourage her to explore a larger kinesphere. Lily's usual reaction when I overemphasized movement was to giggle. In the last three

sessions she showed an improvement in following prompts to make the movement larger when mirroring.

Spatial Awareness

Throughout the study, many spatial explorations were offered to establish awareness of the surrounding environment for the participants. Some participants benefitted from verbal cues while others preferred visual cues to explore and develop their spatial awareness.

Brett

To calm Brett's anxiety, his routine is to walk specific spatial pathways, while winding a string throughout his fingers. The spatial exploration accompanied with the string movement provides him a mental outlet where he can cope with his environment. Knowing of his routine prior to our spatial explorations, I was interested to see how he responded to spatial pathway explorations in the sessions.

In our spatial pathway explorations, Brett became obsessive about performing the pathways perfectly. In one specific exercise, he drew his own spatial exploration on a piece of paper illustrating the space he would travel throughout the room. He referred to the piece of paper and walked the outlined drawing, translating the lines into a spatial exploration. After moving through the pathways, he insisted on trying it again because he did it wrong. The picture in his mind was not translating with exactness in his body, and it was bothersome. After completing the same exercise five times, I encouraged him to move onto the next exercise. With a little resistance, he moved on but continued to bring up the frustration throughout the session. Three weeks later during our last session of the workshop, I opened up the session for a free exploration. I asked Brett if there was

anything that he would like to explore again. I was shocked when he asked to try the spatial pathway exercise again because he never completed it successfully. He still remembered the picture he had drawn, and we worked on completing it. By the end of the session, he felt he performed it well enough that he could leave the exercise and feel successful.

Molly

In contrast to Brett, Molly had difficulty with precision when exploring specific pathways. In one session, we emphasized the pathways by putting tape on the ground. There was a straight, curved, and zigzag pathway available to explore. Molly followed the tape best when I was moving right alongside coaching her. If I deviated and did not provide continuous feedback she started jumping line to line, hopscotch style. Since she was having difficulty grasping the pathway exploration, I applied imagery to assist in executing the exercise more precisely. We pretended we were walking on a bridge and the carpet was hot lava. Staying on the tape was more interesting when the imagery was applied, and Molly found joy experiencing it in the pathway exercise.

While observing Molly in habilitation, her tactile sensitivity is clear. She does not like it when someone or something initiates physical contact with her. If she initiates the contact and maintains control, then she seems less anxious about having a connection. In Molly's sessions, we explored a circular pattern coming closer together making a small circle and then moving farther apart making a large circle. We never made physical contact, but rather exercised the spatial awareness between us by directing focus to our continually changing relationship. I watched her behaviors to ensure that her anxiety during this exploration was not too much for her. As the weeks went on in the study, the

small circle seemed to bother her less in each session. By the end of the study, her reactions were not as extreme, and she kept her smile throughout the exploration.

Lily

After a few sessions of working with Lily, it was clear that visual cues were more effective than auditory cues. Spatial pathways were explored earlier in the workshop and encouraged with auditory prompts. I learned through this experience that auditory prompts were not an effective way to share information with Lily. I tried several other ways including walking, singing, and tracing a shape on the ground with my finger to demonstrate pathways to Lily. When I began outlining pathways on the ground with tape, she immediately began following it. With the visual cue of the tape, she followed the pathways with precision and patience, not leaving the line.

Emotional and Mental Expression

Emotional and mental expression can be challenging for people with ASD. The common themes related to emotional expression in this study included mental presence and overall emotional well-being. A common behavior associated with ASD is the difficulty to stay focused and not drift off with the imagination (Myles, 2007). The term “mental presence” encompasses the participant’s ability to maintain focus and attention.

Mental Presence

Brett

Brett exercised mental presence well throughout the sessions. Occasionally, his eyes began to glaze over, reflecting that his focus was dissipating. Applying a verbal prompt such as, “Are you with me still, Brett?” helped him to regain focus on the task he was working on.

The exploration of music was an effective tool to help Brett stay present in sessions. I played recorded music, both familiar and unfamiliar to him, aiding in different movement experiences and music exploration. Brett also explored music by playing the piano, tambourine, maracas, harmonica, and the flute. The diverse opportunities in exploring music and movement aided to maintain presence and creative involvement throughout the sessions.

During the final two weeks of the workshop, Brett continuously asked if he could bring his own music to try with our warm-up exercises. Because of his ability to adapt with previous music choices, I allowed him to bring his own music to try with the warm-up exercise. As mentioned in chapter five, Brett began class with a somatic exercise in a constructed rest position as a body-mind centering and visualization exercise. The music we used with this exercise was peaceful with minimal noise stimulation or without music in silence. He described his music as the “perfect song” for the somatic exercise and was excited to try it. He plugged his phone into the speakers, assembled into constructive rest position, and awaited his music. He signaled to me to begin the music. A pop Ashley Tisdale song with a strong ‘clubbing’ beat began to play. I was shocked that after five weeks of experiencing a specific ambiance in the somatic exercise, he felt this loud, clubbing music would be a good fit. I kept the music on for a minute to see if he could feel that the music did not fit the exercise. He laid there taking deep breaths as the music blared. After about 20 seconds he sat up and said, “Maybe we should just do the exercise in silence.” I turned the music off, and we reflected on his process of realizing the music was not fitting for the exercise. He told me that when he picked the music at home he felt it would be perfect, but then as he lay in constructivist rest position he felt different

sensations than experienced in the prior weeks. He agreed that music is powerful and can affect the feeling of the exercise.

Molly

Molly had difficulty staying mentally present in movement exercises. Her dual diagnosis encompassing ADHD and autism was apparent when small distractions would take her away from a task in the session. Since the sessions were held in a public library, frequent distractions took place in the hallway pulling her attention away from the exploration. She also asked reoccurring questions related to who was picking her up, the activities she would do following the session, and if she could get books from the library. The repetitive questioning also illustrated her difficulty in staying present. As her mother explained to me, the unknown of the future is something that causes her to experience anxiety and obsession. I did not have the answer to some of the questions, so I said, “I am not sure of that Molly. You will have to ask your mom when she comes to get you.” Even with the questions I answered, she still felt the need to repeat the question five or six times throughout the session. To help keep the exploration stimulating and new, I tried adding a new element to the environment when I saw her attention drifting. The effective new elements included a surprise prop in a bag, something hidden in the room, or a change in the music.

Because I worked with Molly prior to the study, I was aware of the ease certain items brought to her. She loves her baby dolls, bottles, and other baby supplies. Molly brought her baby dolls with her the first few weeks of the sessions. This was allowed as these elements eased her anxiety and brought normality to the new environment. Before we began the movement session, we positioned her babies in the perfect spot to watch her

dance. This preparation routine seemed to bring ease to Molly. Sometimes the babies were involved in spatial awareness activities by placing them in the center of the room and dancing around them. We continued with this for a few weeks until the babies seemed to become the focus of distraction. It seemed that once the new environment felt comfortable, the security her baby dolls originally brought became a distraction. Molly had difficulty focusing during two consecutive sessions and could not complete a task without a sidetracked thought towards her babies. I spoke with her mother about the distraction of the babies in class. She immediately followed through with ensuring that the babies stayed home for future sessions. Distractions came and went in the remaining classes but keeping personal items at home helped tremendously.

Music was also an effective tool used to keep Molly present and to create a comfortable environment for creative exploration. If a distraction erupted and a verbal prompt could not redirect her focus, a change in music was most effective in reestablishing the task. When needed, I stopped the music, prompting her to immediately freeze her body and bring her back into the focus for the exploration. She would always giggle at the startling change, but the redirection was successful. The most effective music choice for Molly related to the habilitation routine she developed with me over the past year. The Disney movie, “Frozen”, had just come out; and I had the music playing in my car when I picked her up the first time. From that moment on, every time she rode in my car, she wanted to listen to “Frozen.” The workshop sessions were no different as the “Frozen” music was a comfortable association she created with me. I tried to explore new music with Molly, and she immediately insisted that the music be the same. She was fine with exploring the musical instruments; but when it came to playing recorded music, it

had to be “Frozen”. Knowing this, I organized the sessions so the music choices would be reflective of the appropriate activities.

Lily

External distractions did not impact Lily during movement sessions as they did Molly. Lily has a calm demeanor and maintained a steady presence throughout most sessions. Her eyes would glaze over often, but a verbal prompt or noise would bring her back to the task.

Lily did not keep eye contact well so I tested her mental presence with small verbal prompts encouraging eye contact or a movement response. At home, her family says, “Lily, eyes,” to encourage eye contact. To maintain consistency for Lily, I used the same verbal prompt during sessions. Lily did not respond favorably to recorded music but did respond well when I sang. Throughout Lily’s sessions, we explored the creation of music alongside the creation of movement.

Emotional Well-Being

Lily

The key to keeping Lily present is also what enhanced her emotional well-being, music. I will continue with the observations and experiences of Lily because of the continuity between the topics of emotional/mental expression.

The first time I had a session with Lily she was very emotional. My journal entry recorded:

The moment her dad left her, she began to cry. She avoided eye contact with me and did not want my verbal consoling that “everything is okay and your daddy is going to come back for you.” As talking to her was not helping, I tried various redirection methods to help ease her mind. I turned on some, what I would consider, happy music, and she immediately plugged her ears. I turned on a

calmer music choice, and she plugged her ears again. I turned the music down and began dancing around her hoping to make her smile or make eye contact with me. The more I tried the more I seemed to overstimulate her. Remembering my previous conversation with her mother, I knew she attended Music Therapy sessions in the past and loved it. I got out a bag filled with musical instruments and set them in the middle of the room. I prompted her to come open the bag and see the surprises inside. She kept walking around occasionally looking at the bag. She was interested but needed to make the choice to participate. The room was quiet except for her light, sad whimpers. Every minute or two, I repeated the prompt to come and look inside the bag. After five prompts, she engaged with me for the first time by sitting by me. Her tears calmed as she opened the bag. She began to explore each instrument, and her tears did not return.

It was clear that Lily loved creating her own music. Oftentimes, people with ASD that have an auditory sensory dysfunction or sensitivity to sound, are okay with sound if they are in control and can predict when it will occur (Myles, 2007). She made eye-contact with me for the first time in our second session. We were exploring the musical instruments, and I began making rhythms with my voice. She smiled and then kept with her own exploration of the instruments. As the sessions continued, creating our own musical scores began to shape the movement explorations.

Brett

Brett has difficulty understanding the emotions he feels in his body at times. In the past when I worked with him in respite care, I witnessed some of this confusion. An example of this was demonstrated one day at my home. He was pacing back and forth, head bobbing with nervous tics, frantically playing with his string, his body language screaming that he has high anxiety or energy that needs to dissipate. “Brett, is something bothering you?” I asked. “I’m okay; I think I’m just really tired. I feel like I’m dragging and need a nap,” he answered. His body language was telling me that he needed

to run a marathon- not take a nap. I encouraged him to go take a walk around our park and then see if he felt better when he returned. He went for a walk and came back saying, “I feel so much better! I guess I just needed to take a walk, not have a nap!” His disconnect of not understanding the emotional and physical needs of his body was common for Brett. At the beginning of each session, Brett would engage in a somatic exercise using ideokinesis principles of tuning into the body with the use of imagery and anatomical referencing (Williams, 2011). In constructive rest position, he closed his eyes and allowed his body and mind to connect together. At the end of the workshop study, Brett reflected on this experience as an emotional outlet that he continues to use at home.

Each session we would start off with a “body scan,” this consisted of going from the top of the head down to the toes, and then back up again. Doing this has helped me understand my body, and how to point out where I feel “tense.” This almost feels like a massage, I loved lying down during this and after the body scan was complete, I had to get up slowly, my body was just so relaxed. Now, whenever I feel intense or I need to “stretch,” I just do the body scan that Kelsey taught me, it does the trick every time...She has helped me realize that dancing can help me express who I am, along with releasing energy (good or bad).

Molly

Like Brett, Molly has difficulty reading her emotional and physical needs. In her previous habilitation sessions and in this study, she would request for the music to be turned up loud. Whenever I turned the music up, she would plug her ears because the stimulus was overwhelming. The request for the music to be turned up seemed to be a routine question asked only because it was habit and not because she really meant it. Habitual requests like these were common with Molly. A short movement phrase was developed intending to connect her emotional and physical self, and to help her understand her needs over her ritualistic sequences. This short movement experience was

created in week three so it was only applied in six movement sessions. When Molly began going through her habitual requests, I prompted her to, “Freeze!” The freeze prompt always caught her off guard and caused her to giggle. We would then, together, take three breaths allowing the breathing movement to grow larger each time leaving the last breath the largest to be physically embodied. Then she would pick a color and imagine that color starting at the top of her head, rushing down to her toes, up her body again, shooting out her arms and the top of her head. I would ask, “How does your body feel?” Her response was always the same, “good”. After completing this connective, redirecting sequence, Molly was able to move onto the next activity in the session and did not need to complete the habitual, non-functional requests. Routines for people with ASD are beneficial to ease anxiety most of the time, but the reason for this redirection with Molly was because her requests seemed to create more discomfort in the environment. Completing this embodiment exercise successfully redirected her every time it was performed. The phrase was typically done once or twice a session, when needed, and was successful in mentally centering her, allowing her to experience the rest of the session. Her mother reflected on the sessions saying that she was always happy when she left and content in relaxing with the family when she got home. Even if she came to the session agitated and nervous she left with the same result of happiness and fulfillment.

Creative Expression

Throughout the study, the participants had many opportunities to exercise their creative expression through improvisation, self-guided movement exploration, visualization, and the exploration of the art mediums: music, drawing, and sculpting- all provided outlets to help discover and exercise creative expression. This section will

reflect on each participant's experience in discovering and exercising his/her creative expression. The reflections and observations were compiled into two sub categories: self-expression and artistic medium exploration. Each parent felt the study provided their child an opportunity to express his/her creativity, and some saw the effects with a behavioral change in their home.

Self-Expression

Brett

Brett's parent reflected on his creative expression in week three of the study saying, "He's enjoying the participation of the creative activities." In week four, she continued saying, "He finds joy in the creative expression he is allowed." I observed Brett growing tremendously in his creative expression throughout the workshop. Although most people would consider his confidence level to be typically high, in the workshop I observed that his confidence was low in regards to his perception of the abilities required for the study. He felt he needed to be a talented dancer in order to be successful in the workshop, which made him self-conscious during the first two weeks. I picked up on his behaviors and added in movement explorations that involved both of us having creative fun and making fools of ourselves. The intention of adding in props like witch hats, skeletons, swimming float tubes, balloons, and crate paper was to show him that being creative is fun; and it does not matter what you look like doing it. We focused on the process of creating, not the product created. I would remind him that his voice and creativity are valued and important. In week three, he offered his creative input in our warm-up sequence asking if we could try adding something new to our jumping jack movement. In our exercise, we did three jumping jacks and then walked five steps

anywhere in the room, repeating the jumping jacks and walking sequences again. He wanted to add the challenge that on the last jumping jack we would try to make it back to our original spot in five walking steps. He was excited about adding this challenge and voicing his creativity. Throughout that session, I made sure to thank him for adding his creative input, hoping he would feel confident to contribute again in the study. In the next session he asked if he could make another change to challenge us in the warm-up. He added another arm sequence to our grapevine step making it more of a brain teaser, adding to the fun in performing. He enjoyed testing movement possibilities and seemed okay discarding ideas if he felt they did not enhance the movement experience positively.

He choreographed what we entitled “Happiness” in week five. This movement composition was the culmination of creative explorations and movement concepts he had experienced in just five short weeks. The composition was created from an explorative drawing of things that make him happy. After drawing marriage, kids, teaching his church primary class, and Jesus Christ, I challenged him to take each of those words and make them into a movement composition. He began by finding movement and exploring each word/thing individually. After the individual explorations, he combined them all into a phrase. He then chose music that best reflected the phrase and intent and then performed the movement phrase for me. After his performance, he was able to verbalize his creative process and why he did the movement he did. I left this exploration of improvisation and movement composition entirely to Brett’s creative-self and did not intervene unless he needed clarification. I was honored to have witnessed that moment with Brett. Brett put together a written reflection of his experience in discovering creative expression in the workshop.

Dancing has allowed me to use my imagination in a new way. Kelsey would place certain objects around the room, and then she would play certain music to go along with those objects. I would then have to create a dance that would make sense to me, or that I could come up with in my mind. I loved doing this because it allowed me to explore certain areas of dance I never knew about, and it allowed me to go deep inside myself. By going deep inside myself I mean, I learned how my body responds to dance, and how dance is like another work out to me.

The creativity of the workshop helped me explore myself just as much as the dancing did. Kelsey would have me draw a path, and I would then have to dance/walk or run that path. I found this activity to be very interesting. I even took this activity to a spiritual level. I came up with the idea of making my path and then walking it blind folded. This was very fun because it got me thinking about where I am in my life.

The workshop has changed the way I look at creativity. I can now take my imagination to a whole new level.

Molly

Molly's mother reflected in the workshop surveys on Molly's ability to play creatively on her own. In the pre-workshop survey she says, "Molly maintains all her energy into baby dolls and books. She doesn't come up with anything on her own or make anything on her own." In her post-workshop survey she states, "She has been more content to just go outside and play on her own". I also observed an improvement with Molly in developing and expressing her creative voice throughout the workshop. She found joy participating in mirroring movement exercises where she would mimic the movement I did. When I would prompt her to be the leader and come up with movement on her own, she was not comfortable doing it. Oftentimes after the request, she would change the subject or ask if I would be the leader. She did not feel comfortable exercising her creative voice. As the sessions progressed, I added small creative tasks to build confidence in her personal voice. By the end of the workshop, she could pick an object,

name a characteristic associated with that object, and make a physical representation, or shape, of that object in her body. For example, she chose a star and then with prompts told me that the star had sharp edges with lots of points. She then took that information and made a shape with sharp edges and points with her body. She always showed excitement after she created something and was able to reveal her creation to me. When I turned around or left the room, it helped to emphasize these insights making her more enthusiastic. It was a sweet experience to watch her confidence build as she explored her creative-self.

Lily

Lily's mother reflected on her creativity pre- and post-workshop saying, "It is difficult to see how creative she is because she does not talk or express herself well." It is challenging to measure creative expression when a person has difficulty expressing himself/herself. Throughout the workshop, Lily loved mirroring exercises and reflected the movement prompts as they were created. Since she did not respond to verbal prompts well, the establishment of a creative environment with little verbal explanation was important. I had discovery boxes in most of the sessions that I positioned in the room so she could go through and see what was inside the box. When exploring the boxes, she would take objects out one at a time, look at them, and then put them back. I was unable to create an environment that stimulated her to creatively play without her mimicking something I did. We explored new ideas in every session and discovered an improvisational exercise in which Lily enjoyed exercising her personal voice through creative movement. We developed a 10-count movement phrase, playing a 10-count rhythm with long plastic tubes. We played the rhythm together a couple of times counting

aloud “1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 1, 2...” to the drumming rhythm of the tubes banging against the ground. It took a few sessions to build this phrase but it evolved from us only drumming together, to her accompanying me while I danced, to me accompanying her improvisational exploration. When she was moving improvisationally, I recognized some of the movement to be from past explorations, but she also chose to create new movement involving timing and level changes. She would giggle as she would make certain movement choices and found joy in experiencing movement improvisation.

Artistic Medium Exploration

Brett

Brett maintained an open mind in experiencing all of the art mediums the study offered. He has a photographic memory and can remember full movies he has only seen once, conversations I had with him years ago, and details from pictures he has seen or places he has been. Grandin explains this ability as being an autistic picture thinker. This is what Grandin classifies herself as and explains her thoughts as being like a vivid slideshow of detailed pictures. Whether Brett’s thinking process is similar to Grandin’s or not, he does have a similarly gifted memory (Grandin, 2013). When participating in the drawing and sculpting mediums, he seemed to enjoy the opportunity to explore, but became frustrated when he created with the medium. His ability to draw and sculpt the object to the exactness of the picture in his mind was not obtainable. We tried exploring different objects, places, people, and even created our own inspiration so an exact image to compare was less likely. His creation was still wrong, and it was difficult for him to enjoy the experience of creating when his product was disappointing.

Because of these experiences, we ended up focusing more of our time on the exploration of music. Brett not only loved to create, compose, and explore music; he also

found inspiration in it for movement. He explored different qualities such as strong, sharp, heavy, light, graceful, and quick, identifying each of these in the music then moving to it. By the end of the study, he was able to choose a song, name characteristics apparent in the music, explore movement for each characteristic, and then put together a phrase from the movement improvisation.

Molly

Similar to Brett, Molly had difficulty getting past the idea that her sculptures did not reflect the proficiency her brain envisioned. The experience of sculpting seemed to be more frustrating than fun so we did not continue working with that art medium. Molly loved recorded music but did not enjoy creating music as much as the other participants. She was disinterested in the musical instruments; and although she explored them for a few minutes, she did not care to explore them further and compose rhythms. She kept asking for her 'Frozen' music.

When we applied the medium of drawing to the workshop session, she opened up in verbal conversation like I had not witnessed before. When she put the marker to the paper, it seemed to be a social outlet for her. She typically had difficulty carrying on a conversation with me, answering questions, and staying on topic. When she was drawing, she answered all of my questions and would sometimes add to the topic after answering the question. For example, I asked her what she was drawing, and she replied, "Her family." I then asked what she loved about each person she was drawing, and she went through each of her family members and told me something about each person. When she was done answering my questions about all the family members, she asked if I wanted to hear a story. She told me a story about going to her brother's football game with her

family and this funny moment they had together. The conversation with Molly felt effortless and stayed on track as she drew. The act of drawing seemed to keep her mind busy enough that she was content staying with the conversation longer than she normally did. I applied drawing exercises to four different sessions for Molly and every time she seemed to open up with her verbal communication skills.

After two sessions of free drawing, Molly explored drawing various shapes and letters and then looking at the characteristics of the letter to inspire a similar shape in her body. By the end of the workshop, Molly was able to draw a shape and make a corresponding shape of her own with her body. For a while, she needed me to show her examples of what the shape would look like; and then she would mirror a similar shape based off of my shape. By the end of the workshop, she did not need me to help her and was able to create on her own.

Lily

Drawing and sculpting did not provide much inspiration for Lily to create and explore in the workshop study. I prompted her to draw various things, and Lily just held the marker in her hand and did not want to participate. She did the same thing when we sculpted. She held the play dough and did not want to create anything out of it. These mediums did not inspire her. Music was Lily's outlet as she loved composing and improvising to it. The music served as inspiration for movement; and as previously explained, we built up to that expression in our sessions. Recorded music was noise; but if she was involved in creating the music, it was fun and inspiring. Lily also loved to use her voice as an instrument. We created rhythm sequences using our voices, making various vowel sounds and also sang songs together. Lily's favorite song to sing and dance

to was “Do as I’m Doing.” (The Church of Jesus Christ of Latter-Day Saints, 1963). The words to the song are:

Do as I'm doing;
Follow, follow me!
Do as I'm doing;
Follow, follow me!
If I do it high or low,
If I do it fast or slow,
Do as I'm doing;
Follow, follow me!
Do as I'm doing;
Follow, follow me!

The song provided verbal prompts to change the movement exploration in space and time. Lily and I chose a movement gesture like clapping our hands and would perform the gesture while singing the song and traveling throughout the room. Her giggles and lasting smiles showed me that she enjoyed the experience of making music and moving to it.

CHAPTER 7

Conclusion

Summary of Findings

This study was an investigation of people diagnosed with ASD and their experience discovering expression through creative movement. An interpretive phenomenological framework was used to interpret the participants' experience through the use of surveys, journals, interviews, and observation. A two-tailed t-test determined whether the participants experienced a significant change in specific ASD behaviors over the course of the study. The results of this study are specific to the three people who participated in the study. Over the seven-week period, each participant's growth and stories were unique, but they all shared commonality. By the end of the study, each participant demonstrated empowerment through dance to explore his/her creativity and exercise personal expression. The feedback received from the participants and parents through interviews and reflections revealed the participants did exercise and discover social, physical, emotional, and creative expression throughout the study. Further examination may show a connection between the four examined areas of expression to improvement in the behavioral skills measured in the t-test.

The surveys and interviews revealed there was a positive impact in each of the participant's personal, home, and social life. Exploring and assessing what participants experienced in the movement sessions brought information back to the parents and families of the participants involved in the study. Some families expressed interest in continuing some of the exercises independently in their home or are looking into

available opportunities in the community to continue exercising this outlet with their child.

Further analysis of the quantitative and qualitative test results and their relation to each other illustrated overarching themes of behavioral improvement in each participant. In some behaviors, the numerical value recorded in the qualitative results matched precisely with the qualitative data gathered through observations, interviews, and reflective surveys. This examination was also able to discover disparities between the tests, which promoted further questioning to consider in future research. For this study, speculation will attempt to formulate a connection to make sense of the inconsistency between the data. Further research would need to be conducted with the participants to pinpoint the cause for the disparities.

Molly's quantitative test results showed a significant change in the 10 tested behaviors overall. Molly's greatest behavioral improvement was seen in her level of anxiety, ability to follow directions, and in her creativity. Her anxiety showed the greatest improvement when paralleled with the other behaviors, moving from a "1-very poor" to a "4-good" by the end of the study. These results coincide with her mother's observations of Molly's vast improvement of exhibiting contentment in their home and socializing with the family. Her mom also explained in the week five survey that Molly was more likely to go outside and play on her own, which showed continuity with the increase in her creativity in the post-workshop survey. Overall, no disparities were found in Molly's results as her tests similarly illustrated her behavioral improvement throughout the study.

Brett, like Molly, showed a significant change overall in the post-workshop survey. His significant improvements were exhibited in his anxiety level, ability to make

decisions, and to follow directions. Brett's qualitative results showed reoccurring themes in his overwhelming embodiment of contentment along with his demonstration of independence in movement lessons. These qualitative themes coincide precisely with the quantitative results as the greatest significant change quantitatively was exhibited in the decrease of his anxiety. His anxiety was the greatest change measured in both tests. Brett's behavioral improvement with following directions and making decisions directly relates to the qualitative results illustrating an increase in his demonstration of independence. Overall, Brett's tests reflect similar results and mirror his accomplishments well for the study.

Lily's quantitative test results did not find a significant change in the overall examination of the 10 behavioral goals. In further examining the quantitative results and their relation to the qualitative data, the relationship between the two tests is not as absolute as it was with Brett and Molly. Lily's qualitative results showed a dramatic improvement in her attitude, and her anxiety levels demonstrated a significant decrease throughout the workshop. Her mom recorded Lily always exhibiting happiness after the sessions making it easy for Lily to communicate more effectively with her family. In Lily's quantitative tests, her parent recorded her anxiety level to be a "3- Neutral" in the pre-test and a "1-Very Poor" in the post-test. The quantitative results contradict the qualitative data recorded from interviews, observations, and reflection surveys. The average score Lily's parent gave when rating her anxiety level after each session was a "4-good". This average illustrates the dramatic inconsistency in the post-workshop results, "1-Very Poor", when related to the consistent progress present in other data throughout the study. The disproportioned findings may be an accidental result performed

by the parent when completing the post-workshop survey. A Likert scale from 1-5 may be misrepresented if the parent forgets which number demonstrates a positive outcome and which is negative. Another possibility that could further explain this outcome may be found in the parent not maintaining an even tone, voice, and opinion throughout. The opinion may have fluctuated, unconsciously, greatly impacting the overall results because of the lack in transparency throughout the sessions. Further research will need to be conducted to identify the cause of the disparity in Lily's test results as well as the true findings, if different.

The primary goal of the study was to provide an outlet for the three participants to discover expression. The scale of participants involving low functioning to high functioning ASD revealed that the severity of the disability did not impact the participant's ability to use movement as an expressive outlet. Each participant found a unique way to discover and express himself/herself through movement. These findings illustrate the transparency of movement effectiveness as a beneficial expressive outlet for the participants involved in this research study.

Further Research

This research is the beginning of my future research in discovering the potential benefits creative movement experiences can provide for people diagnosed with ASD. This study began as an inquiry connecting two of my interests, autism and dance. After working with these three participants in the study, I have developed an emotional tie to this research as well as the participants. I learned from each of them the importance of adaptation and trust, the power of choice and self-creation, and the need for expression. It was a gift to work with each one of them and to be a witness to their individual creative

expression. If given the opportunity and the means to work with them again, I would. Continuing research with Brett and Molly will be an easy task as I still work with them through habilitation and respite care. The difficulty may reside in finding a consistent space for us to hold the sessions since the space used for the study was rented. Once the space is solidified and parental agreement is obtained, the research will continue with Brett and Molly. I currently do not work with Lily in habilitation or respite care so the time spent to continue the sessions for the study would be held separately outside current therapy, habilitation, and respite commitments. If I were able to continue with Lily, I would love to do so. This may even lead to working respite or habilitation care with Lily as it seems to be a natural transition.

When the study concluded, explorations with Brett just began delving into the movement composition process. During the last week of the study, Brett explored movement composition by generating movement through improvisation, gathering specific concepts from the improvisation, and then compiling the concepts creating a beginning, middle, and end. He then performed the composition with his choice of music and verbalized his creative process after the performance. We titled his works and he was proud he had created the movement compositions entirely on his own. In continuing future work with Brett, I will sculpt his movement sessions around exploring the compositional work further. We will continue beginning and ending the sessions with the same warm-up and somatic explorations as I feel they are an integral part of maintaining his safe environment. Since we will need to change locations for the sessions, continuing the same warm-up and cool down exercises will also act as a constant with the changing environment. Along with the exploration of compositional work, further exploration of

music composition and the relation of music to movement will be explored. Music had a strong influence on Brett in the study, and I feel there is room for exploration in translating qualities within the music into movement. Understanding the impact music can have on movement inspiration and generation can also be incorporated into the compositional explorations.

Brett had a favorable response to the somatic explorations and this work will continue with future research. The ideokinesis concepts using imagery provided Brett with an outlet for relaxation, redirecting his excessive energy. The anatomical referencing seemed to generate relaxation in his muscles, allowing the tension to dissipate. Future research will continue incorporating ideokinesis work through anatomical and kinesthetic imagery. Constructive rest position became a routine for Brett, so the incorporation of ideokinesis will continue in this position as well.

Much like Brett, future work with Molly will continue where we left off in the session work, maintaining routine and building upon concepts that seemed promising for her behavioral growth. When the study concluded, Molly had just begun exploring shapes independently through verbal prompts with minimal physical prompts. The beginning session work required mostly physical prompts through mirroring allowing her to see exactly what was expected. Toward the end of the workshop, Molly began to feel comfortable with the creative process and exploring movement independent from me. I will continue to build upon this idea to promote her self-expression through individual creation. She responded well with identifying characteristics of an object or sculpture and, with guidance, could make shapes containing similar characteristics. The exploration of drawing also provided additional inspiration for movement creation so further drawing

tasks will be integrated into lesson plans as well. Somatic applications involving imagery worked well to specify movement tasks for Molly. I see imagery potentially becoming a larger part of lesson plans the more it is incorporated into her movement explorations. Imagery may become a larger outlet for expression with Molly as it has become with Brett through ideokinesis body scans and anatomical referencing. It will be interesting to witness how far she is able to take the somatic work.

If future work with Lily occurs, we will continue to work on creating more improvisational movement opportunities for her to move and self-create. We were able to work up to creating two improvisational movement opportunities in each session, and when she heard the associated music, she knew the exact score to perform. The 10-count phrase and “do as I’m doing” would continue to be incorporated into lesson plans and would act as a constant while the other improvisational environments were created. Somatic work was not as successful with Lily as it was with the others because of her difficulty in processing verbal prompts. I am interested to try constructive rest position with Lily again once the trust is established in the new environment. I tried it at the beginning of this study and felt that it was the wrong moment to apply the somatic work as her attention was scattered. Lily has a calm, relaxed demeanor and I feel her attention span could handle and potentially benefit from the application of constructive rest position.

Further somatic work can be explored with all three participants through the application and exploration of other practices as well. Additional research could be conducted to identify potential benefits and/or preferences for the participants with ASD. Concepts of Laban Movement Analysis were already introduced in this study so applying

more of this somatic practice may work well for the three participants. All of them were introduced to the work of exploring and understanding their personal kinesphere along with brief explorations of effort, space, time, and shape. Other somatic practices, such as Alexander Technique, Feldenkrais Method, Body-Mind Centering, and Authentic Movement could be introduced and explored in the future to aid the participants in better understanding their bodies, movement possibilities, and their connection to the environment around them. Studying these methods further with the participants could aid in patterning unnecessary habitual behaviors and physical routines for a greater quality of life.

The instruction in a one-on-one setting created a safe, explorative environment which positively impacted the participants' experience. Future research will continue to be explored in a one-on-one setting with Brett and Molly to maintain the safe explorative environment. After three months of working with them consecutively, I think incorporating another person into the same space to create and explore would provide great information to the research. Brett and Molly could never be incorporated into the same environment as mixing adults with children is not considered acceptable in the state, in my line of work. However, other participants could be added in a similar age bracket to see how Brett and Molly could potentially benefit from another creative mover in the space. With the findings from this study, I would not accept larger groups of people, over five, as the excessive stimulation may overpower the study objectives. The group study could be compared to the one-on-one study to see which environment was more effective for the participants.

Research could also be conducted in the future with a more focused type of ASD diagnosis and participant demographic. The participants involved in this study varied in severities but future research could focus on only Asperger, high-functioning participants or people with Rhett's Syndrome, lower-functioning females. A specified severity or diagnosis within the spectrum of autism may provide more detailed information on the benefits of dance with ASD. More studies would need to be conducted with different populations and settings in order to determine if movement can provide an outlet of expression for people throughout the spectrum of autism.

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APPENDIX A
INSTITUTIONAL REVIEW BOARD FORMS

Advertisement for Recruitment

Hello!

My name is Kelsey Finlayson, and I am a graduate student at Arizona State University. I am currently working on my thesis research studying dance as a form of expression for people who have been diagnosed with Autism Spectrum Disorder (ASD). The purpose of the study is to provide people with ASD a creative outlet to experience art and movement as a way of expressing themselves. As a result of this exploration, other benefits may foster social interaction, coordination, and confidence.

For this research, I will conduct a 6-week workshop exploring art and dance for people with ASD. The participants will take individual movement classes twice a week for six weeks exploring movement lessons with art integration.

I am in search of participants that would be interested in participating in this 6-week workshop. The experience calls for parent involvement and reflection throughout the process to aid in the research and progression of the workshop. Please contact me if you know of anyone with ASD that would be interested in this opportunity.

Email: kbfmfinlay@asu.edu

I look forward to hearing from you!

Kelsey Finlayson
M.F.A Candidate
Arizona State University
School of Dance

Parent Consent/Parent Permission Form

Dear _____:

I am a graduate student in Dance at the College of Herberger Institute Design and the Arts (HIDA) at Arizona State University. For my thesis work, I am conducting a research study to provide people with autism a creative outlet to experience art and movement as a way of expressing themselves. As a result, other benefits may foster. The purpose of this form is to provide you with information that will help you decide if you will give consent for you and your child to participate in this research.

I am inviting you and your child's participation in this 6-week study, which will involve the following:

Parent Participation

- Transportation for child to and from each session (Twice a week for 30 minutes)
- Completion of Reflection Survey at the end of each session (12 Reflection Surveys)
- Completion of Pre-and Post-Survey; before the workshop begins and when it is completed (1 Pre- and 1 Post-Survey)
- ****Optional-** Recorded interview for video footage

Child Participation

- Attendance of 12 sessions, 30 minutes per session in a 6-week period
- Completion of 15 self-reflection tasks throughout the 6-week workshop (Reflection examples can include but not limited to: Drawing, journaling, recorded interview, or a verbal survey. These tasks are subject to change and may be altered depending on the needs of the child.)

You and your child's participation in this study are voluntary. You and your child may decline participation at any time. You may also withdraw yourself or your child from the study at any time; there will be no penalty. Likewise, if your child chooses not to participate or to withdraw from the study at any time, there will be no penalty.

Although there may be no direct benefit to you or your child, the possible benefit of your child's participation is he/she will discover another outlet for communication, expression, and creativity. Other benefits may foster social interaction, coordination, and confidence. There are no foreseeable risks or discomforts to you and your child's participation. The confidentiality of you and your child is important to me, and it will be maintained. The results of this study may be used in reports, presentations, or publications but your/your child's name will not be used. Some of the sessions and interviews will be video recorded to provide further feedback throughout the workshop. The video footage may also be compiled and shown in presentations for the thesis research. Please let me know if you do not want your child to participate in the video recording. You can change your mind anytime throughout the workshop, just let me know.

If you have any questions concerning the research study or your child's participation in this study, please call me at 801-***-****or email me at ****@gmail.com

Sincerely,
Kelsey Finlayson

By signing below, you are giving consent for you and your child _____
(Child's name) to participate in the above study.

Signature _____ Printed Name _____ Date _____

By signing below, you are giving consent for you and your child to participate in the video work within the study.

Signature _____ Printed Name _____ Date _____

If you have any questions about you or your child's rights as a subject/participant in this research, or if you feel you or your child have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board, through the Office of Research Integrity and Assurance, at (480) 965-6788.

APPENDIX B
LESSON PLAN EXAMPLES

Lesson Plan
Workshop – Week 1 (30 minutes)

Objective: Children will discover movement possibilities in their bodies by exploring how music dynamics and characteristics can inform movement creation.

Somatic Exercise: 2 minutes – Music – Soothe

- Student will find a comfortable space within the room and sense where his/her body is that day. Eyes can close and he/she will take 5 deep breaths. If possible, do a body scan starting with the head and assessing each body part. After moving through the body once, find articulation in body parts as they are called out by the facilitator.

Quick Reflection- *How does your body feel after doing the body part dance? What was your favorite body part to move today? Why?*

Mirroring Warm-up: 2-4 minutes- Music- Upbeat Kid-Pop

- Student will follow along with instructor and mirror movements to warm up his/her body. Movements will include body isolations, stretching, and simple locomotor steps.

Music Exploration: 5-10 minutes- Music- 3 songs with diverse dynamics

- The student will choose the order of exploration out of 3 songs. The student will choose a song he/she would like to listen to and will find words to describe the song (fast, happy, choppy, sharp, etc.). The facilitator will write down the descriptive words on the white board. The student will then be prompted to discover how the words would transform into movement within the body.

Quick Reflection- *I'm going to play through the songs and you raise both arms during the song that was your favorite to move to. Why was that song/dance your favorite?*

Discovery Squares: 15-20 minutes- Music- 3 songs- student's choice

- The student will help move the 4 discovery boxes into the taped off squares on the floor. This activity is student led as he/she will be making decisions which boxes to explore, how long, and in what creative way. Each box will have music, props, movement dynamics to explore, and one challenging task that is unique to the box. Box 1- Classical music; ribbons and fabric; floating, swinging, and slow; eyes closed. Box 2- Scary Halloween noises (music); skeleton and witch hat; small movement, quick, and scary; only use one leg. Box 3- Spunky Pop song; Hoola Hoops and balloons; skip, circles, jumping, big movement; one arm behind your back. Box 4- Robot song; sticks; pauses, jerky, sharp; smile big the whole time.

Quick Reflection- *What box was your favorite to explore? Why? Which box was your least favorite? Why? Would you like to do an activity like this again next time? How does your body feel?*

Cool Down: Facilitator led- 1-2 minutes, Music- Upbeat

- Student will follow along mirroring facilitator's movement to center his/herself and prepare to leave the studio. Movement will involve deep breaths and stretching.

Lesson Plan

Workshop – Week 2 (30 minutes)

Objective: Children will build self-confidence by exercising decision-making skills and creative exploration through movement and music composition.

Somatic Exercise: 2 minutes – Music – Soothe

- Student will find a comfortable space within the room and sense where his/her body is that day. Eyes can close and he/she will take 5 deep breaths. If possible, do a body scan starting with the head and assessing each body part. After moving through the body once, find articulation in body parts as they are called out by the facilitator.

Quick Reflection- *How does your body feel after doing the body part dance? What was your favorite body part to move today? Why?*

Mirroring Warm-up: 2-4 minutes- Music- Upbeat Kid-Pop

- Student will follow along with instructor and mirror movements to warm up his/her body. Movements will include body isolations, stretching, and simple locomotor steps.

Music Exploration: 5-10 minutes- Music- Own instruments

- The student will choose the order of exploration out of 3 instruments (guitar, piano, and drum). The student will choose an instrument and will explore by playing and finding words to describe the music. The facilitator will write down the descriptive words on the white board. The student will then be the accompanist for each instrument while the facilitator moves to the student's music. (This music exploration will be recorded for each instrument to use later in the class). The facilitator and student will then switch roles having the facilitator play music and the student move.

Quick Reflection- *Which instrument was your favorite to play? Why? Which instrument was your favorite to move to? Why?*

Discovery Boxes: Music Composition: 15-20 minutes- Music- Own instruments

- The student will help move the 4 discovery boxes into the taped off squares on the floor. This activity is student led as he/she will be making decisions on which boxes to explore, how long, and in what creative way. Each box will contain props for the student to explore when the specific music piece begins. The music for each box will be the recorded music exploration of the student earlier in the

class. Box 1- Piano; ribbons and fabric. Box 2- Drum; hoola hoops and circles.
Box 3- Guitar; squares and triangles. Box 4- Surprise instrument; sticks.

Quick Reflection- *What box was your favorite to explore? Why? Which box was your least favorite? Why? Would you like to do an activity like this again next time? How does your body feel?*

Cool Down: Facilitator led- 1-2 minutes, Music- Upbeat

- Student will follow along mirroring facilitator's movement to center his/herself and prepare to leave the studio. Movement will involve deep breaths and stretching.

Lesson Plan

Workshop – Week 3 (30 minutes)

Objective: Children will exercise decision-making skills by exploring spatial pathways using creative movement and painting.

Somatic Exercise: 2 minutes – Music – Soothe

- Student will find a comfortable space within the room and sense where his/her body is that day. Eyes can close and he/she will take 5 deep breaths. If possible, do a body scan starting with the head and assessing each body part. After moving through the body once, find articulation in body parts as they are called out by the facilitator.

Quick Reflection- *How does your body feel after doing the body part dance? What was your favorite body part to move today? Why?*

Mirroring Warm-up: 2-4 minutes- Music- Upbeat Kid-Pop

- Student will follow along with instructor and mirror movements to warm up his/her body. Movements will include body isolations, stretching, and simple locomotor steps.

Painting Exploration: 5-10 minutes- Music- Upbeat Kid-Pop

- Student will look at the various examples of paintings in the books provided. They will identify what shapes, lines, and textures they see. Each word identified from the paintings will be written on the white board. Music will turn on and the student will be guided to make shapes and lines for each word on the white board.

Quick Reflection- *Which painting was your favorite to look at? Why? Which painting was your favorite to move to? Why?*

Pathway Exploration: 5-10 minutes- Music Upbeat Kid-Pop

- Student will learn the various spatial pathways by drawing them and then traveling them through space. The pathways explored include: straight, curved, and zigzag.

Discovery Boxes: 5-10 minutes- Music- Varies for each box

- Student will help move the 4 discovery boxes into the taped off squares on the floor. This activity is student led as he/she will be making decisions on which boxes to explore, how long, and in what creative way. Each box will contain two pathways and two locomotor movements for the student to choose from for exploration. Box 1- Straight or Curved Pathway, Hopping or Walking. Box 2- Curved or Zigzag, Skipping or Running. Box 3- Create your own Pathway, walking or jumping. Box 3- Zigzag or Straight, crawling or walking backwards.

Quick Reflection- *What box was your favorite to explore? Why? Which box was your least favorite? Why? Would you like to do an activity like this again next time? How does your body feel?*

Cool Down: Facilitator led- 1-2 minutes, Music- Upbeat

- Student will follow along mirroring facilitator's movement to center his/herself and prepare to leave the studio. Movement will involve deep breaths and stretching.

Lesson Plan

Workshop - Week 4 (30 minutes)

Objective: Children will explore emotions and attitudes illustrated through body language using creative movement prompts and drawings.

Somatic Exercise: 2 minutes – Music – Soothe

- Student will find a comfortable space within the room and sense where his/her body is that day. Eyes can close and he/she will take 5 deep breaths. If possible, do a body scan starting with the head and assessing each body part. After moving through the body once, find articulation in body parts as they are called out by the facilitator.

Quick Reflection- *How does your body feel after doing the body part dance? What was your favorite body part to move today? Why?*

Mirroring Warm-up: 2-4 minutes- Music- Upbeat Kid-Pop

- Student will follow along with instructor and mirror movements to warm up his/her body. Movements will include body isolations, stretching, and simple locomotor steps.

Emotion Exploration: 5-10 minutes- Music- Upbeat Kid-Pop

- Student will be given a box with pictures of different people expressing different emotions in their bodies. The emotions shared will be: happy, sad, angry, and excited. The student will identify how the body looks different in each picture and that even if you couldn't see their face you would still be able to identify the emotion through their body language. The student will try making shapes with his/her body reflecting the emotions happy, sad, angry, and excited.

Quick Reflection- *Which emotion was your favorite to make? Why? Which emotion was your least favorite to make? Why?*

Drawing Exploration: 15-20 minutes- Music- different for each emotion

- Student will go outside and draw the different emotions explored in the previous exercise. The paper will be divided into 4 sections with 1 emotion shared in each quadrant. Various colors will also be available to help assist in reflecting the emotion more clearly in the drawing. Once the student has completed all 4 emotions in each quadrant, the completed drawing will be taped on the ground inside the studio for further exploration. (Side note: if the studio will allow for drawing inside the studio then the drawing can be taken place in there as well.) With associating music, the student will choose which quadrant to begin exploring first. The student will stand in the quadrant and compose a short

movement phrase that reflects that emotion. The student can move onto another quadrant at his/her pace.

-

Quick Reflection- *Which emotion was your favorite to dance to? Why? Which emotion was your least favorite to dance to? Why? How does your body feel right now?*

Cool Down: Facilitator led- 1-2 minutes, Music- Upbeat

- Student will follow along mirroring facilitator's movement to center his/herself and prepare to leave the studio. Movement will involve deep breaths and stretching.

Lesson Plan

Workshop – Week 5 (30 minutes)

Objective: Children will learn to follow directions through improvisational movement explorations working with sculpting textiles.

Somatic Exercise: 2 minutes – Music – Soothe

- Student will find a comfortable space within the room and sense where his/her body is that day. Eyes can close and he/she will take 5 deep breaths. If possible, do a body scan starting with the head and assessing each body part. After moving through the body once, find articulation in body parts as they are called out by the facilitator.

Quick Reflection- *How does your body feel after doing the body part dance? What was your favorite body part to move today? Why?*

Mirroring Warm-up: 2-4 minutes- Music- Upbeat Kid-Pop

- Student will follow along with instructor and mirror movements to warm up his/her body. Movements will include body isolations, stretching, and simple locomotor steps.

Sculpting Exploration: 10-15 minutes- Music- Piano

- The student will be given a box with words of different objects. The words may include: basketball, bat, dog, tree, giraffe, fish, car, and football. The student will be given a sculpting medium, such as playdough, to mold the object out of the dough. As the object is molded, he/she will verbally identify characteristics of the object (ex: round, spread out, long, strong, slimy, etc.) The sculpture characteristics will be written on the white board. After the student completes 3-4 sculptures he/she will embody the characteristics of each sculpture by creating associating movement and shapes.

Quick Reflection- *Which sculpture was your favorite to sculpt with your hands? Why? Which sculpture was your favorite to sculpt with your body? Why?*

Discovery Boxes: Sculpting Exploration: 10-15 minutes- Music- different for each box

The student will have 4 available boxes to choose and explore. Each box will have a sculpture or textiles to draw inspiration from. He/she will look at the sculpture and then make a reflective shape in his/her body. Once the 4 boxes have been explored the student will find a way to connect the four shapes with transitions to make a short movement phrase. If time allows, the student can explore the 4 discovery boxes again being the sculptor and sculpting the facilitator's body into shapes.

Quick Reflection- *Which box was your favorite to dance to? Why? Which sculpture was your favorite to sculpt me out of? Why? How does your body feel right now?*

Cool Down: Facilitator led- 1-2 minutes, Music- Upbeat
Student will follow along mirroring facilitator's movement to center his/herself and prepare to leave the studio. Movement will involve deep breaths and stretching.

Lesson Plan

Workshop – Week 6 (30 minutes)

Objective: Children will build social interaction skills by exploring mirroring movement exercises.

Somatic Exercise: 2 minutes – Music – Soothe

- Student will find a comfortable space within the room and sense where his/her body is that day. Eyes can close and he/she will take 5 deep breaths. If possible, do a body scan starting with the head and assessing each body part. After moving through the body once, find articulation in body parts as they are called out by the facilitator.

Quick Reflection- *How does your body feel after doing the body part dance? What was your favorite body part to move today? Why?*

Mirroring Warm-up: 2-4 minutes- Music- Upbeat Kid-Pop

- Student will follow along with instructor and mirror movements to warm up his/her body. Movements will include body isolations, stretching, and simple locomotor steps.

Mirror Exploration: 10-15 minutes- Music- Piano

- The student will be given a mirror to look at and identify what a mirror does. After discussing the mirror's characteristics, the student will stand and move in front of the mirror to see what his/her reflection does. The facilitator and student will take turns leading and following each other through a mirroring movement activity. They will face each other and mirror the movement of the other person.

Quick Reflection- *What was your favorite part of exploring the mirror? Why? Did you enjoy being the leader or the follower more? Why? How does your body feel right now?*

Sculpting/Mirroring Exploration: 10-15 minutes- Music- different for each box

- The student and facilitator will improvise with the idea of mirroring each other's shapes and allowing those shapes to come alive and create new shapes. One person will be the sculptor and the other person is the sculpture. The sculptor will make a shape and the sculpture will mirror the shape. If comfortable, the sculptor will then make adjustments to the shape by moving the other's body to create a new shape. Once the new shape is created then the sculpture will switch roles with the sculptor by mirroring the new shape. The roles will then switch and the process repeats.

Reflection: *Did you enjoy being the sculpture or sculptor more? Why? Do you remember some of the activities we've done the past 6 weeks? What has been your favorite? Why? Did you know that you can dance at your home, at the park, with your friends, and with your family? Even though we won't have class anymore you can still have fun with dance each week.*

Cool Down: Facilitator led- 1-2 minutes, Music- Upbeat
Student will follow along mirroring facilitator's movement to center his/herself and prepare to leave the studio. Movement will involve deep breaths and stretching.

APPENDIX C
PARENT SURVEYS

Parent Pre-Workshop Survey

Answer the following questions regarding your child. All information shared is welcomed and encouraged for the progression of the research. It is your right to withhold any information you do not feel comfortable disclosing. Thank you for your time and dedication in making this a wonderful experience.

Participant Code: _____

Date: _____

Please tell me about your child's experience with movement. What does he/she have experience with or enjoy doing? (Ex: dance, aerobics, karate, running, basketball, soccer, yoga, swimming, etc.) _____

_____.

On a scale of 1-5, circle the number that best illustrates your child's embodiment (relationship to or demonstration) of the behavior. (5- Excellent, 4-Good, 3-Neutral, 2-Poor, 1-Very Poor)

Attitude	5	4	3	2	1
Anxiety	5	4	3	2	1
Confidence	5	4	3	2	1
Eye Contact	5	4	3	2	1
Listening	5	4	3	2	1
Verbal Communication	5	4	3	2	1
Making decisions	5	4	3	2	1
Following directions	5	4	3	2	1
Creativity	5	4	3	2	1
Coordination	5	4	3	2	1

All of the behaviors above can be explored with various movement lesson plans. Out of the behaviors listed above, are there any specific behaviors that you would like me to focus on with your child? (If more than one word resonates, please list all) _____

_____.

Below is an opportunity to briefly share with me any more information on your child's abilities, difficulties, talents, tendencies, habits, etc. in association to the listed topics. All information is appreciated as it will assist me in working with your child more effectively.

Child's attitude _____

Child's anxiety level _____

Child's confidence _____

Child's eye contact _____

Child's listening skills _____

Child's verbal communication skills _____

Child's decision-making skills _____

Child's ability to follow directions _____

Child's creativity _____

Child's coordination _____

Do you have any other comments/questions? _____

Thank you for your participation in this survey. Please feel free to use the backside of the paper if additional space is needed for further writing.

Parent Post-Workshop Survey

Answer the following questions regarding your child. All information shared is welcomed and encouraged for the progression of the research. It is your right to withhold any information you do not feel comfortable disclosing. Thank you for your time and dedication in making this a wonderful experience.

Participant Code: _____

Date: _____

In conclusion of the workshop, on a scale of 1-5, circle the number that best illustrates your child's embodiment (relationship to or demonstration) of the behaviors listed below. (5- Excellent, 4-Good, 3-Neutral, 2-Poor, 1-Very Poor)

Attitude	5	4	3	2	1
Anxiety	5	4	3	2	1
Confidence	5	4	3	2	1
Eye Contact	5	4	3	2	1
Listening	5	4	3	2	1
Verbal Communication	5	4	3	2	1
Making decisions	5	4	3	2	1
Following directions	5	4	3	2	1
Creativity	5	4	3	2	1
Coordination	5	4	3	2	1

Prior to the workshop beginning, you requested specific behaviors you wanted me to focus on with your child in movement lesson plans. The behavior(s) you requested were: _____
_____. Briefly share with me any improvements, changes, worsening, etc. that have occurred, for your child, over the past 6 weeks in association to these behaviors. _____

Below is an opportunity to briefly share with me more information on your child's current abilities, difficulties, talents, tendencies, habits, etc. in association to the listed topics. All information is appreciated as it will assist me in working with your child more effectively.

Child's attitude _____

Child's anxiety level _____

Child's confidence _____

Child's eye contact _____

Child's listening skills _____

Child's verbal communication skills _____

Child's decision-making skills _____

Child's ability to follow directions _____

Child's creativity _____

Child's coordination _____

Do you have any other comments/questions? _____

Thank you for your participation in this survey and workshop! Please feel free to use the backside of the paper if additional space is needed for further writing.

Parent Reflection Survey

Answer the following questions regarding your child's performance for today's session. All information shared is welcomed and encouraged for the progression of the research. It is your right to withhold any information you do not feel comfortable disclosing.

Participant Code: _____

Date: _____

Please describe the mood/behavior/actions of your child just prior to dropping him/her off for the session _____

Would you describe your child's behaviors today as being typical day? YES _____ NO _____
If no, please explain _____

Please describe the mood/behavior/actions of your child after picking him/her up from the session _____

On a scale of 1-5, circle the number that best illustrates your child's embodiment (relationship to or demonstration) of the behavior after the session. (5- Excellent, 4-Good, 3-Neutral, 2-Poor, 1-Very Poor)

Attitude	5	4	3	2	1
Anxiety	5	4	3	2	1
Confidence	5	4	3	2	1
Eye Contact	5	4	3	2	1
Listening	5	4	3	2	1
Verbal Communication	5	4	3	2	1
Responsiveness to prompts	5	4	3	2	1
Follow thru on prompts	5	4	3	2	1
Creativity	5	4	3	2	1
Coordination	5	4	3	2	1

Do you have any other comments/questions? _____

Thank you for your participation in this survey. Please feel free to use the backside of the paper if additional space is needed for further writing.

APPENDIX D
REFLECTIONS AND INTERVIEW QUESTIONS

Brett's Written Reflection

“Kelsey has helped me take my imagination to new heights. I was one of those guys who were shy about using his imagination, especially when it came to dance. She has helped me realize that dancing can help me express who I am, along with releasing energy (good or bad).

Each session we would start off with a “body scan”, this consisted of going from the top of the head down to the toes, and then back up again. Doing this has helped me understand my body, and how to point out where I feel “tense.” This almost feels like a massage, I loved lying down during this and after the body scan was complete, I had to get up slowly, my body was just so relaxed. Now, whenever I feel intense or I need to “stretch,” I just do the body scan that Kelsey taught me, it does the trick every time.

Dancing has allowed me to use my imagination in a new way. Kelsey would place certain objects around the room, and then she would play certain music to go along with those objects. I would then have to create a dance that would make sense to me, or that I could come up with in my mind. I loved doing this because it allowed me to explore certain areas of dance I never knew about, and it allowed me to go deep inside myself. By going deep inside myself I mean, I learned how my body responds to dance, and how dance is like another work out to me.

The creativity of the workshop helped me explore myself just as much as the dancing did. Kelsey would have me draw a path, and I would then have to dance/walk or run that path. I found this activity to be very interesting. I even took this activity to a spiritual level. I came up with the idea of making my path and then walking it blind folded. This was very fun because it got me thinking about where I am in my life.

The workshop has changed the way I look at creativity. I can now take my imagination to a whole new level. I found Kelsey to be very creative with the whole project. She was very kind and playful. She was the best teacher ever.”

Reflection and Interview Questions

The following questions were directed to participants and their guardians via recorded interview, individual journaling, and during the sessions. The reflection process was optional and was conducted based on each individual's needs and comfort level in participating in the reflection.

Participant

What did you just create?

How did you create the movement?

How does this movement make you feel?

Do you remember your last creative movement dance?

What was that movement dance about?

Does this movement dance feel different from the last movement dance?

Do you enjoy performing one more than the other? Why?

How does your body feel right now?

What is your favorite movement in this dance? Why?

Can you take that movement and turn it upside down?

Can you perform that movement on a high level? Medium level? Low level?

Can you travel in a circular pattern while doing that movement?

Can you perform that movement really strong like a lightning bolt?

Can you perform that movement really soft like how a feather would float?

Can you perform that movement really big taking up lots of space in the room?

Can you perform that movement really small hardly moving at all?

Which movement pattern is your favorite to perform? Why?

Parent

How do you feel your child is reacting to the workshop thus far?

Have your child's reactions from the workshop this week differed from last week? If so, how?

Do you have any concerns?

Have you seen any changes in your child since beginning the workshop? If so, what have you noticed?

Have you noticed any benefits with your child participating in the workshop?

Is there a particular exercise that your child has talked to you about? Is there a reoccurring exercise that has had a positive impact? Is there a reoccurring exercise that has had a negative impact?

Do you have any recommendations for me for future classes?

Getting to know your child

What's your child's diagnosis? Is it a multiple diagnosis?

What are some common struggles your child deals with because of the ASD?

Did you notice any overall atypical behavior over the course of the 6-7 weeks? Increase in anxiety, uneasiness about participating, increase in meltdowns/frustration,

Parent Interview Questions for Video Documentary

1. Can you tell me about your child?
 - a. Age
 - b. Like to do for fun
 - c. Favorite things to collect, read, watch
 - d. What makes him/her happy
 - e. Anything he/she does that shows creativity or exploration in own world
 - f. Favorite toys, sports, art activities
 - g. Anything else you may think of
2. What are some of the things that your child struggles with because of autism?
 - a. Daily activities that may be difficult
 - b. Triggers for frustration
 - c. Triggers for anxiety
 - d. Anything else you may think of
3. What were your thoughts about the study?
4. Did you notice any change in your child throughout the workshop? Any experiences that occurred at home or did your child leave the workshop experience at the workshop?