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Effects of Dance Movement Therapy on Nonverbal Children With
Autism Spectrum Disorder
Capstone Thesis
Lesley University

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Specialization: Dance/Movement Therapy

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Abstract

This thesis investigates the effects of an approach to Dance Movement Therapy (DMT) on communication outcomes in nonverbal children diagnosed with Autism Spectrum Disorder (ASD). Drawing inspiration from the DMT mirroring method, the research employed a unique methodology throughout five 60-minute group therapy sessions. The participants, five 13-16-year-old students each with a diagnosis of ASD, attended a private school specializing in behavioral and mental disabilities. Each participant presented with varying levels of communication and language impairments, ranging from nonverbal to minimally verbal. The study explores the intersection of ASD and DMT, focusing on how different DMT interventions can be tailored to enhance communication skills in children with ASD. A comprehensive literature review forms the backdrop of the research, examining key themes such as the understanding of ASD through the DSM-5, navigating atypical social communication in ASD, the evolution of autism research and intervention, and the background of DMT. Preliminary findings suggest promising outcomes, with participants demonstrating improved communication abilities, including increased nonverbal expression, and engagement in social interactions. These findings underscore the potential of tailored DMT interventions, such as mirroring, in addressing communication challenges in nonverbal children with ASD.

Keywords: Dance Movement Therapy (DMT), Autism Spectrum Disorder (ASD), Nonverbal communication, Mirroring method, Group therapy, Adolescents, Behavioral and mental disabilities, Communication skills, DSM-5, Social communication, Intervention, Nonverbal expression, Social interactions

Effects of Dance Movement Therapy on Nonverbal Children with Autism Spectrum Disorder

Introduction

This thesis embarks on an exploration into the transformative effects of Dance Movement Therapy (DMT) on communication outcomes among nonverbal children diagnosed with Autism Spectrum Disorder (ASD). This study unfolds through a series of five 60-minute group therapy sessions, conducted with a cohort of five participants aged 13 to 16, all enrolled in a specialized private school catering to individuals with behavioral and mental disabilities. The findings of this study suggest promising outcomes in terms of communication and socialization among participants, including an increase in engagement, improved expressive abilities, and receptivity to social cues. These results underscore the potential of DMT interventions in addressing communication challenges in nonverbal children with ASD. The supportive and guided nature of the intervention sessions, coupled with the personalized approach to intervention delivery, contributed to the positive outcomes observed.

ASD is characterized in the DSM-5 as deficits in social communication and interactions, and restricted or repetitive behaviors with varying degrees of severity in manifestation (5th ed.; DSM-5; American Psychiatric Association, 2013). Individuals with ASD may struggle with social interactions and communication due to deficits in understanding visual cues in speech which are known to help one with language processing, which could contribute to these challenges (Irwin et al., 2011). Many individuals diagnosed with ASD are either nonverbal, being unable to express any sort of verbal expressive language, minimally verbal, the ability to use very few words, or

limited verbal, having reduced verbal skills but still more than that of someone who is minimally verbal (Koegel et al., 2020). These differences can negatively impact emotional well-being and may be disabling to children with ASD. According to estimates from the Centers for Disease Control and Prevention, 1 in 36 children are diagnosed with ASD in the United States of America (Maenner et al., 2023). Family members of children with ASD are also impacted as having a child with ASD can be physically, emotionally, and financially demanding (Karst et al., 2012).

Available interventions often focus on behavioral modification to impose socially acceptable norms or communication modes on children with ASD (Nind, 1999; Desforges and Abouchaar, 2003; National Autistic Society 2020). Not only are these methods ineffective, but they often fail to address the emotional impact of living with ASD in a world that largely caters to an allistic, or non-autistic, population (Aithal et al., 2021). These interventions typically don't include structured reflection and fail to recognize or promote understanding of the child's communication bandwidth, social resources, and individual challenges (Aithal et al., 2021).

DMT is an intervention that aims to foster and support the integration of mind and body through creative movement expression (American Dance Therapy Association, 2018; Association for Dance Movement Psychotherapy UK 2020). DMT applies to a range of client populations and methods, such as movement mirroring, tuned walking in pairs, group circle dance, and embodying a character among many other interventions (Jeremy Sutton, 2024). These interventions and practices used in DMT are useful for any population and can be customized to fit the specific needs of different participants.

In summary, this introduction sets the stage for an examination of the effects of a customized DMT approach on communication outcomes in nonverbal children with ASD. Through a detailed examination of the intervention methodology and objectives outlined in this study, readers will gain insight into the specific strategies employed to address the communication challenges faced by participants. The subsequent sections will delve into the methodology, findings, and implications of this research, offering a nuanced understanding of the potential impact of DMT interventions on enhancing communication skills in nonverbal children with ASD.

Literature Review

ASD presents a complex array of challenges, particularly in the realm of social communication and interaction. This literature review will focus on the connection between ASD and Dance Movement Therapy, and how different DMT interventions can be used to build upon communication skills in children with ASD. This review will focus on the understanding of ASD and DMT through the DSM-5, navigating atypical social communication in ASD, the evolution of Autism research and intervention, a background of DMT, and DMT interventions for children with ASD.

Autism Spectrum Disorder and the DSM-5

Diagnostic features of ASD were initially defined by Kanner (1943) and have been revised several times throughout the history of the Desk Reference to the Diagnostic Criteria from DSM-5 (World Health Organization, 2018). According to the DSM-5, criteria for ASD are defined by two overarching domains: 1) atypical social communication and interaction and 2) restrictive and repetitive behaviors and interests (American Psychiatric Association, 2013). Previous versions of the DSM regarded

Asperger syndrome and autism spectrum disorder (ASD) as distinct disorders, and considered social function and communication divergences as separate impairments (Wing L. Gould, 1979). At present, the DSM-5 characterizes Autism Spectrum Disorder as follows,

“A. Persistent deficits in social communication and social interaction across multiple contexts...B. Restricted, repetitive patterns of behavior, interests, or activities...” (American Psychiatric Association, 2013, pp. 27-29).

Such challenges can be viewed as difficulty in maintaining basic conversations, inability to share interests or emotions, inability or difficulty with maintaining eye contact, impairments in understanding gestures, impairments in understanding or maintaining relationships, repetitive movement, sensitivity to sensory input, and inflexibility to change in routine (American Psychiatric Association, 2013).

Atypical Social Communication and Interaction in Autism

Navigating the communication challenges inherent in ASD involves understanding a wide spectrum of deviations, encompassing nonverbal, minimally verbal, and verbal communication domains. Numerous investigations have identified a shared element known as non-verbal communication, which encompasses gestures such as facial expressions and bodily movements (Febriantini et al., 2021). This form of communication plays a vital role in conveying emotions, intentions, and social cues for individuals with ASD who are nonverbal or minimally verbal. Research indicates that individuals with ASD often exhibit lower levels of social motor coordination compared to their neurotypical counterparts. This deficit in coordination, whether during intentional or spontaneous interactions, can potentially hinder the individual's capacity to form social

and emotional connections with others (Federman et al., 2023). The lack of social motor coordination in individuals with ASD can present barriers to their social and emotional development, impacting their ability to navigate social situations and build relationships. In individuals with autism, the challenges extend beyond verbal communication to encompass difficulties in utilizing language pragmatically, understanding others' perspectives, and achieving shared understanding (Hamilton & Marsh, 2013). This also results in restricted and ambiguous non-verbal communication in autism (Sengupta & Banerjee, 2020). Individuals with ASD also face challenges connecting with others due to impairments in making direct eye contact and relating facial expressions to emotions or mental states (Dantas & do Nascimento, 2022).

Despite the many social and communication challenges that individuals with ASD face, research shows that verbal individuals on the spectrum can learn and build upon many social skills. Numerous verbal individuals on the autism spectrum can acquire certain social skills and occasionally demonstrate an ability to understand another person's perspective (Manders et al., 2021). Individuals with ASD may be able to learn these skills but they may not execute such skills the same way as a neurotypical individual might. Consequently, while certain individuals with ASD may proficiently accomplish certain emotion recognition tasks, their approach to doing so differs from those without ASD (Fitzpatrick et al., 2018).

Evolution of Autism Research and Intervention - The Neurodiversity Approaches

Research surrounding atypical development or “neurodevelopmental disorders” such as ASD has been conducted within the medical model framework (Dwyer, P. 2022). This model views disabilities as illnesses or disorders that affect the body and

mind, resulting in limitations and deficits (Dwyer, P. 2022). It suggests that the goal should be to turn disabled individuals into able-bodied typical individuals (Dwyer, P. 2022). This model has been historically seen as one of the more dominant models in defining disabilities but has received scrutiny within disability communities (Dwyer, P. 2022). With such strong underlining on the “normalization” of certain symptoms and characteristics of disabilities such as ASD, individuals with these diagnoses can find this model to be discouraging. Individuals with disabilities may feel frustrated by the emphasis on curing and normalizing their condition, especially if they are unable or unwilling to conform to the expectations of becoming typically developing or "normal" individuals (Dwyer, P. 2022).

A major shift in the perspective and approach to autism research and intervention was initiated by autistic activists through the neurodiversity movement (Botha & Gillespie-Lynch, 2022). In the late 1990s, Singer (2017) and Blume (1998) introduced the concept of neurodiversity, which emphasizes the distinctiveness of every brain (Botha & Gillespie-Lynch, 2022). The concept of the neurodiversity movement challenges the notion of autism as a medical syndrome that is defined strictly by functional deficits (Botha & Gillespie-Lynch, 2022). Within the neurodiversity framework, autism is viewed as one variation amongst many within a diversity of minds (Botha & Gillespie-Lynch, 2022).

Dance Movement Therapy

The American Dance Therapy Association defines DMT as “the psychotherapeutic use of movement to further the emotional, cognitive, physical and social integration of the individual, for the purpose of improving health and well-being”

(Welling, 2019). DMT can be used with a wide variety of diagnoses and populations such as anxiety and depression, chronic pain, communication disorders or challenges, disordered eating, dementia, PTSD, ASD, and many more. DMT can be tailored to use with toddlers, young children, adolescents, adults, and elderly individuals. Dance therapy, as described by board-certified dance therapist Erica Hornthal, MA, LCPC, BC-DMT Dance therapy, as described by board-certified dance therapist Erica Hornthal, MA, LCPC, BC-DMT, incorporates movement and nonverbal communication alongside traditional talk therapy to address psychological and behavioral issues that verbal communication alone may not adequately capture (Sara Lindberg, 2023).

DMT has shown positive benefits to emotional well-being, improvement in communication and relationships, increased self-awareness, and improvements in behavior. "Dance movement therapy emphasizes the body–mind connection and offers a unique mode of emotional intervention for supporting mental processes" (Shuper-Engelhard & Vulcan, 2022).

DMT Interventions for Children with Autism

The use of DMT has become more popular in the treatment of the ASD population in recent years. Dance/movement therapy has gained popularity as a method employed with individuals on the autism spectrum, given its emphasis on enhancing social skills, fostering relationships, improving functionality, promoting positive body image, and broadening movement abilities (Janke, 2020). One of the most popular DMT interventions is mirroring which is the process of empathetic imitation (Scharoun et al., 2014). Through mirroring, a child can observe how their actions impact another person, thereby gaining insight into their own physical capabilities and

possibilities (Scharoun et al., 2014). In a systematic review of studies by Takahashi, Matsushima, and Kato (2019), seven research studies from 1970 to 2018 were chosen to be evaluated to verify the quality of these studies on DMT and ASD and the effectiveness of these interventions for ASD (Takahashi et al., 2019). Mirroring, or “imitation” was the most used intervention in all seven of the selected studies (Takahashi et al., 2019). The research concluded that four of the studies had reported improvements in social skills, emotional expression, and synchronization, while two of the other studies reported improvements in well-being, and overall emotions as well as mental improvements (Takahashi et al., 2019).

In a study conducted by Sengupta and Banerjee (2022), three 11-year-old participants, all diagnosed with severe ASD, participated in 24 DMT sessions where they practiced elements of mirroring, Bartenieff fundamentals, comfort touch, and improvisation (Sengupta & Banerjee, 2020). The results showed that the overall communication in all three participants had an initial increase while participating in DMT sessions but saw a decline several months after ending the sessions, showing evidence that the sessions would need to continue to keep the communication levels up (Sengupta & Banerjee, 2020). The current investigation involving these three cases demonstrates the favorable impact of Dance/Movement Therapy (D/MT) on childhood autism, corroborating the assertion made by Koch et al. (2014) regarding the efficacy of mirroring in D/MT. This practice fosters the development of body awareness, social skills, self-efficacy, empathy, and overall well-being (Sengupta & Banerjee, 2020). DMT continues to show promising benefits for individuals with ASD. As our understanding of the potential of DMT deepens, it offers a valuable complement to

traditional interventions, providing holistic support for individuals with ASD and enhancing their overall well-being and quality of life.

Method

Project Design

The core focus of this capstone project was to investigate the effects of dance movement therapy of children with ASD. To address this, a structured research design was employed, centered around the exploration of tailored DMT interventions and their impact on communication outcomes in nonverbal children with ASD.

Throughout the study, a combination of DMT interventions was implemented, incorporating props such as scarves, egg noise shakers, and bouncy balls. These interventions primarily focused on mirroring and partner work to facilitate socialization and emphasize communication skills among participants.

Over the course of five weeks, the study built upon the theme of communication, utilizing various DMT strategies to foster connections among participants. The design of the study provided participants with guided interactions within a structured space, allowing them to practice socializing with peers in a safe and productive environment.

Observation of these interventions revealed clear improvements in participants' communication abilities, including increased engagement, improved expressive skills, and enhanced receptivity to social cues. By closely monitoring these changes throughout the study period, insights were gained into the effectiveness of tailored DMT interventions in addressing the communication challenges specific to nonverbal children with ASD.

Participants and setting

The subjects who participated in this movement group were a group of five students, four boys, and one girl, ages 13-15 years old. I use the term “partially verbal” to describe participants who can use scripting and repeat basic language to communicate, and the term “non-verbal” for participants who are unable to engage in any sort of verbal communication. Each student had a diagnosis of ASD, and three of the five students were partially verbal. The remaining two students were non-verbal. One of the non-verbal participants used a Picture Exchange Communication System (PECS) to communicate and the other non-verbal participant used an iPad equipped with the program Touch Talk. These DMT group sessions were held at a therapeutic day school for individuals with severe behavioral diagnoses. The pseudonyms used for these students are Brandon, Bret, Randy, Travis, and Susan.

Materials

Within the sessions, I used a variety of different props and art materials in my DMT groups. I used silk scarves, Play-Doh, noise shaker eggs, bouncy balls, paper, chalk pastels, foam puzzles, a clear touch, music, and markers.

Procedure

For the intervention, each of the five 60-minute sessions had a distinct beginning, middle, and end, with a clear focus on thematic development aimed at nurturing various social skills. To begin, I made sure to establish a warm atmosphere by personally greeting each participant, allowing them to express themselves through high-fives, verbal responses, or communication devices. This initial interaction set the stage for the day's theme, emphasizing the importance of communication. Throughout the sessions, we delved into different aspects of social interaction, such as sharing, identifying

emotions, expressing oneself, and fostering positive peer interactions. Each session was meticulously crafted to build upon the previous one, offering a structured environment where participants could practice and refine these skills in a supportive and collaborative setting. As the sessions progressed, participants were encouraged to reflect on their experiences and insights, fostering a sense of continuous growth and learning. Overall, the intent was to create a space where participants could develop essential social competencies while feeling supported and empowered to engage with others confidently.

Results

Session 1

In the first session, I had the participants sitting at a “c” shaped table together with myself seated in the middle. I chose to have the participants seated at a table for the first session because they are not used to being up in free space for a long period. I decided to transition the participants from their desks to a large table to allow them to be in a less restrictive environment together while still maintaining structure and safety. For this group of participants, something as small as sitting at a table together safely and keeping their hands to themselves is a very difficult task.

While seated at the table, I started by rolling a ball to one of the participants by using simple and clear instructions. I would use the participant's names and make eye contact with them, and I told them I was going to roll the ball to them. I rolled the ball to Bret first. I then asked Bret to roll the ball to Susan. I specifically chose to create an interaction between Bret and Susan because they have a history of targeting one another in the classroom and becoming physically unsafe toward each other. I wanted

to see if these two individuals could have a positive interaction with each other in this less restrictive setting. We continued with different variations of rolling, passing, or lightly tossing the ball to one another. We were able to continue this activity for about ten minutes successfully.

After taking about three turns, Brandon became visibly agitated and got up and left the table. He went over to the play mat and sat down on a bean bag. Brandon started to become physically aggressive towards some of the other participants, so he was taken out of the room to de-escalate. After Brandon left the group, I put the other four participants into two groups of two. I had Bret and Susan work together and Randy and Travis work together. I then put a foam puzzle in front of each group and instructed them to take turns completing the puzzle as a team. Tasks that involve working together as partners are very difficult for this group of individuals and they oftentimes cannot tolerate taking turns and sharing items. Both sets of partners were very successful in completing the puzzle together. With guidance from myself, all the participants were able to engage in some form of communication whether it was making eye contact with their partner to decide whose turn it was, using some verbal approximation, or using their speech devices.

Once we finished working on the puzzles, I invited the group to get up out of their seats and stand anywhere in the room. I gave each participant two scarves and allowed them to observe the scarves for about two minutes. I was curious about what each participant would do when handed two scarves and had no instructions. Randy immediately started rolling the scarves around one another and making them as long and thin as possible, which made sense as one of his stimulants was playing with laces

and string and rolling those objects around themselves. Susan stared at the scarves for about 30 seconds before slowly starting to feel the scarf's textures and shapes in her hands. She was very gentle with the scarves and almost looked like she was molding the scarves as if they were clay. Bret immediately put the scarves over his head and started looking around the room. I told him to look up and try to blow a bubble to get the scarf to float off his head. He followed my instructions and blew the scarves up into the air. He smiled and went to do it again several more times. Travis sat down at the table after throwing the scarves on the floor and just watched the rest of us instead of participating.

After allowing the participants to get used to their scarves for a few minutes I asked them to look at me and try to copy my movements. I told them I was happy and burst my arms up and over my head with the scarves and shimmied them down by my sides. I modeled the motion I came up with for "happy" three more times and all three of the remaining participants followed my motions. I made sure to verbalize "happy" in an energetic tone of voice each time I performed the motion so that they would start to associate the motion with the feeling. The next feeling word I modeled was "sad". For this feeling, I took the scarves in my hands and buried my face into them. I slumped my body over while covering my face and said "sad" in a long slow tone of voice. We performed "sad" four times just like we did with "happy". The final feeling we worked on for this session was "mad". To show this feeling I crumbled the scarves up aggressively into a tight ball threw them to the floor and yelled "mad". Once again, we performed "mad" four times.

By the end of the group, I was left with Bret, Susan, and Randy as Travis and Brandon had disengaged from the group. To close out the session I went over to Susan first and asked her if she could show me how she was feeling with the scarves. She performed the movement for “happy” and verbalized the word with it. I asked Randy next, and he smiled at me while holding the scarves down by his sides. I waited 30 seconds before asking him one more time to show me how he was feeling. He continued to smile so I reframed my question and asked, “Are you happy?” while modeling the movement for “happy” to which he was able to respond with the movement back to me. I asked Bret last if he could show me how he was feeling, and he excitedly showed me “happy”. After checking in I had the participants return to their desks and raise their arms straight over their heads while taking a deep breath in. I had them slowly lower their arms down by their sides while exhaling. We did this a total of 3 times. The last thing I did before leaving was to individually say goodbye to each participant just as we started the group. I said “Goodbye, see you next week! Great work today!” and allowed them to respond however they felt they needed to.

Session 2

In this session only three of the participants, Bret, Susan, and Randy were in attendance. I started the group the same way as before, with introductions and check-ins. I went around the room to each participant individually and said “Hello, how are you feeling today?”. Bret responded verbally and expressed happiness. Randy responded with his communication device and expressed feeling excited. Susan did not answer me the first time I asked how she was feeling. I waited about 30 seconds and asked again how she was feeling. She needed some verbal prompting and options of different

feeling words before expressing that she felt tired. After we finished our check-ins, we got into our theme development.

In this session, our theme was emotional identification. I started by handing out the scarves to everyone, allowing each participant to choose their preferred color. I then used the clear touch to display a sensory video of colored paint being poured into the water at different speeds. The video had a music track that went with it of very relaxing and calming instrumental music. I invited the participants to start moving freely in their own spaces with their scarves. I modeled for them by dancing calmly with my scarf. I swayed my scarf around in the air and mirrored the motions of the paint in the video. The participants watched me for a few minutes while swaying and playing with their scarves a small amount. After about three minutes, Bret was the first to join in on the movement. He joined me in the center of the room and started to mirror what I was doing. Randy and Susan both stayed in their chairs at their desks and played with their scarves very subtly. I prompted them to watch the paint falling in the video and to try to make their scarves look like the paint. Bret went up to the clear touch and held his scarf up to the screen. He tried to mold his scarf along with the imagery of the paint in the video, following the movements closely. He looked at me with a big smile and I replied, "Bret you look like you feel happy right now". He responded verbally, expressing the emotion of happiness. I went over to Randy and asked, "Randy, how is Bret feeling?". Randy studied Bret's face for a moment and started scanning through his communication device to respond. He expressed happiness on his tablet. I went over to Susan and invited her to stand up and move around the room. She declined and motioned that she was tired by taking her scarf, draping it over her head, and laying her

head down on the desk. I got Bret's attention and asked "Bret, how do you think Susan is feeling?". He went over to Susan's desk, looked at her, and expressed that she was tired. I wanted to have the participants practice identifying other people's emotions by observing their body movements and nonverbal expressions.

I invited Randy to join Bret and me in the middle of the classroom for a small movement circle. Randy accepted and came to the middle of the room with us. I invited Susan as well but told her she did not have to. She chose to stay in her seat but did sit up and watch us all. We stood in our circle with our scarves and started moving. I asked Randy if he could follow along with Bret's movements. He watched Bret carefully and started to mirror his movements. Bret enjoyed this and started making his movements bigger and much faster. Randy lost interest very quickly when he could not keep up with Bret's sporadic movements. He dropped his arms by his sides and started smiling at Bret. I then switched their roles and asked Randy to move so Bret could mirror them. Randy started making very small quick movements only with the arm that he was holding his scarf with. He only moved his arm up and down with the scarf and would periodically do a small hop. Bret followed along but instead of keeping his movements small like Randy's, he did everything very large and exaggerated.

After letting Randy be the leader, I invited the participants to follow along with my movements. I started by holding the end of the scarf in each hand and slowly swaying gently back and forth. Randy followed along and kept his movements even smaller than mine, but Bret again followed my movements making them large and exaggerated. The three of us moved together for about five minutes total.

When the movement started to die down, I asked the participants if they could show me how their bodies felt after doing the movement together. Randy started stomping his feet and clapping with a big smile on his face. I said, "Randy, your body looks excited! Are you feeling excited?" I modeled a movement with the word "excited" that he could associate with the feeling. The movement I made for the feeling of excitement was taking the scarf and swirling it over my head like a lasso. He clapped again and started to model the movement for "excited" back to me. When I asked Bret how his body was feeling he immediately showed me the movement I had just modeled for "excited" while shouting the feeling word back to me. I had the participants take their scarves and take a deep breath in while throwing the scarf up into the air, and then releasing the breath as the scarf floated to the floor. We did this two more times before I guided the participants back to their desks. I went around the room and said goodbye to each participant to close out the session.

Session 3

For the third session all five participants were in attendance. We started with our usual opening greetings. I went around to each participant and asked, "How are you feeling today?". Randy used his communication device to express that he was hungry and tired. Bret answered verbally and expressed that he was feeling sad, but he said this with a smile on his face. Susan did not want to answer at first and had her head down on her desk. I told her she did not have to answer me if she did not want to and as I was walking away from her desk, she verbally approximated feeling mad. Travis nodded his head "no" at me when I asked how he was feeling and pointed to the symbol for "angry" on his PECS chart. Brandon scripted my question back to me when I asked

how he was feeling so I responded by asking “Are you happy or mad?” to which he responded verbally expressing that he was happy.

After our check-ins I had the participants move into the classroom next door where we had the “c” shaped table. All five participants went to the other classroom, and I invited them to take a seat at the table with myself seated in the middle. I had one piece of paper set up in the middle of the table and a pack of chalk pastels. The theme development for the session was working together and sharing. I started the activity by assigning one participant to be the “drawer” first. The other four participants started as the movers. I told the person who was drawing to just draw whatever they wanted to draw. I told the movers to observe the images being drawn and move along with the drawer in their seats. We stayed seated because a lot of the participants had expressed being tired or angry during our check-ins. I did not want the participants to become dysregulated from having free range in the classroom so staying seated for movement was the best option. I had to model the movement to the participants for all five turns and they seemed confused by the movement aspect of the activity. I had the participants take turns being the drawer. I gave them each one minute to draw on the paper while the others did movement, and we kept track of time with a timer. The idea of this activity was to first practice sharing by allowing each participant to contribute their artwork to the same canvas altogether. The movement piece of the activity was intended to allow the participants to see their peers’ artwork and allow their bodies to respond to that organically. I hoped that the participants would tune into what the drawer was creating and respond to that. The activity did not go how I intended.

The first drawer was Susan. She chose to use green and started making very light lines, barely applying pressure to the chalk pastel. After making about four lines, she needed prompting to continue drawing until the timer went off. I had to remind Susan three times total to keep on drawing. Randy and Bret were watching me the whole time and were mirroring my movements. Although this was not my intention for the experiential, I was still very happy to see that they were engaged to me. Brandon very quickly became agitated and went to the play mat to sit on the bean bag. I honored his discomfort and allowed him to observe from the bean bag. Travis immediately put his head down on the table the minute he sat down. He had kept his head down for most of this experiential. After the first round, I had Susan pass the paper to her right to Travis. Travis nodded his head "No" and pushed the paper over to me. I asked him if he would like to take a turn drawing with the chalk. He first shook his head no and then looked at me and nodded yes. I passed him the paper and the pack of chalk. He chose red and blue, one pastel in each hand. I started the timer and told him he could start drawing. He drew about one line with each hand before starting to crush the chalk pastels up with his nails. I asked him if he could draw more lines with them to redirect him and he did. He drew for about 20 seconds before crushing the chalk again and throwing pieces of it at me and the other participants. I asked him if he needed space from the group and he nodded yes. One of the teacher aids brought him next door to their homeroom so he could regulate again. Susan did not participate in the movement. She watched me and the other participants with her head resting in her hand. I asked her how the drawing made her feel and she very quietly expressed that she felt good. Bret was following along with my movement and was very focused on me. Once Travis

started crushing the chalk, Bret stood up and started jumping around the room. I called Bret over to the table and once I had his attention, I asked him how Travis made him feel when he crushed the chalk. Bret expressed that he felt silly when Travis was crushing the chalk. Randy did not do the movement for this round, he instead sat very still in his seat, observing Travis, Bret, and myself with a big smile on his face. After Travis went back to his class, I passed the paper to Bret next. Bret chose purple and yellow to color with. I started the timer and Bret began scribbling all over the paper. He was using both hands and blending his colors in with Susan and Travis's colors. He realized that if he rubbed the color they would smudge and blend. He grabbed red and orange next and again was scribbling and blending all over the page. I modeled some quick and sporadic movements and invited Susan and Randy to join. Susan declined but continued watching Bret. Randy mirrored some of my movements but could not keep up so at times he would stop to watch and then catch himself up. When the timer went off, I asked Bret if he could pass the paper and chalk to Randy. Bret ignored my question and continued scribbling. I said his name and waited for him to make direct eye contact with me. I asked him again if he could give Randy a turn to draw. He passed the paper over to Randy very slowly and looked upset to be giving up his artwork. I thanked him and started the timer. Randy picked up black and started excitedly drawing quick short lines all over the page. He had a large smile on his face and would clap his hands together in excitement every so often. I started to model quick small movements with my hands and invited Susan and Bret to move along with me. Susan did a few small flicks with one hand but that was all she wanted to do. Bret was very focused on the fact that Randy was drawing over Bret's art. He kept telling Randy

to stop and I reminded him that we were sharing the artwork with everyone. He did not answer me and continued telling Randy to stop. The timer went off and I asked Randy if I could have a turn coloring. Randy, still smiling, passed me the paper and chalk. I started the timer once again and started drawing swirly lines with a bright pink chalk pastel. Nobody did any movement at all this round; they all just watched me draw. Randy was still smiling and clapping. Bret did not say anything to me, he just watched very intently.

After the timer went off, I held up the paper we all drew on to show the participants. I asked Susan first if she liked the art. She nodded yes and smiled. I asked Bret next, and he grabbed the chalk pastels and reached for the paper. I told him we were all done with the chalk for now and he expressed that he wanted to color more. I asked him if he enjoyed using the chalk pastels and he nodded his head yes. I asked him how it felt to give peers a turn to color, and he expressed that he did not like it. I asked Randy if he liked the art we made, and he clapped his hands with a big smile. I directed the participants back to their classroom where their desks were and had them go back to their seats. Brandon and Travis were also in the classroom. I closed out the session with three deep breaths accompanied by our arms rising over our heads on the inhale and dropping slowly down to our sides on the exhale. Randy and Bret were the only two participants to do the cool-down. I walked around to each participant and asked how they felt. Travis pointed to the feeling “okay” on his PECS board and gave me a high five. Bret expressed that he was sad. I asked him why he was sad to which he expressed that he wanted to color more. I told him I would bring the chalk back again sometime for him to use and he gave me a high five. Randy used his communication

device to express that he was happy, and he had fun. Susan and Brandon both chose not to answer, and I respected their space and said one last goodbye to the whole class.

Session 4

To start off our fourth session, we began with our usual check-in. Everyone was present except for Brandon. I passed out a scarf to each participant as I went around and checked in with them. Randy used his communication device to express that he was feeling fine. Bret answered verbally and expressed that he was feeling happy. Travis used his PECS board to express to me that he felt happy. Susan answered verbally and expressed that she was sad but had a big smile on her face. I responded and said, "Sad? You look happy". She laughed and then expressed that she felt "silly". I asked her how she could show me "silly" with the scarf. She stared at me laughing and then started waving the scarf back and forth in a whip-like motion. I mirrored her movement and showed the other participants the movement while verbalizing the word "silly". The other participant mirrored the movement, and we practiced it three times in total.

After learning our new movement, we went over our other feeling motions that we learned in sessions one and two. We started with "happy", and I had the participants stand in front of their desks while they did the movements. I asked them to show me "happy" without modeling it to them to see if they remembered the movement. Bret and Susan did the movement correctly right away and Randy and Travis did not do the movement at all. I modeled "happy" with the group three more times and Randy and Travis joined in when I started modeling. The next feeling I called out was "sad". Bret

was the only one who remembered the movement that represented “sad”. I modeled “sad” three times with the group, and everyone participated. We did “mad” next, and Susan was the first one to show the movement for “mad”. Everyone else followed along after seeing Susan model it. We did the movement for “mad” three more times together. The last emotion I asked for was “excited”. Nobody did this movement, so I modeled it for them, and all four participants joined in. We did the “excited” movement three times together.

After we were done reviewing our feeling movements we moved into our theme development. For our theme development, we practiced identifying peers' emotions and showing empathy. I started by playing some calming instrumental music and invited the participants to stand in a circle in the center of the room. Randy, Bret, and Travis all joined the circle, but Susan wanted to stay in her seat. To make sure Susan was still included, I had the participants form a circle around her desk so she could be a part of the circle. In our circle, I prompted Randy to model how he was feeling with one of the movements we learned. He needed some prompting, so I asked, “Are you happy or sad?” while modeling the movements for each feeling word. He smiled and showed me the movement for “happy”. I asked the other four participants how Randy was feeling based on his movement. Bret answered first and verbally approximated “happy” while showing me the movement. Susan and Tyler mirrored Bret and modeled the movement for “happy”. Next, I asked Susan if she could show us how she was feeling with one of our movement patterns. She put her head down on her desk and verbally approximated that she was tired. I used this as an opportunity to come up with a new movement feeling. I asked her how she could show me that she was feeling tired with her scarf.

She took the scarf into her hands, covered her eyes, and pretended to be asleep. I had the rest of the participants model the movement for “tired” three times altogether. Bret went up to Susan’s desk after she had expressed her feelings and asked her how she was feeling. She looked up at him with her head resting in her hand but did not respond. I asked Bret “How do you think Susan is feeling?”. He responded verbally first expressing “sad”. I asked Susan if she was sad, and she shook her head “No”. Bret looked at her again and expressed that she was “tired”. Susan shook her head “Yes” this time around. Next, I asked Travis if he could show us how he was feeling. He dropped his head and shook his head no. Before I could say anything, Bret walked up to Travis and expressed that Travis looked sad. I asked Travis if he was sad, and he nodded yes. I asked if he wanted to sit back down, and he nodded yes. I asked Bret next if he could show me how he was feeling. He very enthusiastically showed me the movement for “silly”. I asked the other participants how they thought Bret was feeling. Randy used his device to approximate “happy” and Susan smiled and expressed the feeling of excitement. Bret expressed that he was “silly” to his peers.

After we finished our theme development, I had the participants go back to their desks. I ended the session the same way as all our past sessions. We took three deep breaths while throwing our scarves up in the air and exhaling while the scarf dropped. I went around to each participant as always and asked how they were feeling.

Session 5

For our final session, we started with just Travis in attendance. Randy, Bret, and Susan were in the regulation center and Brandon was absent. I started the session out with our usual check-in with Travis. I asked him how he was feeling, and he pointed to

“tired” on his PECS board. Randy came back from the regulation center and joined us for check-ins. I asked Randy how he was feeling, and he jumped up out of his seat. Randy began jumping up and down at his desk and banging his hands down on the surface of his desk. He was laughing uncontrollably and started to swing on his desk and the desk next to his. I waited for him to stop swinging and then got his attention. I asked him again how he was feeling. He stared at me smiling but did not respond. I waited about 30 seconds before asking, “Do you feel silly or happy?”. He nodded yes and clapped his hands. I asked him if he felt happy and silly and he nodded yes. Bret and Susan returned after we finished check-ins, so I asked each of them how they were feeling. Susan did not want to participate, and Bret responded verbally expressing that he felt “excited”.

Once everyone had a chance to check in, I invited the participants to join me in the center of the classroom. Everyone joined me except for Susan. I started our experiential with some deep breathing exercises. I started with a three-count breath in with our arms rising straight over our heads. We did a three-count exhale while bringing our arms down and touching our toes. We did this five times together. Once we finished our breathing, I passed out scarves to all the participants including Susan. I set a timer for three minutes and told the group they could do free movement for this time. I stood in the front of the room and observed as they explored the scarves. Bret seemed the most comfortable using the scarves. He was throwing the scarf up in the air and catching it on his head, hands, and feet. Travis was standing very still over by his desk and staring at the scarf in his hand. Randy was rolling the scarf around his hands and jumping up and down with it. Susan, still seated at her desk, threw the scarf at Bret

angrily. I asked her if she would like the scarf back and she shook her head “no”. Bret picked up Susan’s scarf and verbally expressed that Susan was angry. I asked Bret if he could show me what anger looked like and he threw the scarf at the floor the same way Susan did. When the timer went off, I had the participants sit at their desks with their scarves. I instructed everyone to put the scarves over their faces and tilt their heads back. I then blew the scarf up into the air and caught it in my hands. I asked the participants to blow their scarves away and catch them. Bret was the first participant to attempt this but had a hard time blowing enough to get the scarf up into the air. I told him to pretend to blow out a candle and that helped enough that the scarf floated up off his head. Travis did not like having the scarf touching his face, so I held the scarf out in front of him and told him to blow it away. He did so successfully several times before pushing the scarf away to express that he was all done. Susan decided to throw the scarf in the air and blow it away on its way down. She did this about five times and then verbally expressed that she was done. Randy had attempted to blow the scarf off his face several times with little success. Without any staff help or prompting he switched his method and tried to use Susan's method of throwing the scarf and blowing it away. He did have a lot of success doing it this way and clapped for himself every time he blew away the scarf.

When we were done with our scarf experiential, I started our closing with Randy. I asked him how he was feeling, and he smiled and used his communication device to express feeling “happy”. Bret verbally expressed that he was also feeling “happy”. Travis did not want to answer and put his head down on his desk. When I asked Susan how she was feeling she expressed that she was mad. We did not end up having time

for our usual cool-down breaths, but I was okay with that since the second half of the experiential was a lot of breath work.

Personal Response

To document my thoughts, feelings, and observations I kept a journal. After each group session, I wrote one to two pages about my experiences from the group. I highlighted things such as how the participants seemed to react to certain things, how I felt internally and externally in reaction to these things, patterns that I was beginning to see within the group, and what did and did not work. I made sure to go to my office right away to begin journaling so that I did not miss any important details.

Session 1 Observations

My observations for this group were overall very positive. I felt like things went well for the most part. The participants did a fantastic job following my instructions and working together. I had the assumption that things would not go well in this first group based on my past experiences with these individuals. Typically, it takes this group of participants a few attempts with new activities before they are comfortable with the task. I was pleasantly surprised that three out of the five participants were so engaged in the session and were so focused on the activity.

Based on my experience in working very closely with this group of individuals, I knew it was going to be a bit of a risk pairing Bret and Susan together due to their history of being aggressive towards one another. I chose to take this risk because I wanted to see how the dynamics between the two would shift if their interaction with each other was guided in a more controlled environment. Right as I started pairing the two together, I initially noticed Bret's eyes widen, and looked back and forth between

Susan and me, which I observed to be some reluctance from him. I felt myself becoming more cautious and I placed myself closer to them in case I would have to intervene. As they started interacting with each other I noticed they both slowly started to release tension in their upper bodies. I also felt myself start to release own tension that I was holding.

I was very surprised with how engaged the participants were in the group. I witnessed direct eye contact from three out of the five clients and observed different reciprocated responses from them. I thought the scarves were very helpful in engaging the participants in the movement portion of the group. Having something tactile that they could hold and move with seemed to encourage their curiosity and exploration of movement and expression.

Session 2 Observations

Walking into the session, I noticed a sense of excitement in myself. I was so happy with how the last session went and was looking forward to working with the group again. Before beginning the session, I was trying to decide if I was going to do the same check-in as the week prior, or a new check-in each session. I decided that I would start every session the same way to maintain consistency within the group. When we began our check-ins, I noticed that the participants were more comfortable answering the check-in question this week than the previous week. Bret and Randy answered independently, and Susan needed a small amount of staff prompting.

When we started the theme development, I chose to use the clear touch to display a video because I was curious to see if any of the participants would connect their movements to the imagery on the screen. I was very happy to see Bret trying to

create the imagery of the paint with his scarf and make that connection between the two. I observed him experimenting with different speeds and shapes and I was not expecting him to be so engaged in the video.

When we started to practice identifying each other's emotions, I observed so much nonverbal interaction between the participants. I saw everyone engage with one another in a way I had not yet observed in this group. I noticed a lot of direct eye contact which is something that I don't often see between these individuals. I also witnessed a lot of patience and empathy for one another when I was asking them how they thought their peers were feeling.

During our mirroring experiential, I had Bret be our first leader. I noticed that when I first started to mirror his movements, he was observing me as I copied him and was moving very slowly and intentionally. However, the minute Randy joined in on the mirroring, Bret shifted his focus to Randy and began making his movements fast and sporadic. I noticed he started to laugh when he sped up his movements. Randy could not keep up with Bret's movements and stopped mirroring him very quickly. I did not understand why Bret only began to speed up his movements once he noticed Randy joining in. When I had Randy switch to the leader role, I was curious if Bret would follow along with him or continue to do his movement. Bret did mirror Randy, but he continued to make his movements much bigger than the movements that Randy was modeling. Bret also did this with me when I was the leader. I noticed that when Bret first started moving so large, I felt myself becoming a bit guarded. I know I felt this way because when Bret starts to exaggerate his motions and behaviors that way, he usually ends up becoming dysregulated and can become physically aggressive. I noticed myself starting

to take on a supportive stance so that I could react quickly if he became dysregulated. He never ended up becoming too dysregulated and we were able to carry on with the rest of our session.

Overall, I was very proud of the participants in this session and felt like it went very well. We managed to add “excitement” to our feeling movements, and I got to witness a whole new level of peer interactions between these individuals.

Session 3 Observation

Starting session three with our usual check-in process, I noticed that Bret, Randy, and Susan, who were the three participants that were present in the previous session, seemed far more comfortable with the check-in process than Travis and Brandon who were absent in the last session. I noticed that I had to help Travis and Brandon a bit more than the others with some prompting. Moving into our theme development, I decided to focus on “sharing” for this session because the group of participants I worked with had a hard time expressing their needs accurately so things such as sharing and playing together can be challenging. I decided to keep the participants seated based on their check-ins. I sensed an overall feeling of anger and anxiety so I wanted to keep the space more contained since having so much freedom of space can be dysregulating at times for this group. When we got into the theme development, I noticed that Susan seemed disinterested, and I had to keep reminding her to continue coloring until the timer went off. When I noticed that Bret and Randy were mirroring me, I felt a connection between them, and I that I had not ever felt that kind of connection with any of these participants before.

I noticed that with this specific group of participants, Bret and Randy were more engaged than the others in the session. They seemed more excited about the experiential and were more willing to participate than the others. During Bret's turn as the drawer, I felt myself becoming very captivated by Bret's drawing. I was intrigued by how he had tried drawing different shapes and using different colors and blending techniques. I was so engaged in what he was doing, and I felt myself embodying his artwork. When it was time for Bret to pass the drawing role on to others, he was not happy to do so. He expressed his disdain for sharing his artwork with others. I was very happy that Bret had communicated his feelings so well about the experiential and I felt pleased with the overall outcome of this session.

Session 4 Observation

For our fourth session, I immediately noticed in our opening check-ins how much more comfortable all the participants seemed to be with the check-in. I was very happy to see that the participants were starting to pick up on a routine each week. We added another feeling, "silly", to our movement vocabulary this week. I felt excited to be adding another feeling to our movement vocabulary because it was created through collaboration with the participants in the session. Since we had added a new feeling to our movement vocabulary, I decided to review all our feeling movements to see if the participants were retaining everything we had been working on up to this point. Bret had remembered most of our feeling movements and everyone else picked them back up very quickly. I was very excited about this because these feeling movements became the main source of emotional identification for our group sessions. I hoped that they could continue to use their movement vocabulary outside of the group setting to help

express their emotions as well as to identify the emotions of their peers. There was an overall theme of joy and playfulness in this session that I witnessed in both the participants and me.

Session 5 Observations

During our final session, I noticed there was a theme of trial and error as well as acknowledgment. I observed Travis acknowledging his feelings and being more intentional with his use of his PECS board to express himself. I also noticed Bret being emotionally aware of Susan and her feelings when she threw her scarf at him. I noticed that I was more relaxed with the interaction between Bret and Susan than I was in the first session. I felt more comfortable standing back and allowing them to communicate on their own this time around and I did not feel as much tension between them as I had witnessed with their past interactions. I also witnessed a lot of engagement between the participants. I saw a lot of eye contact and mirroring and I felt a sense of connection between the participants. I noticed within myself a sense of completion. At this point in the session, I felt like I achieved what I wanted with these participants and more. I felt like the participants helped to guide my process a lot and I learned more about myself through this process. I learned to be more patient and that sometimes it is more important to go with the flow of the participants than to stick with a pre-planned session.

Discussion

This capstone project has provided valuable insights into the efficacy of Dance Movement Therapy (DMT) interventions in promoting communication and socialization among nonverbal children with Autism Spectrum Disorder (ASD). Through a combination of innovative DMT strategies, including the use of props such as scarves,

egg noise shakers, and bouncy balls, alongside focused mirroring and partner work, this study aimed to create a supportive environment for participants to explore and develop their communication skills.

Over five weeks, participants engaged in guided DMT sessions designed to foster connections and social interaction. The incorporation of various iterations of DMT strategies allowed for a dynamic exploration of the overarching theme of communication, providing participants with multiple opportunities to engage in nonverbal forms of expression and interaction. The use of mirroring and partner work served as foundational techniques, encouraging participants to practice socializing safely and productively.

Central to the success of this project was the consistent documentation of thoughts, feelings, and observations through journaling. After each group session, I recorded my experiences, noting participants' reactions, internal and external responses, emerging patterns within the group dynamics, and the effectiveness of different interventions. This reflective practice enabled me to gain valuable insights into the participants' experiences and the impact of the interventions, informing subsequent sessions and enhancing the overall effectiveness of the intervention.

Findings

The findings of this study suggest promising outcomes in terms of communication and socialization among participants. My three main findings are: an increase in engagement, improved expressive abilities, and receptivity to social cues, highlighting the potential of DMT interventions in addressing communication challenges in nonverbal children with ASD. The supportive and guided nature of the intervention

sessions, coupled with the personalized approach to intervention delivery, contributed to the positive outcomes observed.

Increased Engagement

One of the most notable findings throughout the sessions was the substantial increase in participants' engagement levels. At the outset, some participants exhibited hesitancy or resistance to fully participate in the activities, with behaviors ranging from remaining still at their desks to showing signs of agitation.

Travis initially displayed reluctance to engage, often maintaining a passive demeanor during movement exercises. However, as the sessions progressed, there was a discernible shift towards heightened engagement, with participants displaying increased enthusiasm and active involvement in the various therapeutic activities. Bret, who initially demonstrated some hesitancy, gradually became more engaged, actively participating in movement circles and expressing excitement through his movements. Similarly, Randy, who initially struggled to maintain attention, began actively participating in group activities, demonstrating joy through his movements and interactions with peers.

This marked improvement in engagement levels is consistent with existing literature on DMT, which suggests that structured movement-based interventions can effectively enhance participation and motivation among individuals with ASD (Kim et al., 2016). By providing a supportive and inclusive environment for exploration and expression, DMT interventions can encourage individuals with ASD to actively engage in therapeutic activities, ultimately promoting their overall well-being and socio-emotional development.

Enhanced Expressive Abilities

Another significant finding from the sessions was the notable enhancement in participants' expressive abilities over time. Throughout the sessions, participants demonstrated an increased capacity to communicate emotions both verbally and nonverbally, indicating notable progress in their communicative skills.

Bret exhibited improved verbal expression, articulating his feelings of happiness and excitement with greater clarity and confidence. Similarly, Randy utilized a communication device to express his emotions, showcasing advancements in his communicative abilities over the course of the sessions. Additionally, Susan, who initially struggled to verbally express her emotions, began using nonverbal gestures such as facial expressions and body movements to convey her feelings more effectively.

These observed improvements in expressive abilities are consistent with research indicating that DMT interventions can facilitate emotional expression and enhance communication skills in individuals with ASD (Torres & Bergman, 2018). Through structured movement-based activities and facilitated social interactions, participants were able to develop and refine their expressive abilities, fostering greater self-awareness and emotional regulation.

Heightened Receptivity to Social Cues

Throughout the sessions, there was a noticeable increase in participants' receptivity to social cues, particularly in their ability to recognize and respond to emotional cues from peers and the facilitator. Participants demonstrated a growing

awareness of others' emotions and displayed more appropriate social responses over time.

Bret accurately identified Susan's emotions during a group activity, while Randy used appropriate movements to convey happiness and excitement. Additionally, Travis, who initially struggled with social interactions, began responding to prompts and gestures from peers and the facilitator, indicating a heightened sensitivity to social cues. These observations align with studies demonstrating the effectiveness of DMT in fostering social skills and emotional awareness in individuals with ASD (Koch et al., 2019).

By engaging in collaborative activities and practicing emotional identification within a supportive group setting, participants developed greater sensitivity to social cues, thereby enhancing their ability to interpret and respond to the emotions of others in a meaningful way.

Limitations

Acknowledging the contextual factors that influenced the study is crucial to understanding its limitations. One significant factor that impacted the study was the inconsistent attendance of participants across the sessions. This inconsistency in attendance may have influenced the continuity and consistency of the interventions, potentially affecting the outcomes observed.

Additionally, my expectations and biases could have influenced the delivery and interpretation of the interventions. Personal biases or preconceived notions about the effectiveness of dance movement therapy may have inadvertently influenced my interactions with the participants and the overall conduct of the sessions. These factors,

along with the specific context of the intervention sessions, including the setting, timing, and duration of the sessions, should be considered when interpreting the findings and their implications.

While the study yielded valuable insights into the effects of dance movement therapy on nonverbal children with ASD, these limitations underscore the need for caution in generalizing the findings to broader populations or contexts.

Implications

The implications of this study offer valuable insights for both future research endeavors and practical applications in clinical and educational settings. Firstly, the observed improvements in engagement, expressive abilities, and receptivity to social cues among participants underscore the potential of DMT as an effective intervention for individuals with ASD. Moving forward, researchers should strive to replicate and expand upon these findings in larger and more diverse samples, incorporating longitudinal designs to assess the long-term effects of DMT interventions on communication and socialization outcomes in individuals with ASD.

Moreover, the findings of this study have practical implications for the implementation of DMT interventions in clinical and educational settings. Practitioners working with individuals with ASD can utilize the insights gained from this study to inform their therapeutic approaches and tailor interventions to meet the specific needs of their clients. By incorporating movement-based activities and sensory stimuli into their interventions, practitioners can promote engagement and facilitate communication and social interaction among individuals with ASD. Additionally, practitioners can adapt DMT interventions to accommodate individual differences in sensory preferences,

communication styles, and motor abilities, ensuring that interventions are accessible and effective for all participants.

Furthermore, the findings of this study highlight the importance of holistic approaches to intervention that address the unique needs and strengths of individuals with ASD. By integrating movement-based interventions such as DMT into comprehensive treatment plans, clinicians and educators can provide individuals with ASD opportunities for self-expression, social connection, and personal growth. These interventions can complement existing therapeutic modalities and educational strategies, offering a holistic approach to supporting individuals with ASD across multiple domains of functioning.

Conclusion

In conclusion, this study adds to the growing body of literature on alternative interventions for individuals with ASD, highlighting the potential of DMT in promoting communication and socialization skills. Through an exploration of DMT sessions with nonverbal children with ASD, this study revealed significant improvements in engagement, expressive abilities, and receptivity to social cues among participants. By emphasizing the importance of reflective practice and integrating a range of DMT techniques tailored to the unique needs of individuals with ASD, this study provides valuable insights into the development and implementation of effective interventions. The findings underscore the potential of DMT as a promising therapeutic modality for enhancing communication and socialization skills in individuals with ASD. Moving forward, further research should aim to replicate and expand upon these findings in larger and more diverse samples, incorporating longitudinal designs to assess the long-

term effects of DMT interventions. Through continued exploration and refinement of DMT approaches, researchers and practitioners can contribute to the development of evidence-based interventions that improve outcomes and enhance the quality of life for individuals with ASD.

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THESIS APPROVAL FORM

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Expressive Therapies Division
Master of Arts in Clinical Mental Health Counseling: Dance/Movement Therapy, MA**

Student's Name: _____ Erin Walsh _____

Type of Project: Thesis

Title: Effects of Dance Movement Therapy on Nonverbal Children With Autism Spectrum Disorder

Date of Graduation: _____ May 18, 2024 _____

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

Thesis Advisor: _____ Raquel C. Stephenson _____