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REPEAT AFTER ME:

DANCE PROGRAM EVALUATION FOR THE FRIENDSHIP CIRCLE

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HONORS PROJECT

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Abstract

Approximately 1 in 6 children in the United States are diagnosed with one or more developmental disabilities or delays (Boyle et al., 2011). Although the number of therapeutic approaches for children with developmental disabilities has increased, no single treatment or combination of treatments is effective in relieving symptoms for all individuals (Scharoun, Reinders, Bryden & Fletcher, 2014). Therefore, there is a need to continue to explore alternative therapeutic methods. Research over the past twenty years has found dance/movement therapy (DMT) to be an effective form of treatment for children with special needs, specifically in terms of functioning and well-being. However, limited research has examined how DMT can enhance relationships between children with and without special needs. The Friendship Circle Toledo is a program that provides services and support for children with developmental disabilities through partnerships with trained teen volunteers. The members of the Friendship Circle participated in a 30-minute dance program, which included a warm-up, 20-minute mirroring activity, and a cool-down. Following the dance program, the teen volunteers were asked about their likes and dislikes of the program, how they felt their partners responded to it, and what they felt they learned from it. Common themes among the volunteers' qualitative responses were explored and presented. The majority of participants enjoyed the session, expressed appreciation for specific activities or the session as a whole, and found the session to benefit themselves and/or their buddy. The researcher's observations and the teen volunteers' qualitative responses indicated the implementation of dance activities (including mirroring) may be particularly valuable in settings similar to the Friendship Circle.

A substantial number of children in the United States are affected by a developmental disability. According to a study conducted by the Centers for Disease Control and Prevention (CDC) and the Health Resources and Services Administration (HRSA), approximately 1 in 6 children in the United States are diagnosed with one or more developmental disabilities or delays (Boyle et al., 2011). Developmental disabilities are severe disabilities which appear before the age of 22 and affect cognitive and/or physical functioning (“FAQs on Intellectual Disability,” n.d.). Some developmental disabilities are primarily physical, such as epilepsy or cerebral palsy, while others are both physical and intellectual, such as Down syndrome or fetal alcohol syndrome (“FAQs on Intellectual Disability,” n.d.). Another common type of developmental disability, affecting 1 in 68 children in the United States, is autism spectrum disorder (“Facts About ASDs,” 2016).

Although the number of therapeutic approaches for children with developmental disabilities has increased, no single treatment or combination of treatments is effective in relieving symptoms for all individuals (Scharoun, Reinders, Bryden, & Fletcher, 2014). Therefore, there is a need to continue to explore alternative therapeutic methods. Dance/movement therapy (DMT) is a practical and feasible option for children with special needs. Therapists are able to modify DMT sessions to accommodate the special needs of these children (Scharoun et al., 2014). Dance/movement therapy, a holistic form of therapy, is defined by the American Dance Therapy Association as “the psychotherapeutic use of movement to further the emotional, cognitive, physical, and social integration of the individual” (“American Dance Therapy Association,” n.d.).

Despite its promise to improve the functioning and well-being of children with developmental disabilities, research on DMT is sparse and minimal research has examined how

DMT can enhance relationships between children with and without special needs. In the current project, an evaluation of a 30-minute dance program was performed in order to determine the merits of utilizing dance as a way to enhance relationships between children with and without special needs.

Dance/Movement Therapy

Research over the past twenty years has found dance/movement therapy to be an effective form of treatment for a large number of individuals. Studies have targeted a wide variety of populations, including individuals with severe mental health problems, the elderly, abuse victims, individuals with disabilities and many more. Overall, DMT interventions have resulted in positive outcomes. Specifically, DMT has been shown to reduce clinical symptoms and improve well-being, mood, affect, quality of life, body image, and interpersonal competence (S. Koch, Kunz, Lykou, & Cruz, 2014). In addition, studies involving people of other cultural backgrounds have found DMT to be transculturally applicable (Harris, 2007; Carmichael, 2012).

Dance/Movement Therapy Interventions for Children with Special Needs

DMT interventions have involved children with varying types of developmental disabilities. More specifically, interventions have involved children with intellectual disabilities, Down syndrome, and most frequently autism spectrum disorder (ASD). These interventions have primarily involved groups of children with one specific type of disability, enabling therapists to focus on improving a specific set of skills. As a result, interventions with children with intellectual disabilities, Down syndrome, and ASD have differed slightly to cater to the needs of each group.

Children with intellectual disabilities suffer from deficits in intellectual functioning, such as reasoning, learning, and problem solving, and in adaptive behaviors, such as everyday social

and practical skills (“FAQs on Intellectual Disability,” n.d.). A meta-analysis conducted by Ritter & Low (1996) found DMT interventions to be extremely beneficial for individuals with intellectual disabilities (Ritter & Low, 1996). Specifically, DMT enabled those who are non-verbal to express themselves through movements, and enhanced motility, speech patterns, locomotion abilities and social skills (Ritter & Low, 1996). A more recent meta-analysis conducted by Koch et al. (2014) evaluated a limited number of DMT interventions for those with intellectual disabilities, suggesting the need for additional research (S. Koch et al., 2014). In response, Barnet- López et al. (2015) designed a DMT intervention to evaluate if DMT had a significant effect on body cognizance in adults with intellectual disabilities (Barnet-López et al., 2015). Each participant took the Koppitz human figure drawing test before and after the intervention. Scores following the intervention increased significantly, indicating DMT had increased body awareness in these individuals (Barnet-López et al., 2015). Due to deficits in intellectual functioning and adaptive behaviors for individuals with intellectual disabilities, sessions with a clear structure of movements and activities are vital (Barnet- López et al., 2015).

Down syndrome (DS), which results from an abnormality in the 21st chromosome, dramatically affects an individual’s physical, mental, and social development (Jobling, Virji-Babul, & Nichols, 2006). DMT, characterized by sensorimotor integration, has proven to be particularly beneficial and enjoyable for individuals with DS (Albin, 2016). Therapists working with these individuals have utilized the Laban framework, a framework created by pioneer movement theorist, Rudolph Laban (Jobling et al., 2006). Laban’s approach facilitates body-awareness and exploration through the emphasis of Space, Weight, Time, and Flow (Jobling et al., 2006). DMT has been shown to improve motor skills, emotional processing, language capabilities, and academic success in these individuals (Albin, 2016). Additionally,

improvements in quality of life, independence, confidence, and decreased anxiety in social settings are often identified by therapists. These improvements are not only reflected in the therapy setting, but also in the participants' daily lives (Albin, 2016).

Children with ASD, one of the most common developmental disabilities, have been the population of interest for a number of DMT interventions (Scharoun et al., 2014). Consequently, a fair amount of research has been published regarding the use and effectiveness of DMT with these individuals. ASD is a group of developmental disorders characterized by atypical language and social development, combined with repetitive and patterned behaviors (Scharoun et al., 2014). In addition, children diagnosed with ASD have demonstrated the inability to empathize with others. As a result, DMT interventions involving children with ASD have typically been focused on improving body awareness, self-other awareness, psychological well-being, empathy, and social skills (S. C. Koch, Mehl, Sobanski, Sieber, & Fuchs, 2015).

One theory of ASD suggests the inability for these children to empathize with others is due to a "dormant" mirror neuron system (Scharoun et al., 2014). Mirror neurons are neurons which are activated when performing an action and also when watching another individual perform that same action (Scharoun et al., 2014). Consequently, a "dormant" mirror neuron system contributes to the inability to be empathetic, express emotions, and communicate with others (Scharoun et al., 2014). As a result, DMT interventions with children with ASD have focused primarily on the mirroring technique.

Dance/Movement Therapy Techniques

Dance/movement therapists typically incorporate a variety of techniques into each session. Although therapists have ample techniques to choose from, most DMT sessions follow the same general pattern. Most sessions last approximately 45 minutes and consist of a warm-up,

a main activity, and a cool down (Barnet-López et al., 2015; S. C. Koch et al., 2015; Lara, 2015; Levy, Fried, & Leventhal, 1995). The purpose of a predictable structure is to provide participants with a sense of security. With a sense of security, participants are more willing to take risks and explore the environment (Levy, Fried, & Leventhal, 1995). Mirroring, Chacean circles, and Laban's framework are commonly used in the DMT setting.

Laban's Framework

The four core concepts of Laban's framework are Space, Weight, Time, and Flow (Jobling et al., 2006). Each concept is further broken down into two dimensions (Petersen, 2008). Laban described Space as being either Direct, indicating "goal-centered action and clean, linear trajectories" or Flexible, indicating a lack of attention to physical interactions (Petersen, 2008, p. 194). Laban's concept of Time refers to the speed of motion and is described as being either Quick or Sustained (Petersen, 2008). Laban's concept of Weight is defined as being either Strong or Light. Strong refers to vigorous or forceful movements, while Light refers to delicate or fine movements. Strong and Light can also be used to describe the amount of muscle tension involved in performing a particular action. In this case, Strong refers to high muscle tension, while Light refers to minimal muscle tension, muscle relaxation (Petersen, 2008). Finally, Flow is defined as being either Bound, careful, scrupulous movements of someone learning a new skill, or Fluent, "the wild abandon of a child at play" (Petersen, 2008, p. 194). Laban's approach also emphasizes the importance of asking participants' questions during movement activities. For example, "How many parts of your body can you bend?" or "Can you raise your arms slowly?" or "Can you raise your arms quickly?" (Jobling et al., 2006). These questions keep children engaged, foster enhanced body awareness, improve movement language skills, and ultimately result in confidence and creative expression (Jobling et al., 2006). Using Laban's four core

concepts and asking participants questions related to their movements establishes an encouraging learning environment and helps therapists easily identify where more assistance is needed.

Chacean Circle

Today, a circle used in the DMT setting is referred to as a Chacean circle, named in honor of Marian Chace, a DMT pioneer (Baum, 2013). Not only did Chace favor circles because they were a natural shape for human gathering, but more importantly, she viewed circles as a “container for personal and collective growth” (Baum, 2013, p. 174). The Chacean circle, known for having participants stand alongside the therapist in a circle, promotes equality and equal recognition of each individual (Baum, 2013). These circles are also beneficial for establishing boundaries, spatial organization, and a center of focus (Levy et al., 1995). Finally, due to its circular nature, the Chacean circle is considered to be an inclusive and mutually supporting environment (Baum, 2013). The Chacean circle is often incorporated into DMT sessions, regardless of the participating population and primary DMT technique in use.

Mirroring

Mirroring, a technique characterized by leading and following in movement, is typically used to establish a mutual relationship between a therapist and his/her client or between clients (S. C. Koch et al., 2015; McGarry & Russo, 2011). However, mirroring involves more than mere imitation of the client’s movements. Mirroring involves adopting the non-stereotypic qualities of the client’s movements to allow the client to see the effects of their movements on another individual (S. C. Koch et al., 2015; Scharoun et al., 2014). For example, children with ASD are known for displaying repetitive behaviors. Therefore, mirroring allows clients with ASD to not only see how the repetitive behavior alone affects another individual, but also how the posture or tenseness in a specific body part may affect another individual. Research regarding the mirroring

technique suggests mirroring strengthens empathy between individuals (McGarry & Russo, 2011). Fraenkel (1983) measured the relationship between empathy and mirroring and found “mirroring of movements [to be] correlated with empathy in regular social interactions and temporal synchrony of mirroring to be related to relationship closeness” (McGarry & Russo, 2011, p. 181).

Research Question and Hypothesis

Although several researchers have investigated the effects of DMT on relationship closeness between a therapist and his/her client or between clients, a limited number of studies have examined the effects of DMT on relationship closeness between children with and without special needs. DMT could potentially be used to reduce the social barrier between these individuals. Additionally, the majority of DMT interventions have involved children with one type of disability. A small number of studies have investigated the effects of DMT on groups of children with different disabilities. The current project is an evaluation of a dance session conducted with the Friendship Circle of Toledo. Two attributes of the Friendship Circle make it an especially interesting venue in which to evaluate the implementation of DMT. First, the Friendship Circle includes participants of varying ages and with varying disabilities. Second, the Friendship Circle model pairs participants with teen volunteers, which makes the relationship aspects of DMT (and, in particular, mirroring) especially relevant. Thus, the current evaluation sought to determine if a dance program involving mirroring would successfully improve relationship closeness and emotional understanding between children and adolescents/young adults with and without special needs at the Friendship Circle. In evaluating this program, special attention was paid to the success of a DMT session in enhancing the emotional connection and relationship closeness between children and adolescents/young adults with special needs at the

Friendship Circle and their regular teen volunteers. In addition, this evaluation helped the Friendship Circle determine whether having individuals participate in mirroring activities with unfamiliar partners is more difficult than with familiar partners. It was expected that mirroring in dyads would enhance the emotional connection and relationship closeness between children and adolescents/young adults with special needs and their regular teen volunteers. It was also expected that mirroring would be more difficult when individuals were paired with someone other than their previously assigned buddy.

Method

Participants

A total of 14 teen volunteers and 12 children and adolescents/young adults with special needs from the Friendship Circle Toledo participated in a 30-minute dance program. Each volunteer was paired with an individual with special needs for the duration of the program. Due to an uneven number of participants, two volunteers took turns mirroring. Due to time constraints, only 10 volunteers were asked to give feedback about their participation in the program.

Procedure

Members of the Friendship Circle were divided into two groups: (1) younger children with special needs (ages 6-12) and their regular teen volunteers and (2) adolescents/young adults with special needs (ages 13-23) and their regular teen volunteers. A variety of songs were played throughout the session. Upbeat, indie songs of both slow and fast tempos were used in order to keep the participants engaged throughout the session. Popular songs were avoided in order to prevent the participants from getting distracted. Each group participated in a 30-minute dance session with the following structure:

- a. Warm-Up (5 minutes): First, participants were instructed to stand in a Chacean circle, a large circle with all participants facing toward the center. Next, participants were asked to engage in a variety of stretching exercises which included components of the BrainDance, a warm-up created by Anne Green Gilbert. The primary purpose of the BrainDance is to “prepare the brain for learning and help [participants] develop appropriate behavior and social skills” This goal is achieved through the use of eight fundamental movement patterns which bring awareness to different body parts and sensations (Gilbert, 2004). A song with a slower tempo was played during the warm-up in order to establish a calm and focused atmosphere. Finally, participants were asked to play the Name Game, a game created by Joanne Lara, the founder of the Autism Movement Therapy Method. Each individual was asked to break down their name into syllables and then execute one movement for each syllable. In unison, all participants repeated the individual’s name and imitated their sequence of movements (Lara, 2016). The primary goal of the Name Game is to improve individuals’ ability to listen to cues, use creative thinking, make eye contact, and take turns (Lara, 2016).
- b. Mirroring Activity (20 minutes): Songs with a fast tempo were played during all mirroring activities. Two songs were played during each phase.
 - a. Phase 1 (7 minutes): The children and adolescents/young adults with special needs were paired with their previously assigned buddy for five different mirroring activities. During each activity, the participants were asked to not solely mirror the movements of their partner, but to also mirror the direction and quality of their movements.

- i. Basic Movements: During this exercise, I executed a movement and then asked the individuals with special needs to perform the same movement while facing their buddy. Simultaneously, the teen volunteers were asked to mirror the movement of their partner. Lastly, the individuals with special needs were asked to create their own pattern of movements and their buddies were asked to mirror it.
- ii. Reaches: During this exercise, the children and adolescents/young adults with special needs were instructed to reach their arms in specific directions. Simultaneously, the volunteers were expected to mirror the movements of their buddy. Next, the individuals with special needs were instructed to move their arms very slowly. Then, they were instructed to move their arms very quickly. Lastly, the individuals with special needs were instructed to create their own pattern and their buddies were expected to mirror it.
- iii. Palms/Shapes: During this exercise, both partners were instructed to place both palms in front of their partner. Then, the children and adolescents/young adults with special needs were asked to make a small circle with one hand and then again with the other. Next, they were asked to make a circle with both hands at the same time. Finally, the individuals were asked to create their own pattern. Throughout the whole exercise, the volunteers were instructed to mirror the movements of their buddy.

- iv. Rhythms: During this exercise, I executed a basic rhythm and then asked the children and adolescents/young adults with special needs to execute the same rhythm while facing their partner. Simultaneously, the teen volunteers were asked to mirror the movements of their buddy. First, participants were instructed to execute the rhythm the same way I did. Then, participants were encouraged to repeat the same rhythm using different body parts. Again, the teen volunteers were asked to mirror the movements of their partner.
 - v. Embodying Emotions: During this exercise, the children and adolescents/young adults with special needs were asked where in their body they felt a particular emotion. For example, participants were asked where they felt excitement/happiness. I asked if they felt it in their heart, their stomach, etc. Then they were asked, "If you couldn't use words to express how happy you were, how would you express yourself using movements?" Then the individuals with special needs were instructed to use movements to express excitement/happiness. Simultaneously, the teen volunteers were asked to mirror their buddy's movements. This process was repeated for sadness, anger/frustration, and fear. Finally, the individuals with special needs were asked, "How are you feeling right now? Hungry, happy, tired, frustrated?" Then, they were asked to convey how they were feeling through movements and their buddies were expected to mirror it.
- b. Before the next phase, we walked around the room in various patterns.

- c. Phase 2 (7 minutes): The individuals with special needs were still paired with their previously assigned buddy, however, during this phase, the teen volunteers were asked to lead movements and the individuals with special needs were asked to mirror them. Just like in the previous phase, the participants were asked to engage in the same five mirroring activities. However, during the Embodying Emotions exercise, the teen volunteers were asked to pick an emotion, convey it through movements, have their partners mirror their movements, and then have the individuals guess what emotion they were trying to convey. Also, the volunteers were asked to make different shapes during the Palms/Shapes phase. For example, they were asked to make a triangle, rectangle, etc.
- d. Phase 3 (6 minutes): The volunteers were asked to shift one partner to the left. As a result, everyone was paired with a new buddy. Much like in Phase 1, the individuals with special needs were asked to lead all of the movements while the teen volunteers were asked to mirror them. Both the children and adolescents/young adults with special needs and the teen volunteers had a chance to lead the Embodying Emotions exercise.
- c. Cool-down/Wrap-Up (5 minutes): Participants were asked to engage in a variety of cool-down exercises. A song with a slow tempo was played during the cool-down. The same exercises used in the warm-up were used during the cool-down. Finally, the participants were thanked for their participation.

Measures

After the 30-minute dance program, the teen volunteers were informally interviewed. During snack time, each volunteer was individually interviewed. Their responses were typed and later organized into themes. The teen volunteers were asked the following questions to evaluate the program:

1. Did you enjoy the dance session?
2. How did your partner feel about the session? Did they enjoy it?
3. How did your partner respond to the mirroring activities? What did you notice?
4. Did you find the mirroring activities to be difficult for you and/or your partner? Why?
5. Which mirroring activity did you find to be the most enjoyable/difficult?
6. Did you find the mirroring activity to be more difficult with your new partner? How did your new partner respond to the mirroring activity? What did you notice?
7. Which mirroring activity made you feel the strongest emotional connection with your partner?
8. Are there any activities from the session that you would incorporate into your regular interactions with your partner? If so, please elaborate.

Results

Researcher's Observations

All participants, with the exception of one individual, appeared to enjoy the 30-minute dance program; participants were smiling and laughing throughout the session. The participants appeared to particularly enjoy the various mirroring activities they were asked to execute. When the volunteers were asked to lead the mirroring activities, they successfully identified when slowing down for their buddy was necessary. For example, if their buddy was unable to efficiently mirror their movements, the volunteer either slowed down or simplified their

movement pattern accordingly. When the individuals with special needs were asked to lead, some of them slowed down or simplified their patterns, however, others did not give their buddy enough time to catch on to their pattern of movements. In general, the younger children appeared to enjoy the dance program more than the adolescents/young adults. When the participants were asked to come up with their own pattern of movements, the majority of participants did as requested. They were also very creative, especially the younger children. The younger children appeared to have an easier and more enjoyable time coming up with their own pattern of movements than the adolescents/young adults did. Several of the adolescents/young adults either made subtle movements or didn't move at all. Perhaps the older children needed more structure or more time to get comfortable.

It is worth mentioning some individual differences identified by myself and the director of the Friendship Circle. As previously mentioned, only one individual appeared to dislike the dance program. As illustrated by the director, the individual's dislike of the program may have been related to her level of functioning. Seeing as the activities were designed to accommodate children with varying types of disabilities, the session may have been too easy for her, as well as the other high functioning individuals. On the contrary, the session appeared to be too difficult for the lower functioning individuals, especially the nonverbal individuals. Some of the lower functioning individuals became frustrated with themselves and gave up relatively quickly. Although the nonverbal individuals were unable to fully participate in the session, they still enjoyed it. Although mirroring was too difficult for the nonverbal children, it was evident that they enjoyed moving to the music and making noise. A simplified session or a one-on-one session might be more effective for these individuals. In order to avoid boredom and frustration,

dance programs for individuals of the same age and of the same level of functioning might be a better option.

While the dance session was not suitable for all individuals, it was particularly beneficial for some. More specifically, according to the director, one of the adolescents with special needs often struggles to focus during other Friendship Circle activities. Interestingly, she was extremely focused for the entire duration of the dance program. Not only was she focused, but she also listened and followed directions, did an excellent job mirroring her buddy, and successfully created her own unique patterns of movements. Therefore, this may suggest the implementation of dance activities may be a great option for certain children, adolescents, or young adults with special needs.

Interviews

Consistent with the observations, when the teen volunteers were asked whether or not they and their buddy had enjoyed the session, all participants, with the exception of one individual, said yes.

Response to Mirroring Activities

According to the volunteers, the children and adolescents/young adults with special needs enjoyed the mirroring activities, however, the majority of them struggled in some way. More specifically, the individuals with special needs were either delayed when mirroring their buddy, unsure of which hand or body part to use, or distracted by the excitement of the whole situation. Although many of them struggled at the beginning of the session, some of the volunteers said the confusion dissipated after they “got the hang of it.” This finding highlights the importance of repetition when working with this type of population.

The children and adolescents/young adults with special needs also struggled with taking turns during the mirroring activities. Although the teen volunteers and the individuals with special needs were instructed to take turns, more often than not, the individuals with special needs led the mirroring activities. During the interviews, several of the volunteers said the participants with special needs preferred leading over following, perhaps suggesting that giving individuals with special needs a chance to lead an activity is important.

Difficulty of Mirroring

Some of the volunteers said they had a difficult time mirroring, while others said it was easy. The difficulty of mirroring depended on the level of functioning of the child or adolescent/young adult as well as the amount of experience the buddy had working with the child. For example, one of the volunteers who was paired with a nonverbal individual said mirroring was “really difficult because she can’t speak. [I] tried to get her to do the same things as me, [but it only] worked a bit.” On the other hand, when one volunteer was asked whether or not she found mirroring to be difficult she said, “Not really. I’ve been working with her for a while so I just know what to do.” Finally, others said “certain activities were more difficult than others.”

Most Enjoyable Mirroring Activity

The volunteers had mixed responses about the most enjoyable mirroring activity. The two activities reported most often were the mirroring exercise involving the palms/making shapes and the mirroring exercise involving rhythms. One of the volunteers found the palm exercise to be “easy, but stimulating at the same time.” The rhythm exercise was particularly favored by one of the volunteers paired with a nonverbal individual. She claimed to enjoy it because “[her

buddy] got to clap her hands and wave them. That was how she got into the music.” Finally, one volunteer found when their buddy was leading to be the most enjoyable.

Most Difficult Mirroring Activity

The teen volunteers were also asked which mirroring activity they found to be the most difficult. Some volunteers found simply “following another person [to be] difficult,” while others found specific activities to be more difficult than others. Several volunteers found mirroring to be the most difficult when their buddy was given freedom to come up with their own pattern of movements. One volunteer found this particularly difficult because her buddy would “[get] wrapped up in dancing and [execute] eccentric movements” which she had trouble mirroring. Many of the volunteers also found the emotions exercise to be the most difficult, especially when asked to guess which emotion their buddy was trying to convey.

Difficulty of Mirroring with New Partner

It was expected that mirroring would be more difficult when individuals were paired with someone other than their previously assigned buddy, however, some of the volunteers found it to be more difficult, while others found it to be easier. For example, one volunteer said she found mirroring with her new buddy to be more difficult because she “didn’t know his tendencies or how he reacted to things, so it was hard to come up with ideas.” She also stated that her buddy was more timid about engaging in the activities, perhaps suggesting he was less comfortable interacting with an unfamiliar individual. On the other hand, one of the volunteers found it to be easier. “[The difficulty] depends on who you are with. [My new buddy and I knew] each other well so it was fine.” Again, the difficulty of mirroring seemed to depend on the level of functioning of the child or adolescent/young adult and the amount of experience the volunteer had with the individual. Therefore, individuals who did not know their new partner appeared to

find mirroring more difficult, while those who knew their new partner found mirroring to be easier. The difficulty of mirroring with a new partner also seemed to depend on the individual's original partner. For example, one of the volunteers found mirroring with her new partner to be easier. Unlike her original partner who had executed more complex movements, her new partner had executed simplistic movements which as a result made mirroring "much easier."

Strongest Emotional Connection

A few of the volunteers said no activities made them feel a strong emotional connection with their partner, however, other volunteers said some of the activities did. One volunteer specifically said she felt the strongest emotional connection to her partner "when they were in sync...and whenever [their buddy was] happiest." The majority of the volunteers felt the strongest connection to their partner during the mirroring exercise involving rhythms, the mirroring exercise involving the palms, or the expressing emotions exercises.

Regular Interaction Activities

Although five of the volunteers said there was nothing from the session they would incorporate into their regular interactions with their buddies, the remainder of the volunteers said they would incorporate various components of the session. One volunteer said they would incorporate the whole session because it was "a good way [to get] to know each other and [to see] how [their buddy] would act when feeling a certain emotion." Some volunteers said they would incorporate mirroring in general, while others said they would incorporate specific mirroring activities from the session. For example, one volunteer said they would incorporate the embodying emotions exercise because it challenged them "[to try] to understand what [the other person] was feeling and [enabled them to see] how it [affected] the other people around [them]." Another volunteer said they would incorporate the rhythm exercise "because [her buddy] likes

music” and if they weren’t doing anything she would say, “Hey, let’s do this.” Finally, two of the volunteers said they would incorporate the warm-up into their regular interactions with their buddies because “[stretching] is a good way to wind down” and to “start and end things.”

Discussion

Overall, the 30-minute dance program was a success. The majority of participants enjoyed the session, expressed appreciation for specific activities or the session as a whole, and found the session to benefit themselves and/or their buddy. The volunteers’ qualitative responses suggest dance activities involving mirroring or basic warm-up exercises may be beneficial in settings similar to the Friendship Circle.

Although both the younger children and the adolescents/young adults claimed to enjoy the dance program, the younger children appeared to enjoy the program more. The younger children particularly enjoyed coming up with their own pattern of movements. Unlike the older children, the younger children never stopped moving. They needed very little guidance in terms of what pattern of movements to execute. On the other hand, the adolescents/young adults frequently stood around waiting for direction. Though research has found DMT to benefit children and young adults individually, nowhere in the literature are interventions with these populations compared (Samaritter & Payne, 2017). Consequently, the method used to design age-appropriate sessions is not discussed. Future research should investigate how to structure an effective DMT session for each of these groups.

While the majority of the participants with special needs initially struggled to execute the mirroring exercises, they demonstrated improvement each time an exercise was repeated. The importance of repetition when working with this type of population is highlighted in the literature (Albin, 2016). Repetition enables participants to develop good habits and strengthen

familiarity with specific concepts (Albin, 2016). Because more time may be required for individuals with special needs, slowly introducing concepts and repetition across several class periods is also recommended (Albin, 2016).

Although it was expected mirroring would be more difficult when participants were paired with someone other than their previously assigned buddy, not all participants found it to be more difficult. Rather, the level of difficulty depended on the level of functioning of the child or adolescent/young adult with special needs and the amount of past experience working with the individual, regardless of whether or not they were paired with their original partner or a new one. Perhaps, determining if mirroring an unfamiliar partner is more difficult than mirroring a familiar one, mirroring should be done with individuals in a setting unlike the Friendship Circle. For example, a setting where individuals are meeting for the very first time might be better option. These findings could potentially determine if mirroring can help reduce the social barrier between individuals with and without special needs.

Based on both observation and the volunteers' qualitative responses, mirroring in dyads did appear to enhance the emotional connection between the children and adolescents/young adults with special needs and their regular teen volunteers. This was primarily evident in the mutual enjoyment the volunteers and children and adolescents/young adults expressed during the session. One of the volunteers said the session was a great way to get to know their buddy better. Also, one of the volunteers said she felt the strongest connection to her partner when they were in sync, which is consistent to Fraenkel's (1983) finding which found temporal synchrony to be related to relationship closeness (McGarry & Russo, 2011). On the other hand, some of the volunteers said that the activities did not make them feel a strong emotional connection to their

partner. It is possible that a single session is not sufficient to strongly impact the emotional connection between participants.

Limitations

Despite the overall success of the 30-minute dance program, there are some limitations worth noting. Ideally, mirroring should be done in pairs, however, due to an uneven number of participants, not all of the participants executed the mirroring activities in dyads. Two of the individuals with special needs were paired with more than one buddy, which meant the volunteers had to take turns mirroring. Another limitation of the program was that it did not accommodate for children with more severe disabilities. However, the program did accommodate for the needs of most participants. Because the sessions were done in groups of 12-14 individuals, individual attention could not be paid to all participants. Future dance programs might conduct sessions in smaller groups in order to allow the instructor to pay closer attention to each of the participants. Another limitation was no restrictions were placed on what participants could and could not do when they were asked to create their own patterns of movement. As a result, some of the less coordinated/experienced individuals had trouble mirroring their partner. Therefore, more restrictions should be put in place in future dance programs. The structure of the 30-minute dance program was established several weeks before the session took place. Although the structure was established well before the session was conducted, the session did not follow the structure exactly as planned. More specifically, the cool-down was shortened during both sessions because more time was spent on the warm-up and mirroring activities than predicted. In the future, more time should be allotted for a cool-down. Another limitation directly relates to the space where the session was conducted. The space was relatively large, however, participants were asked to stand in a circle for the majority of the

program. Consequently, participants had to be more cognizant of the participants around them and following the instructor's movements was confusing for those on the opposite side of the circle. Future sessions should include time spent in a circle as well as time spent in a position where following the instructor is less confusing. Perhaps, using a space with a mirror would be helpful. Although a large number of participants (26) participated in the dance program, only 10 volunteers were interviewed. The children and adolescents/young adults with special needs were not interviewed following the program. In order to gain a better understanding of the children and adolescents/young adults' feelings about the program, future evaluators should consider interviewing them as well. Though the following program implemented various DMT techniques, the program was not a true DMT session. Considering the program was primarily intended to entertain members of the Friendship Circle, this particular program served its purpose. Programs seeking to improve the functioning of individuals with special needs should consider administering a DMT session led by a trained therapist. Lastly, the session was only conducted on one occasion with members of the Friendship Circle. In order to accurately determine whether or not dance sessions involving mirroring enhance relationships between individuals with and without special needs, multiple sessions should be conducted and evaluated.

Directions for Future Research

While the project demonstrated that mirroring may enhance relationship closeness and emotional understanding between individuals with and without special needs, more research needs to be done. First, multiple sessions need to be conducted and evaluated in order to determine the true merits of mirroring. Second, future research could explore the effects of mirroring on relationships between children and adolescents/young adults with special needs and other individuals, such as parents, teachers, and siblings. Future research should also be done to

determine which DMT techniques, other than mirroring, may benefit disabled individuals. Finally, more research needs to be done to determine how to design a dance session which accommodates for children of varying ages with varying disabilities. A session which can accommodate for the needs of individuals of varying ages with varying disabilities would be particularly valuable for organizations such as the Friendship Circle, where children and adolescents/young adults (ages 6-23) with a wide range of disabilities are asked to participate in activities together.

Conclusion

The success of the 30-minute dance program, as demonstrated by the researcher's observations and the volunteers' qualitative responses, suggests future dance programs should be employed in settings similar to the Friendship Circle. Despite success of the program, more research needs to be done. Given that the majority of the participants enjoyed the dance program, implementing more dance-related activities with children and adolescents/young adults with special needs in settings unlike the Friendship Circle, such as home or school, could potentially reveal enhancement in areas of their lives other than their relationships.

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Appendix A

Dance Session Procedure

- Introduction: Hello, my name is Michelle Sire and I am an undergraduate Psychology Major with a planned minor in Movement Therapy from Bowling Green State University. Today, I am going to lead a dance session. You are not required to participate in any of these activities. If you do not wish to participate, feel free to sit out and rejoin the group at any point in time.
- Warm-Up (5 minutes): Stand in a large circle (facing toward the center)
 - Water Under the Bridge by Adele
 - Deep Breathing: Breathe deep and slow 3-4 times
 - Grow and shrink from your center. Open up to the world and close back into yourself (crouching into a ball on the ground) (3x)
 - Heads (up and down 2x) (right and left 2x) (right ear and left ear 2x) 1 full and slow head roll to the right and 1 full head roll to the left
 - Shoulders (2x backward) Elbows Bent (2x) Full arm circles (2x)
 - Roll down to touch the toes with the head leading (Emphasize the importance of relaxing the body and rolling through every vertebrae of the spine) Bend knees and straighten (slowly bend and slowly straighten)- Repeat 3x, Slowly roll-up
 - Shake it out
 - Spread legs out into second position and reach left arm over while leaning to the right then reach right arm over while leaning to the left
 - Roll down once again (this time with the legs spread apart) Again emphasize the importance of relaxing the body and rolling through every vertebrae of the spine) Swing from side to side with arms around head, then slowly roll up
 - Name Game-Going around the circle one by one each participant breaks down their name into syllables, then executes one movement for each syllable. The group in unison stands up and repeats that student's name, imitating the sequence of movements.
- Mirroring Activities (20 minutes)
 - Phase 1: Children/Adolescents/Young Adults with Special Needs Paired with Original Partner (7 minutes)
 - Songs: Fast Car and Heavy
 - Basic Movements/Shapes/Rhythms: Give your partner a chance to catch on! Slow down if you need to!
 - Volunteers in inner circle. Perform movement, have outer circle perform movement. Ask volunteers to mirror the movement of their partner. (Emphasize the importance of mirroring everything about the movement- direction and quality of the movement)
 - Do step touch, add arms, add claps, knees up, heels, opposite arms across, reach out with leg, sink down and

- rise up-freeze-match your partner), challenge them to balance, extend leg, can you put it behind you? Outer circle comes up with their own pattern and their buddies mirror it.
- Reach up (right and left) and Reach down (Right and left)- Let your body move with you.
 - Slowly (extend your arm as far as you can)
 - Sharply and quickly
 - Outer circle create your own pattern and inner circle, mirror your buddy.
 - Have both hands in front of you with palms facing your partner, but not touching! Ask children to make a small circle with one hand and then again with the other. Then make a circle with both hands at the same time. Small circle, bigger circle, larger circle. (Both hands make two separate circles) Outer circle create your own pattern and partners mirror it.
 - Rhythms:
 - Basic rhythm: Repeat after me! Pace is key!
 - Repeat rhythm using different body parts (legs, head, belly, etc.)-Partners mirror their partner
 - Embodying Emotions:
 - Excitement/Happiness-When you're feeling excited or happy, where do you feel it? Your stomach? Your heart? Your hands? (Are they shaking from the excitement?) If you couldn't use words to express how happy you were, how would you express yourself using movements? Use movement to express where you feel this emotion. Let this body part initiate your movements. (Partners mirror your buddy's movements) Make big, abstract movements. Show how it affects each body part and how they work together to convey an emotion. Show an example!
 - Sadness: Tightness in your chest?
 - Anger/Frustration- Your feet?
 - Fear-Do your legs shake?
 - How are you feeling right now? Hungry, happy, tired, frustrated? I'm excited, but a little nervous! Convey how you're feeling through movements and have your buddy mirror you!
 - Walk around the room (follow the leader)-walk, skip, freeze
 - Phase 2: Volunteers lead!
 - Songs: Life's What you Make it and Runaways
 - Volunteers in outer circle. Perform movement, have outer circle perform movement, outer circle mirror them. (Emphasize the importance of mirroring everything about the movement- direction and quality)

- Do step touch, add arms, add claps, knees up, heels, opposite arms across, reach out with leg, sink down and rise up-freeze-match your partner), challenge them to balance, extend leg, can you put it behind you? Outer circle comes up with their own pattern!
- Reach up (right and left) and Reach down (Right and left)- Let your body move with you.
 - Slowly (extend your arm as far as you can)
 - Sharply and quickly
 - Volunteers come up with their own pattern and inner circle mirror it.
- Have both hands in front of you with palms facing your partner, but not touching! Ask volunteers to make a small circle with one hand and then again with the other. Small circle, bigger circle, larger circle. Both hands make two separate circles. Make a triangle, rectangle, and square from the ground up. Hold the shape facing your partner, freeze and hold. (Narrow, wide, rounded and twisted elements of the shape) Make a shape with your partner.
- Rhythms:
 - Basic rhythm
 - Repeat rhythm using different body parts (legs, head, belly, etc.)-Partners mirror their partner
 - Embodying Emotions:
 - How are you feeling right now? Hungry, happy, tired, frustrated? Convey it through movements, have your buddy mirror you.
 - Have volunteers pick an emotion, convey it through movements, have partners mirror movements, and then have their buddy guess what emotion they were trying to convey
- Phase 3: Children/Adolescents/Young Adults with Special Needs Paired with New Partner (6 minutes)
- Songs: Sparrow and the Wolf and Spark
- Volunteers shift one partner to the left and inner circle leads!
 - Have both hands in front of you with palms facing your new partner, but not touching! (Keep palms facing each other throughout exercise) Ask inner circle to make a small circle with one hand and then again with the other. Small circle, bigger circle, larger circle. Both hands make two separate circles. Make a triangle, rectangle, and square from the ground up. Hold the shape facing your partner, freeze and hold. (Narrow, wide, rounded and twisted elements of the shape) Make a shape with your partner.
 - Reach up (right and left) and Reach down (Right and left)-Let your body move with you.
 - Slowly (extend your arm as far as you can)

- Sharply and quickly
 - Have inner circle come up with their own pattern and have volunteers mirror it.
- Rhythms:
 - Basic rhythm
 - Repeat rhythm using different body parts (legs, head, belly, etc.)-Partners mirror their partner
 - Embodying Emotions:
 - Have outer circle pick an emotion, convey it through movements, have partners mirror movements, and then have children guess what emotion they were trying to convey
 - Have inner circle pick an emotion, convey it through movements, have partners mirror movements, and partner must guess.
- Cool-down/Wrap-Up (5 minutes):
 - Song: Photograph by Ed Sheeran
 - Deep Breathing: Breathe deep and slow 3-4 times
 - Grow and shrink from your center. Open up to the world and close back into yourself (crouching into a ball on the ground) (3x)
 - Heads (up and down 2x) (right and left 2x) (right ear and left ear 2x) 1 full and slow head roll to the right and 1 full head roll to the left
 - Shoulders (2x backward) Elbows Bent (2x) Full arm circles (2x)
 - Roll down to touch the toes with the head leading (Emphasize the importance of relaxing the body and rolling through every vertebrae of the spine) Bend knees and straighten (slowly bend and slowly straighten)- Repeat 3x, Slowly roll-up
 - Shake it out
 - Lay down on the floor-allow your body to sink into the floor, relax, let's pop back up and say goodbye!