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**Dance Movement Therapy and Families with Children with Disabilities: Working and
Moving Together: A Literature Review**

Capstone Thesis

Lesley University

May 5, 2023

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Dance/Movement Therapy

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Abstract

Dance/movement therapy is an evidence-based therapeutic treatment that is available to a vast variety of populations. Research proves that children under the age of 12 diagnosed with autism spectrum disorder (ASD) and/or attention deficit/ hyperactivity disorder (ADHD) experience challenges with communication and social skills, abnormalities in body language and regulation, repetitive motor movements (fidgeting), difficulties in play or social activities, and sensitivity to sensory inputs. While literature suggests that dance/movement therapy can provide an effective reduction of the related symptoms seen in developmentally disabled children (ASD/ADHD), there is less emphasis on how dance/movement therapy can offer similar relief for the family members of neurodivergent children. Caregivers of these children often need to adapt their personal needs, daily routines, experience stress, burnout, and depression, while also enduring social isolation and challenges within their personal relationships. This review seeks a greater understanding of the obstacles caregivers and their developmentally disabled child undergo and encourages dance/movement therapy to be employed for the betterment of the family system's daily lives.

Keywords: Autism, attention deficit/ hyperactivity disorder, Dance Movement Therapy, children, family, caregiver, burden, stress

Author Identity Statement: The author identifies as a straight, White woman born in Chicago. The author recognizes the impact and influence of their scope of experience within the context of this review.

Dance Movement Therapy and Families with Children with Disabilities: Working and Moving Together: A Literature Review

How does the family system change when a child is diagnosed with a behavioral or learning disability? A family system may include caretakers, parents, or siblings. The identified patient, in this case, a child diagnosed with autism spectrum disorder (ASD) and/or attention deficit/ hyperactivity disorder (ADHD) at times becomes the prevalent focus within their family. With this amplified attention on the identified patient, family members learn to adapt their lifestyle to co-exist with the needs of their neurodivergent child. Though the child with developmental disabilities may require additional support socially, academically, and physically, their caretakers are also in need for potentially similar supports. This review is intended to better understand the experiences of the following populations: children with ASD (CwASD), children with ADHD (CwADHD), and their family system (FwASD) or (FwADHD). What if the therapeutic space used for CwASD/CwADHD invited their family members to participate in the beneficial interventions as well? How would this change the dynamic of the family?

To understand the current prevalence of ASD, the Diagnoses of the Autism and Developmental Disabilities Monitoring (ADDM) network conducted active surveillance of ASD. Their report focused on ASD among children 8-years of age in 2018 who lived in the United States. In 2018, one in 44 children 8-years of age were estimated to have ASD (Maenner et al., 2018). Additionally, the National Survey of Children's Health (NSCH) studied the estimation of national prevalence ADHD diagnosis among U.S. children 2 to 17 years of age. In 2016, this report estimated 6.1 million U.S. children had ever received an ADHD diagnosis. With growing statistics for childhood ASD or ADHD, allows for more research specific to this population and

their family members (Danielson et al., 2016). The statistics about these two diagnoses reveal how common it is for a family to be raising a developmentally disabled child.

The reoccurring behaviors observed in CwADHD include attention difficulties, impulsivity, movement changes, socio-emotional changes, social interactions, and motor development (Gronlund et al., 2005). Developmental deficits observed in CwASD include social functioning, communication, and motor development (Martin, 2014). A common thread running through both populations' deficits include social skills, communication development, and motor functioning. Knowing that these children need extra attention in social skills, communication, and motor functioning, indicates why CwASD and CwADHD are appropriate candidates for dance/movement therapy (DMT). The American Dance Therapy Association (ADTA) defines DMT as the psychotherapeutic use of movement to promote emotional, social, cognitive, and physical integration of the individual, for the purpose of improving health and well-being (ADTA, 2020). By understanding the goals of DMT and the reported behaviors of ADHD and ASD in children, there is potential for a positive therapeutic relationship. DMT provides a holistic approach that integrates the body and mind, and it can thrive in the non-verbal realm of communication. This type of therapy is extremely appropriate for the early intervention of children on the spectrum (Martin, 2014). DMT approaches may provide a pathway to the integration of motor and social/communicative functions for this population.

After addressing the needs of CwASD/CwADHD, it is pertinent to better understand the experience of caregivers with disabled children. Phetrasuwan and Miles (2009) indicated that parenting a child with ASD adds to the typical tasks required of the parent. This may include needing to be more vigilant to manage the child's behaviors, taking more of an advocacy role for the child in the educational system, to being more hands-on to assist the child with self-care

skills. Other caregiver burdens include social isolation and depressive symptoms. Their research is important in framing this inquiry: Through a critical review of the literature, the inclusion of the family with child(ren) with ASD and ADHD will better understand the role DMT plays in the population addressed. Can DMT improve deficits in social skills, communication development, and motor functioning? Is there evidence for participating FwASD or FwADHD benefiting from DMT interventions?

In this review of the literature, the relationship between the family system and the expressive therapies, specifically, but primarily, through dance therapy will be explored. The research reporting what these families experience will support the question if this population is a strong candidate to benefit from expressive therapies. The symptoms and behaviors exhibited in CwASD/CwADHD will be briefly examined and addressed. Following the children's symptomologies, the burdens that the caregiver may experience will be reviewed. To support this, an examination of therapeutic interventions for the caregiver will be investigated. Finally, recommendations based on this review and the suggestion of further research areas will be included.

Literature Review

Population – Children

Autism Spectrum Disorder

To meet diagnostic criteria for ASD according to the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; American Psychiatric Association [APA], 2013), (DSM-5), a child must have persistent deficits in each of three areas of social communication and interaction plus at least two of four types of restricted, repetitive behaviors (APA, 2013). For the three social communication and interaction areas, the child must persistently show deficits in social-

emotional reciprocity, nonverbal communicative behaviors, and developing, maintaining, and understanding relationships. Examples of social-emotional reciprocity deficits include abnormal social approach and failure of normal back-and-forth conversation; reduced sharing of interests, emotions, or affect; and failure to initiate or respond to social interactions. Nonverbal communicative deficits in social interactions consist of poorly integrated verbal and nonverbal communication, abnormalities in eye contact and body language, deficits in understanding and use of gestures, and lack of facial expressions and nonverbal communication. Deficiency in developing and understanding relationships that are present via difficulty to adjust behavior to suit various social contexts, difficulties in sharing imaginative play or in making friends, or the absence of interest in peers (APA, 2013, p. 50).

There are four areas of restricted or repetitive behaviors that can be manifested in a child diagnosed with ASD.

1. Stereotyped or repetitive motor movements, use of objects, or speech (e.g., simple motor stereotypes, lining up toys or flipping objects, echolalia, idiosyncratic phrases).
2. Insistence on sameness, inflexible adherence to routines, or ritualized patterns of verbal or nonverbal behavior (e.g., extreme distress at small changes, difficulties with transitions, rigid thinking patterns, greeting rituals, need to take same route or eat same food every day).
3. Highly restricted, fixated interests that are abnormal in intensity or focus (e.g., strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interests).

4. Hyper- or hyporeactivity to sensory input or unusual interest in sensory aspects of the environment (e.g., apparent indifference to pain/temperature, adverse response to specific sounds or textures, excessive smelling or touching of objects, visual fascination with lights or movement) (APA, 2013, p. 50).

Attention Deficit/Hyperactivity Disorder

The DSM-5 reports, people with ADHD show a persistent pattern of inattention and/or hyperactivity–impulsivity that interferes with functioning or development. For children up to the age of 16 years, six or more symptoms of inattention need to be present for at least 6 months (APA, 2013, p. 59). Examples of inattention symptoms include: failure to give close attention to details or makes careless mistakes in schoolwork, at work, or with other activities, often has trouble holding attention on tasks or play activities, and often has trouble organizing tasks and activities. For hyperactivity-impulsivity children up to the age of 16 years must show six or more symptoms. Examples of hyperactivity-impulsivity include: fidgeting with or taps hands or feet, or squirms in seat, often runs about or climbs in situations where it is not appropriate, is often “on the go” acting as if “driven by a motor”, often talks excessively, and often has trouble waiting their turn. Before the age of 12, several inattentive or hyperactive-impulsive symptoms must present (APA, 2013, p. 60). These symptoms must present in two or more settings, (such as at home, school, or work; with friends or relatives; in other activities). Lastly, the symptoms must interfere with, or reduce the quality of, social, school, or work functioning.

When criteria for both ADHD and ASD are met, both diagnoses should be given. Many individuals with ASD have psychiatric symptoms that do not form part of the diagnostic criteria for the disorder (about 70% of individuals with ASD may have more comorbid mental disorder,

and 40% may have two or more comorbid mental disorders). (APA, 2013, p. 58). It is not uncommon for children to be diagnosed with more than one mental disorder, specifically with ASD and/or ADHD.

Similarities seen within the CwASD/CwADHD symptomatology include challenges with communication and social skills, abnormalities in body language and regulation, repetitive motor movements (fidgeting), difficulties in play or social activities, and sensitivity to sensory inputs. *The Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition Text Revision* (DSM-IV-TR) does not allow a comorbid diagnosis of ASD and ADHD. Tureck et al. (2013) reported that when comorbidity has been examined, results have indicated, that 31% of children diagnosed with high-functioning ASD met criteria for ADHD, while an additional 24% showed elevated inattentive or hyperactive symptoms. Tureck et al. (2013) research further confirms that shared behavioral features are common between ASD and ADHD. This information is useful to further explore possible therapeutic interventions for these populations.

Population – Family System

What is a family system? As a family can be made up of many different working parts and uniquely differ, Ernest W. Burgess, known as the pioneer of American family sociology, over time updated the definition of the nuclear family. He proposed that the most appropriate way to conceptualize and study the family was “a unity of interacting personalities” (Burgess, 1926 as cited in Bengtson, 2001, p.3) . Burgess continues by stating that behaviors of one family member, for example, a troubled child or a detached father, could not be understood except in relationship to other family members and their evolving patterns or interactions (Bengtson, 2001). To further define family, Bowen’s theory suggests, a nuclear family shapes how family members will influence the behavior and functioning of future generations, including offspring,

adopted children, wards or other dependents, and even pets (Bregman and White, 2010). This model supports that parents, caregivers, and siblings may be found in a typical family system.

While all parents experience stress while raising children, parents of typical children also experience an increase in self-efficacy and a decrease in stress as time goes by, but these improvements may not be observed for parents of children with disabilities (Hutchinson et al., 2016). Research determined that parents and caregivers of children with ASD have more stress than parents of neurotypical children (Foster, Swain, & Scarpa, 2018). Although FwADHD or FwASD both experience increased stress, compared to parents of typically developing children, it is possible that the types of stress experienced can be linked to parenting style and/or child behavior. Caregivers are the backbone of the healthy development of their children and when all these negative experiences are at play, it can directly impact the ways in which a child develops because they rely on the feedback from their caregiver to develop.

Researchers examined current research literature and identified 10 key topics and principal themes found in the perspectives of parents of CwASD. The principal themes included: social interactions, gaps in knowledge about ASD, advocacy, social isolation, life adaptation, psychological impacts, stigma, health care services, financial burdens, and education (Samsell et al., 2022). For FwASD, the stress generated from social interaction difficulties likely centers around the child's lack of skill or interest in social interaction. Whereas for FwADHD, stress likely emerges from parent-child social interactions being characterized by increased conflict or noncompliance (Hutchinson et al., 2016). These key factors of stress are integral to the family dynamic which ultimately influence how the child presents and how the family parents their child. Parents/caregivers are often scrambling to meet the emotional demands of what this diagnosis means for the family, and often neglect their own well-being in the process.

Mental Health/Stress/Burden

To further investigate caregiver burden, Stuart and McGrew (2009) examined factors impacting caregiver burden following the diagnosis of ASD. Primary caregivers of children diagnosed with ASD were assessed on variables thought to influence outcomes associated with family stress as proposed within the double ABCX model. The variables included the severity of autistic symptoms, additional life demands, social support, appraisal, and coping strategies. Burden was measured through these three domains: individual caregiver, marital relationship, and the family as a whole. Most families reported high levels of burden following their child's diagnosis. Strong and consistent predictors of increased burden included: symptom severity, social support available, additional stressors, such as additional illness in the family or divorce, and the use of passive avoidant coping strategies, such as denial or avoidance. To strengthen this point, parents and siblings of CwASD experience different types of psychological impacts, including stress, depression, anxiety, devastation, despair, and fear. Several couples described the grief following their child's ASD diagnosis as, "being a similar experience to a death in the family" (Samsell et al., 2022, p. 99). The reported stressors suggest a continued need for caregiver self-care and stress relief interventions. A similar study conducted by Phetrasuwan and Miles (2009), examined the relationship between parenting stress and maternal psychological status (depression and well-being). The participants ($N = 108$) included 106 biological mothers and two adoptive mothers who had CwASD. Parenting stress was measured using the Parental Stressor Scale: Developmental Disabilities (PSS:DD). Mothers rated their levels of stress associated with parenting a CwASD. Depressive symptoms were assessed through the Center for Epidemiological Studies of Depression Scale (CES-D). Feelings or behaviors measured included guilt, worthlessness, loss of appetite, sleep disturbance, and feelings of hopelessness. There was

a significant correlation of the PSS:DD with the CES-D. Mothers who reported higher overall parenting stress reported more depressive symptoms. The results inform how there is a correlation of increased parenting stress and depressive symptomology observed in mothers with CwASD. Hutchinson et al. (2016) conducted a research study to examine if parents with children with ADHD or ASD, would exhibit greater parenting stress and children would exhibit poorer executive functioning (EF) compared to typically developing children. Parents filled out a demographic questionnaire, the Parenting Practices Questionnaire (PPQ), and the Parenting Stress Index (PSI). Results revealed a strong positive correlation between parenting stress and parental report of child EF. As hypothesized, parents who reported more stress also reported that their children had more EF difficulties.

Social Isolation

Caregivers of neurodivergent children must alter their daily routines in accordance their child's specific needs. Consequently, the added parenting commitments leave less time for personal fulfillment or participation in adult socialization without their child. Social relationships could include other parents, friends, and family. Altieri and von Kluge (2009) noted that, as a direct consequence of having a child with ASD, parents experienced estrangement from extended family, including from the grandparents or even entire sides of the family, as well as being forced to leave places of worship because of a lack of acceptance. Parents in Lloyd et al. (2019) mentioned feeling abandoned as families and friends began to end relationships. Parents in Celia et al. (2020) and Hock et al. (2012) reported they found it easier and safer to remain at home as much as possible, including the observation that daily tasks as simple as a trip to the grocery store became an arduous undertaking (Samsell et. al, 2022). These research-based examples amplify the social isolation caregivers within this population might be faced with.

Marital Stress

The preexisting stability of the parental relationship is a big factor in how well parents can work together in raising a disabled child. In this context, stability refers to how long the couple have been together and how long they have been married. Other factors in the stability of a couple's relationship have to do with how culturally and religiously committed to their marriage they are, how well defined their views are of the roles of "mother" and "father", and how supportive and involved their extended families are (Siegel and Silverstein, 1994). To strengthen the correlation of additional support and marital stress, parents of children with ASD often feel challenging behaviors result in more stress among parents, which, in turn, result in increased marital conflicts and decreased marital satisfaction among FwASD. Familial support decreases the children's behavioral problems, strengthens the parental relationship, and promotes life satisfaction. (He et al., 2022). For this population, the structure of the family's preexisting relationship, for example with extended family members and/or parent to parent, benefits from a strong and supportive base. If this base has less support, it may result in more challenges along the way. With the symptoms of ASD and ADHD present during early childhood, increased pressure on family life occurs; this can lead to relationship dissatisfaction and, in some families, even divorce. Characteristics found within the parents themselves play a crucial role in predicting the likelihood of separation, for instance, certain personality traits, psychiatric disorders in the partner, low education level, low income, marrying young and infidelity are among the factors known to increase the risk of partnership dissolution (Kousgaard et al., 2018). In a research study located in Denmark, Kousgaard et al. (2018) explored the correlation of parental separation associated with having a child with ADHD or ASD. This study followed parents with children with ADHD ($N = 12,916$), ASD ($N = 7,496$), and typical children ($n =$

18,423) starting from birth and until their 25th birthday. Of these, 1,989 children were diagnosed with both ADHD and ASD. The prevalence of divorce was 59.8% in parents of children with ADHD, 50.7% in parents of children with ASD, and 38.4% in the control families. At the child's 11th birthday, 50% of the parents of children with ADHD were separated compared with 37% of the ASD families and 25% of the control families. A common thread identified within the FwASD and FwADHD was that parents had a high prevalence of psychiatric diagnoses. This theme makes sense as their children are probable to genetically inherit these disabilities. Additional findings indicated that symptoms and behaviors present in the child from birth increased the family burden and potentially contribute to a higher risk of divorce between the parents. A study researched by Hartley et al. (2018) found that parenting stress predicted a lower number of positive marital interactions. Examples of *positive marital* interactions included sharing a joke or funny story, give a compliment, kiss or hug, had sex, or communicated positive feelings toward each other. Examples of *negative marital* interactions included avoided talking to or being around, made a critical comment, expressed frustration or anger, and was impatient or short tempered. Specifically, experiencing a day with lots of negative marital interactions predicted a higher level of parenting stress the next day. Whereas experiencing a day with lots of parenting stress predicted a lower number of positive marital interactions the next day. A recommendation to help FwASD, is to introduce ways to practice positive marital interactions on stressful parenting days, when emotional resources may be low. Findings from Hartley's study may have relevance for FwADHD, as this population also reports high levels of parenting stress and have an increased risk of divorce (Wymbs et al., 2008). The connection of spillover between the parenting and marital domains may occur in similar ways for FwADHD as for FwASD.

Siblings

The guide and handbook, *Sibling Group Lends a Helping Hand*, is a resource that shares expressive art therapy interventions used within the sibling group structure. Von Ferstel and Glenshaw (2011) detail the challenging and at times rewarding experiences siblings of disabled children encounter. These therapists and researchers worked with children with psychological, neurological, social, emotional, and behavioral difficulties, such as ASD and ADHD, their families, and their siblings at a therapeutic day school that highly valued the power of all the expressive art modalities. A sibling of a former student inspired the creation of this school's sibling group. She reported that her highly autistic brother severely impacted every member in her family, and that her experience was fraught with "confusion, guilt, isolation, and an overwhelming sense of responsibility" (Von Ferstel & Glenshaw, 2011, p. x). Her family felt fractured and disconnected from each other, their extended family, and their community at large. She expressed that this sibling relationship had marked every aspect of her adult life. She felt that she had never experienced acknowledgment or support for her unique experience (Von Ferstel & Glenshaw, 2011). Furthermore, it is important to address the question, why do siblings or children with special needs need to be helped and held? The common thread is that due to the intense focus of the diagnosed child the needs of their siblings are often unmet.

Siblings with ASD/ADHD are not only impacted by a brother or sister's needs but also impacted by the way they are called upon to reach out and rise above the disability to bridge gaps manifested in the sibling relationship. These siblings seem to overcompensate for their needs with vigilant self-reliance and may end up depressed, angry, resentful, guilty, embarrassed, anxious, and emotionally alone (Von Ferstel & Glenshaw, 2011). Siegel and Silverstein (1994) say children of parents who are depressed or who have other psychiatric illnesses are at greater

risk for depression. Since parents of disabled children are at an increased risk for depression, this means the unaffected children are also at risk. These researchers continue to explain that a depressed or withdrawn child may serve a purpose for the family system. The demanding needs of the disabled child can create a quiet, non-demanding, self-sufficient, “invisible” child who blends into the background can serve as a relief for their parents.

Based on research and the therapeutic work conducted, Von Ferstel and Glenshaw (2011) found the following emotional themes, roles, and perspectives seen in the siblings they worked with. These roles are caretaker, defender, overachiever, parentified child, and/or mediator. An example of the caretaker role is exhibited when a sibling plays with her brother to provide a break and alleviate parents. This responsibility of occupying her brother is to further support the needs of their parents. The caretaker can undertake responsibility by coaxing, dressing, joining in, helping feed, play with, making a game out of specific parental directions for their neurodivergent sibling to aid the parent. This may be helpful, but a long-term result of the sibling in the caretaker role can become controlling and may alter the sibling relationship.

The Defender

The defender role is defined as one in which siblings rise in defense of the disabled sibling when those outside the family tease or misunderstand the disability, and/or a family member responds with frustration or rage towards either sibling (Von Ferstel & Glenshaw, 2011). The long-term effects of constantly standing up or battling for their disabled brother or sister may result in painful mixed feelings of resentment if not properly repaired.

The Overachiever

The overachiever role is to compensate for that which disabled brother or sister cannot achieve. The typical sibling will strive to excel and succeed beyond the disability seen in their

sibling. With the pressure of overachieving behaviorally, socially, or academically, the typical sibling is at risk for being devastated when experiencing any form of failure (Von Ferstel & Glenshaw, 2011). A sibling in the overachiever role reports,

when I get good grades my mom and dad say, ‘oh good for you!’, but when my sister gets a note from school saying she didn’t get a ‘time out’ that day, they jump up and down and say, ‘you are amazing! Good job! We are SO proud of you!’. (Von Ferstel & Glenshaw, 2011, p. 17).

While in this role, the overachiever sibling resents their parents and disabled sibling, yet she still has the desire to achieve. This desire is rooted in wanting to get attention from their parents to make themselves feel good, but also their parents feel good for having one child who can excel while their handicapped child might not have those capacities.

The Parentified Child

The parentified role is when the child attempts to parent their parents. The parentified sibling sacrifices their own developmental needs and is keen on the feeling of always being needed by the physically and emotionally exhausted parent. When the typical sibling starts to deny their own needs, feelings, and authentic reactions they are vulnerable to only servicing the emotional needs of the parent, and not themselves.

The Mediator

The last role, the mediator, can be described as the child who always stuck in the middle. The mediator may voice concerns about not wanting to upset their sibling or might give into their sibling to avoid conflict. This adjustment is helpful in the moment and settles the potentially upsetting situation, but mediators can lose sight of his/her own feelings, opinions, and point of

view in this process. The mediator might also feel defeat or resentment when no one notices their attempt to repair the initial conflict.

Another skill the siblings of disabled children learn is how to notice warning signs when their sibling may become dysregulated or come after them and in return need coping strategies to stay out of harm's way. To find comfort while their sibling is dysregulated, Von Ferstel and Glenshaw (2011) report that typical siblings create a hiding spot to retreat to. The siblings of children with disabilities are often expected to sacrifice their personal wants and needs to better support their parents or sibling. The difficult roles they embody and symptoms they exhibit can be overlooked by parents within this population.

The sibling and caregiver population experience a unique dynamic in their home while growing as a family. The research provided illustrates the demands and distress that other members in the family live through daily. If the identified patient, a neurodivergent child, is unable to immediately change their symptomology, that often means that their family system is required to change. These adaptations may be beneficial for the neurodivergent child but may cause negative lasting effects on their support system. This suggests that the CwASD/CwADHD is not the only family member in need of intervention. The research also identifies how the increase in stress on the parent leads to an increase in dysregulation and disruptive behaviors seen in a CwASD/CwADHD. When parenting CwASD/CwADHD, supportive resources, community spaces, and outlets intended to improve the well-being of the caregiver can often be overlooked. Ultimately, caregiver well-being influences the entire inner workings of how the family flows and functions together. There should be continued research to better fortify the caregiver and sibling population with the intention to upgrade the experience for all. Expressive

art therapy approaches are available and well researched for the CwASD/CwADHD population, but what if the entire family was invited to participate in this work?

Tortora (2006) explains that DMT uses movement, body awareness, dance, and relaxation techniques to facilitate changes on all developmental levels. The movement interventions and movement observational tools used by the dance/movement therapist can be valuable assets in working with young children and infants, particularly those who are non-verbal (Tortora, 2006). DMT is well-suited for working with infants and children because children communicate first through their bodies, before verbal language develops (Martin, 2014). Based on this information the CwASD and CwADHD population are likely to improve motor deficits, social skills, and communication challenges if participating in DMT interventions.

Traditionally, the guiding principles of DMT include three phases: the initial phase, the middle phase, and the final phase (Gronlund et al., 2005). The initial phase is designed to emphasize the client's strengths, build a trusting therapeutic relationship, maintain boundaries, and explore available resources, such as creative props, pillows, balloons, scarfs, or large gymnastic balls. Once feelings of familiarity are established with the client, the middle phase begins which is when the DMT can begin non-directive instructions that may include creative prompts, improvisations, or empathetic mirroring (Gronlund et al., 2005). Mirroring involves imitation by the therapist of movements, emotions, or intentions implied by a client's movement, and is commonly practiced to enhance empathy of the therapist for the client. Tortora (2006) defines the term mirroring as

a process that involves a therapist literally embodying the exact shape, form, movement qualities, and feeling tone of another person's actions, as if the therapist were creating an emotional and physical mirror image. (p. 259)

This exercise is practiced in DMT and is considered by practitioners and patients to enhance emotional understanding and empathy for others (McGarry & Russo, 2011). In the final phase, the client and therapist begin to discuss the significance of the therapeutic process in the client's life. Together they prepare for an ending by reviewing the time spent together and evaluating previous difficulties and tasks. Though the therapy may be ending, the client will start relating what was learned and find purpose for it in their life outside of the therapeutic space (Meekums, 2002).

Before a dance/movement therapist begins working with a child the therapist might benefit from such assessments as family interviews, movement observations, and standardized tests that consider the child's sensory integration capacities and movement range. Then, the therapist can have an idea as to which areas a child shows sensitivity (such as light, sound, texture, etc.) and can adjust the therapeutic space to fit the sensory and regulatory needs of the individual child. In the same way, the dance/movement therapist can recognize and provide objects of interest and comfort for the child within the therapeutic space (Martin, 2014).

Children with ASD and DMT

With the understanding of traditional DMT practice in mind, several studies have highlighted the power of DMT in reducing symptoms associated with ASD, whilst increasing communication skills and social development. It is a modality that encourages an inclusive environment, enabling any child, despite their capabilities, to be expressive in a physical and non-verbal manner (Morris, 2021). As mentioned previously, most of the common symptoms of CwASD include repetitive and restricted patterns of behavior, increased sensitivity to change, and persistent deficits in social communication and social interaction (APA, 2013). Motor skills and social/communication development are related, and this relationship emerges early in life

(Martin, 2014). Additionally, CwASD who exhibit deficits in these areas require intervention as early and as effectively as possible to aid in proper development (Martin, 2014).

Martin (2014) developed a framework that incorporates the three phases of DMT, and methods to implement early intervention strategies. The technique of mirroring was explored as a potential tool to foster social connectedness and increase imitation skills. Phase one was intended to develop a safe and nurturing space and allow the clinician to familiarize themselves with the child's specific abilities and needs, as well as movement range. Phase two was for developing a connection that fostered engagement, practicing methods of mirroring/imitation and embodying attunement. Phase three established a sense of self, strengthened the understanding of the client's capabilities, incorporate a full body integration, and organize body coordination. Phase four explored synchrony with daily rhythm and troubleshooting dysregulation. Tortora (2006) explains in *The Dancing Dialogue*, that the dance/movement therapist can help a young client to organize body actions through the following categories: (1) the limbs in relation to the torso; (2) specific body coordination; (3) awareness of body actions; and (4) overall sense of body actions. Moving through these categories, the dance/movement therapist can observe and creatively intervene where necessary, beginning with how the child's body moves in relation to its parts and the body as a whole. Martin (2014) concluded that by focusing on a child's functioning in the realms of body awareness, motor coordination, rhythm and timing, the dance/movement therapist can begin to address the early correlations and challenges observed in motor and social/communicative functioning of CwASD. The importance of addressing the developmental coupling of motor and social/communicative deficits as early as possible cannot be over-emphasized due to the cascading effects they have on continuing development. It is also imperative to aid CwASD in evading the feelings of isolation, loneliness, and frustration that

often result from difficulties in communication. The hope for Martin's theoretical framework is to serve as a jumping-off point for further research for DMT as an early intervention for CwASD.

To examine if individuals diagnosed with ASD were adequate candidates for DMT, Beatriz et al. (2020) synthesized five studies that confirmed a positive influence from DMT participation while focusing on the negative symptoms of ASD. The symptoms studied and observed by researchers included lack of empathy, emotional expression, body awareness, and the impact of social reciprocity and communication processes. ASD participants are considered to exhibit disordered communication impairments, repetitive behaviors, difficulty focusing on environmental stimuli, increased anxiety, and impaired emotional learning. With this knowledge, the researchers emphasized that dance could provide improvement towards some of these social limitations. Also, skills like the recognition of emotions of others, recognition of perceived and relayed facial expressions, maintenance of eye contact, and nonverbal expression can improve too. This research highlighted that DMT can be implemented as a tool for symbolic expression that can support a better understanding of emotional states and the exploration of gestural connection. These specifically promote the capabilities associated with communication (Beatriz e. al., 2020). The general themes addressed during this analysis were that DMT improved functions like independence/autonomy, body awareness, psychological wellbeing, emotional inference, communication, and social skills and adjustment.

Children with ADHD and DMT

For the CwADHD population, Gronlund et al. (2005) investigated the effect of DMT as a treatment for young boys with ADHD with aggressive or destructive behavior. Data was collected through the dance therapists' participant observations of two six-year-old boys. They

analyzed attention, impulsivity, movement changes, socio-emotional changes, social interactions, and motor development. The DMT intervention sessions included the two boys and two dance movement therapists and ran for 40 minutes over three months. The sessions started and ended the same with the same rhythmic exercise. The CwADHD were invited to sit in a circle on the floor as they clapped their hands and sang. Then there was a warmup which intentionally utilized a fast tempo to encourage tiring out the hyperactive CwADHD. To build the therapeutic relationship and trust, the participants and dance movement therapists engaged in mirroring and movement empathy. The creative use of props was used to improve balance and visual perception. Lastly, the sessions ended with a relaxation portion where the dance movement therapists would massage the CwADHD's necks and shoulders. If time allowed, the children were able to learn short pieces of choreography. To promote creditability, the parents were interviewed before and after DMT and two years later in a follow-up interview. The parents reported differences in their sons before, during and after the DMT interventions. One mother reported, "Tom has learned more patience... he has learned to wait. He is not quite as angry as before. He has become friendly" (p. 75). Although dance therapy only partly reduced the behavioral and emotional symptoms of the boys, it had, however, a positive effect on the motor function of both boys. This suggests that attention to kinesthetic coherence or motor coordination may be an appropriate steppingstone to the successful treatment of young boys diagnosed with ADHD.

Caregivers and DMT

Champagne and MacDonald (2022) conducted a pilot study investigating if the benefits of DMT could be applied to parents of children with ASD. These caregivers described appreciation for social support, having fun, and mindfulness during the DMT group sessions.

Parents articulated experiencing a sense of social support that was elicited within the DMT group and shared the uniqueness of being able to support one another through movement, rather than with words. A mother shared, “I appreciate the sense of community I feel with the other participants, the sense of empathy, understanding, and acceptance that comes with shared experiences” (p.5). Some parents from this study indicated that the DMT sessions were fun, which provided them with new energy, life, and a sense of spontaneity and/or play. Another parent even mentioned how this time to be mindful of their own needs is especially beneficial for them in dealing with their child’s ASD, “After 5 years of a roller coaster ride since we got the diagnosis, the dance therapy class has been like a small oasis of time and space that allowed me to take a break, focus on me a bit” (p.7). These firsthand experiences of caregivers exemplify how social groups providing community can help alleviate feelings of social isolation caused by their child’s diagnosis.

Aithal et al. (2019) conducted a study in India that was aimed to measure the stress levels of parents of CwASD before and after simulated Dance/Movement Psychotherapy (DMP) sessions. Treatment and resources in India are limited in availability, and services are mostly only available in urban areas, while rural communities receive much fewer options. As they explore the need for services within this community, researchers make note that much of the research on ASD is focused on the individual, and that the needs of parents are not as emphasized. Some of the implications include a general divestment in physical activity, as well as a reported higher level of stress and depression for caregivers. Aithal et al. developed a study that took place in South India at a special education institution. Twelve mothers from different areas across India, were recruited and placed into experimental/control groups. The Parenting

Stress Index–Short form (PSI-SF) and Hamilton Depression Rating Scale (HAM-D) were measured for pre-therapy and post-therapy assessment.

Participants in the experimental group in six total sessions over the course of 2-week, using DMP themes of improvisation, symbolism, and active imagination, rhythm. Sessions began with a warmup, then transitioned into theme development, and finished with a cool-down. Results indicated a massive reduction in stress levels and depressive symptoms, as well as an improvement in parent-to-child functioning in comparison to the control group. Researchers discussed the possibilities of why stress and depression levels went down so drastically including, hypothesizing that DMP sessions gave parents/caregivers an opportunity to have time and space away from parenting to focus on themselves, offered a community of support from mothers who can empathize with their shared experience, activated endorphins and emotional release through the use of movement, created a space for verbal reflection that made connections between the mind and body, and think of new adaptive ways of coping. It might be useful to continue this research by implementing a study in which the parents and children were involved in the DMP sessions together. This would encourage bonding and developing stronger empathetic connection, while also diluting levels of stress.

Method

This review explored the symptomology seen in children diagnosed with ASD and/or ADHD and addressed the challenges that caretakers of this population may experience. This writer evaluated how DMT could be a beneficial therapeutic approach for CwASD/CwADHD and their family system. It was important to utilize literature that included families and children with diverse backgrounds and multicultural perspectives. While evaluating the mental health stressors exhibited in caretakers, an individual section was included that described burden, social

isolation, and marital stress. Additionally, this write included individual sections detailing the possible roles, perspectives, and experiences of siblings of a CwASD/CwADHD.

In reviewing literature that combines DMT for CwASD/CwADHD and FwASD/FwADHD, research was accessed via peer-reviewed resources from Lesley Library, Lesley Digital Commons, and Google Scholar. Information was also accessed through printed books and academic textbooks. Key search words included: children, autism spectrum disorder, attention deficit/ hyperactivity disorder, motor functioning, social functioning, development, communication development, developmental deficits, social skills, dysregulation, caregivers, parents, siblings, nuclear family, burden, stress, marital stress, marital separation, social support, social isolation, depression, expressive therapies, dance movement therapy, movement, attunement, and regulation.

To condense the population to CwASD/CwADHD exclusively, the literature reviewed had the criteria to only include participants under the age of twelve. To provide an inclusive understanding of the family system, the caregiver population was more open ended, with less criteria surrounding age, sexual orientation, or gender identity. This review had a two-part population: children with developmental deficits and the people within the child's family system.

Discussion

This thesis considered the use of DMT as an expressive art therapy treatment approach for CwASD and CwADHD, as well as its impact on members of the family system. ASD is a developmental disorder whose description has continued to evolve. Currently, ASD is diagnosed according to exhibiting “persistent deficits in social communication and social interaction across multiple contexts” and “restricted, repetitive patterns of behavior, interests, or activities” (APA, 2013, p. 50). Similarly, ADHD is the most common neurodevelopmental disorder diagnosed in

childhood, and it is characterized by chronic symptoms of inattention, impulsivity, and/or hyperactivity that led to functional impairment experienced in multiple settings (APA, 2013). CwADHD are more likely to experience a variety of negative outcomes compared to their peers without the disorder, including lower academic attainment and impaired social functioning (Danielson et al., 2016). Both populations' deficits include motor functioning, social skills, communication development. These symptoms indicate why CwASD and CwADHD are appropriate candidates for DMT.

While CwASD and CwADHD exhibit a unique experience due to their symptomology, their caregivers are impacted in different ways. The experience of caregivers with disabled children requires additional support and tasks necessary to raise their child. Parenting a neurodivergent child may include needing to be more vigilant to manage the child's behaviors, taking more of an advocacy role for the child in the educational system, and needing to take a more hands-on approach to provide the child with self-care skills. Caregiver burdens include social isolation, depressive symptoms, marital stress, and personal stress (Phetrasuwan and Miles, 2009). An often overlooked population and integral part of the family system includes siblings too. Due to the intense focus of the diagnosed child the needs of siblings of CwASD/CwADHD are often unmet. Siblings are not only impacted by a brother or sister's needs, but also impacted by the way they are called upon to reach out and rise above the disability to bridge gaps manifested in the sibling relationship. Siblings of CwASD/CwADHD experience confusion, guilt, isolation, and an overwhelming sense of responsibility, overcompensate for their needs with vigilant self-reliance and may end up depressed, angry, resentful, guilty, embarrassed, anxious, and emotionally alone (Von Ferstel & Glenshaw, 2011). The family system may include a variety of individuals, but all people involved are susceptible to

the challenges exhibited in these diagnoses. Therefore, discovering a therapeutic intervention technique that can address some of the challenges that CwASD and CwADHD, and FwASD/FwADHD face is essential. Research reveals that DMT is an effective tool for addressing symptoms and experiences seen in the CwASD and CwADHD, and FwASD/FwADHD populations. DMT uses movement to integrate the emotional, cognitive, physical and social aspects of an individual (ADTA, 2019). DMT uses movement, body awareness, dance, and relaxation techniques to facilitate changes on all developmental levels. The movement interventions and movement observational tools used by the dance/movement therapist can be valuable assets in working with young children (Tortora, 2006). With a deeper understanding for the strengths DMT has to offer, DMT treatment and intervention recommendations for CwASD focus on levels of functioning, encouraging engagement and relationship, aiding in challenges with body awareness and coordination, and fostering rhythm and synchronization to help integrate the motor and social/communicative functioning (Martin, 2014). To reduce the behavioral and emotional symptoms in CwADHD, DMT treatment and intervention recommendations include engagement in mirroring, movement empathy, and the use of sensory props.

Lastly, caregivers who engaged in group DMT sessions described appreciation for “social support, having fun, and mindfulness” (Champagne & MacDonald, 2022) which helped to alleviate FwASD/FwADHD’s experiences of stress, burden, social isolation, and marital distress experiencing stress, burden, social isolation, and marital distress. They reported a sense of social support that was elicited within the DMT group and shared the uniqueness of being able to support one another through movement.

Conclusion

DMT as an expressive art therapy treatment approach is valuable for a multitude of populations. The common deficits observed in CwASD and CwADHD include motor functioning, social skills, communication development. Due to the ASD/ADHD deficits, FwASD and FwADHD are subject to mental health burden, stress, depression, and marital distress. The well-being of the family system directly influences how the CwASD/CwADHD can regulate, how the caretaker can provide the needed supports for their child, and how the caretaker can show up for all members of the family unit, including themselves. This review addresses how DMT can reduce ASD/ADHD symptoms seen in children and alleviate the burden experienced by their family. Future research is recommended to support the benefits of DMT as an intervention for all members of a family with a CwASD and CwADHD.

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***THESIS APPROVAL
FORM***

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Dance/Movement Therapy, MA**

Student's Name: Gabriella Cohen

Type of Project: Thesis

**Title: Dance Movement Therapy and Families with Children with Disabilities: Working
and Moving Together: A Literature Review**

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

Thesis Advisor: Denise Malis