Therapeutic Dance in a Pediatric Setting

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**Introduction**

In the eighteenth and nineteenth centuries, dance became an opportunity for purposeful activity. Elaborate balls allowed family and friends to share the new trends in music and dance and offered a means for a gentleman to seek his wife (American Antiquarian Society, 2007). Early Americans were significantly restricted in their forms of communication due to lack of technology. The social foundation of dance provided a ground for people to communicate with culturally acceptable non-verbal movements and gestures (American Antiquarian Society, 2007). Dance therapy evolved from the idea that dancing has the power to communicate an individual’s innermost feelings by allowing the individual to be aware of feelings through sensation and movement.

“The body is an instrument of dance and movement is the medium of dance” (Goodwin, Krohn, & Kuhnle, 2004, p. 230). The body is the subject of dance, not the instrument of dance, and the mind and body are one action. Individuals discover themselves through movement. Dance movement therapy (DMT) is a thriving therapy alternative in the treatment of a wide range of medical conditions (Zilius, 2010). To date, there is an inadequate amount of research on DMT. Research is conducted through case studies and a limited number of randomized controlled trials. In the present paper, the role dance plays in adolescent occupational therapy treatments will be investigated. This review of literature differs from previous research because the literature investigates DMT and the benefits of dance treatments in children participating in occupational therapy.

**Dance Movement Therapy** Dance involves direct expression through the body and research indicates that it is a powerful medium for therapy. Dance movement therapy (DMT) is a creative-art therapy that provides an outlet for communication in which furthers the emotional, cognitive, and physical integration of the individual (Zilius, 2010). DMT is practiced individually, in groups, or with the client’s family. DMT derived from dance education (Karkou & Sanderson, 2001). Physical education teachers, with a background in special needs education and an interest in modern educational dance, were among the first to develop DMT (Karkou & Sanderson, 2001). Other influences on DMT are artistic trends, psychotherapy, and body-mind therapies (Karkou & Sanderson, 2001).

The goals of DMT include assessing patient needs, communicating emotions, improving self-control, organizing thoughts and actions, developing interpersonal skills, integrating physical and emotional selves, promoting body awareness, and supporting healing (Zilius, 2010). Supporting positive changes in one’s body image is a significant goal in DMT (Erfer & Ziv, 2006). Technical aspects of dance are not a main concern. Examples of individuals benefiting from DMT are individuals with developmental, medical, social, physical and psychological impairments (Zilius, 2010).

The focus of DMT is on “the general process of connecting internal feeling with external expression” (Zilius, 2010, p. 87). Movement allows for the verification of the unconscious process in a symbolic way. Symbolic interaction becomes a vital part of the therapeutic work, which may be meaningful to the client and the therapist. Symbols have multiple meanings for each individual. Examples include personal touch, individual eye contact with the therapist or other group members, facial expressions (smiling and frowning), and/or body movements. Symbols enable a therapist to access material in which is not easily accessible (Karkou & Sanderson, 2001). Focusing on the value of one’s actions rather than what the action itself holds true for non-verbal communication through DMT.

DMT allows changes in feelings, cognition, physical functioning, and behavior in the body and mind of the individual. The mind-body relationship emphasized in DMT corresponds with the holistic approach occupational therapists base therapeutic treatment approaches. DMT focuses on the connection between the mind and body to promote health and healing. DMT values creativity and the individuality of the client (Karkou & Sanderson, 2001).

DMT is an expressive therapy through the therapeutic use of movement to improve the mental and physical well-being of a person with varying conditions. Movement, posture, gesture, and action are the first modes of expression in individuals and continue to be operative during our entire lives (Koch & Fischman, 2011). With the focus of dance as nonverbal expression, interaction, and communication, individuals are making sense of human behaviors on a nonverbal, expressive level (Koch & Fischman, 2011). Dance is a standard for enabling communication in DMT.

DMT is based on the belief that the mind and body work together. A thriving dancer is one who holds the mind and body as one in action (Goodwin et al., 2004). The body is changeable, alterable, and defined by the dancer because it is constant with the mind (Goodwin et al., 2004). Movement becomes the result of free choices and the dancer can be artistic in translating what the body is, what it can do, and what it can convey by pushing away the boundaries of limitation, whether the movement be self- or externally imposed (Goodwin et al., 2004).

According to Erfer and Ziv (2006), DMT is a valuable therapy form because it creates cohesion in groups of children at a short-term inpatient psychiatric unit in a hospital. All movement in children is a form of communication. Children discover through body experiences that establish “their emotional, social, physical, communicative and cognitive development” (Erfer & Ziv, 2006, p. 240). DMT is a practice that allows children to participate in meaningful investigation of the self, the environment, and others (Erfer & Ziv, 2006).

Two important components in DMT with children are the development of body image and self-awareness (Erfer & Ziv, 2006). Body image has a psychological basis. Body image is based on input from the vestibular, kinesthetic, proprioceptive, tactile, and visual systems. Body image shapes the foundation for the sense of self, the attainment of self-help skills, and central concepts (Erfer & Ziv, 2006). Promoting positive transformations in body image is an important goal in the practice of DMT.

**Occupational Therapy**

Occupational therapists assist people throughout the lifespan participate in activities they want to do through the therapeutic use of every day occupations (American Occupational Therapy Association, 2011). Occupational therapists focus on adapting the environment to fit the person and including the client on the therapy team to determine a plan of care. Occupational therapy services typically include an individualized evaluation during which the client’s goals are determined by the client and therapist. Customized intervention to reach the goals determined are developed in order to advance the client’s capability to perform daily activities (American Occupational Therapy Association, 2011). Occupational therapists provide a variety of services, evaluations of the client’s environments, adaptive equipment training and education, and education for family members (American Occupational Therapy Association, 2011). Occupational therapists take a holistic approach to the treatment of individuals with varying disabilities and disorders and always remain client-centered to ensure the quality of treatment is best for the individual.

Occupational therapists address multiple diagnoses and populations with ages ranging from birth until end of life. Occupational therapists work with children, youth, and their families to encourage active participation in activities that are meaningful to them (American Occupational Therapy Association, 2011). Recommended occupational therapy interventions are based on a comprehensive understanding of typical development in childhood and the impact of disability, illness, and impairment on the individual’s development, learning, play, and overall occupational performance (American Occupational Therapy Association, 2011). The primary occupations of young children are interacting with caregivers and play. Occupational therapists provide interventions to improve these occupations and build skills for sharing, taking turns, and playing with peers (American Occupational Therapy Association, 2011). When a child experiences an injury, occupational therapists provide services to increase movement, strength, cognitive abilities, social and interpersonal skills to improve the child’s functional abilities and independence (American Occupational Therapy Association, 2011).

Occupational therapists study in mental health and address children’s emotional and behavioral needs as they relate to everyday activities and social interaction (American Occupational Therapy Association, 2011). Services include helping children develop the ability to cope with challenges, defuse anger, calm down in order to succeed in and out of the home (American Occupational Therapy Association, 2011). Occupational therapists utilize individualized treatment approaches with children to keep their attention while implementing treatment to achieve increased functional independence. Dance therapy can be individualized to each child and their interests to achieve greater results of function.

**Benefits of Dancing** Dancing benefits an individual’s health, artistic abilities, emotional and mental life (Ladock, 2011). Dancing provides an outlet for individuals to enjoy participating in the occupation of fitness. A lifetime of inactivity results in less than optimal quality of life in adults. Issues surrounding inactivity include greater percentages of body fat, poor cardiac conditioning, reduction in muscle mass, and less body strength, endurance and balance (Alpert, 2011).

Physical benefits include fitness, coordination, cardiovascular conditioning, flexibility (Alpert, 2011; Dascomb, 2011; Ladock, 2011) and strengthens body muscles (Ladock, 2011). During a one-hour dance session, 200 to 500 calories can be burned with the continuous motion of dance (Alpert, 2011). The femur, tibia, and fibula, the weight bearing bones, are strengthened with the side-to-side movements of most dance steps (Alpert, 2011). Through the rhythmic movements in dance (hip drips, figure eights, circles, and shimmies), an individual can experience full range of motion in the lower back, hip joints, and ligaments which improves posture and increases muscle tone aiding in the prevention of lower back problems (Alpert, 2011).

Intellectual benefits include intellectual stimulation, calculation and planning, sequential learning, patterns, spatial development, increased motivation to learn, mental flexibility, problem solving, holistic thinking, and improved academic performance (Dascomb, 2011). Dance helps shape new interconnections in the older brain and allows the brain to work faster (Alpert, 2011). The temporal and prefrontal brain activity increases because of dancing (Alpert, 2011). This results in the improvement of memory, improved attention, and the ability to multitask and plan (Alpert, 2011).

 Artistic benefits include arts appreciation, musicality, rhythmic expression, creative expression, imagination, and innovation (Dascomb, 2011). Social benefits include team exploration and cooperation, communication, companionship (Dascomb, 2011) and improvement in individual’s social outlook (Ladock, 2011). Dance allows people to come together socially and develop ties with fellow dancers, unlike solitary exercise, which only allows individuals to interact with themselves (Alpert, 2011).

Individual benefits include confidence (Ladock, 2011), self-esteem, listening skills, self-discipline, sense of accomplishment, persistence, accuracy and openness to new ideas (Dascomb, 2011). By the dancer being in the moment, stress reduction will occur allowing stress and tension to be on pause while the dancer is absorbed in dance routines (Alpert, 2011). Endorphins are produced while an individual is dancing, allowing that individual to experience mood elevation (Alpert, 2011). With all of these benefits of dance, it is only appropriate for occupational therapists to include dance therapy into treatment sessions if it fits the client’s interests. Dance provides expression of the client’s innermost emotions while creating a sense of renewal and completeness.

**Pediatric Therapeutic Uses of Dance**

Dance is a valuable tool used with pediatric patients. It allows for the expression of ideas and creativity. Children with special-needs, asthma, pain, attention-deficit hyperactivity disorder, autism-spectrum disorders (ASD) and pervasive developmental disorders (PDD) benefit from DMT (Zilius, 2010). DMT can be useful for both physical and emotional aspects of quality of life. DMT is offered as a health promotion service for healthy people and as a balancing method of reducing the stress of people with illness.

Children with ASD and PDD experience life through physical sensations rather than non ASD or PDD individuals who experience life through all of the senses (Zilius, 2010). ASD children commonly have self-stimulating movement qualities and commonly take on abnormal motor behaviors (Zilius, 2010). The abnormal motor behaviors can include toe-walking, rocking or flapping motions. In DMT, therapists view patients’ movements as a language and consider the movements to be expressions of hidden thoughts and emotions that the child is conveying (Zilius, 2010). Occupational therapists can provide an ASD client with interventions, dance, to help the child appropriately respond to information coming in through the child’s senses. A therapist could include dancing to assist in play therapy that aids the child in interacting with others.

Children with attention-deficit hyperactivity disorder (ADHD) lack the ability to pay attention, control their activity, and restrain impulsive behavior (Zilius, 2010). These problems may interfere with a child’s ability to hear or read instructions, complete assignments and tasks, and participate in games. DMT allows children with ADHD the ability to release energy productively instead of through aggressive, impulsive means (Zilius, 2010). DMT provides children with structure and a calm environment resulting in the ability to focus during treatment. Individuals who are troubled with uncoordinated movement and body tension profit from DMT to address these issues, allowing individuals to place superfluous energy into the dance and allowing deep emotions to be brought to the surface (Zilius, 2010).

Children with asthma that participate in DMT benefit from communicative lessons and stress-reduction techniques (Zilius, 2010). DMT addresses the emotions of the individual, breathing patterns, body image, family communication and obedience to asthma management (Zilius, 2010). During expressive dance activities, pain management is addressed because the brain releases endorphins and neurotransmitters that can alter the patients’ outlook (Zilius, 2010). Therapists can develop programs that focus on breathing techniques. This allows patients to gain control and increase their expression through movement (Zilius, 2010). An occupational therapists treatment approach toward individuals with pain management can focus on relaxation techniques and assist with areas of tension and stiffness. A therapist can develop a dance program specifically to the individual that focuses on weight transfer, range of motion and balance (Zilius, 2010).

DMT is a resource to facilitate coping with illness, especially for individuals who are dealing with disease processes associated to cancer (Cohen & Walco, 1999). Children with cancer have greater psychological adjustment problems than healthy peers. In early childhood, a key issue in accepting the psychological modification of cancer is to determine the extent of disturbance caused by the condition (Cohen & Walco, 1999). Therapeutic goals focus on helping the child with cancer adjust and adapt to the anxiety of the condition (Cohen & Walco, 1999). The capability to generate and execute different fundamental movement patterns is essential to the therapeutic process for more advanced and integrated motor activities (Cohen & Walco, 1999).

DMT practitioners introduce specific body movement structures that address starting and stopping, adjusting the shape of the body within a designated space, and exploring opposite qualities are introduced into therapy sessions (Cohen & Walco, 1999). Children with cancer experience dance by becoming more incorporated and familiar on a body level, with various situations and slight gradations (Cohen & Walco, 1999). DMT provides “a context for increased integration among subjective internal states, behaviors and body movement, and the demands of the environment” (Cohen & Walco, 1999, p. 38).

In school-aged children, peer relationships become increasingly complex and become central to socio-emotional development (Cohen & Walco, 1999). The noticeable physical changes connected with cancer, and its treatment, becomes a challenge as it relates to eased interactions with peers and cancer patients. Rejection by peers who do not have cancer can lead to feelings of self-consciousness, fear, and removal to individuals with cancer. DMT can provide a way by which abstract concepts are addressed and allow the individual to explore the nonverbal expression of growing emotions (Cohen & Walco, 1999).

Chronic illness and cancer have major implications for adolescents. Loss of normal contact with peers may lead to isolation. Falling behind in schoolwork can incite feelings of shortage and being overwhelmed. Delayed physical development, disability, or defacement related with cancer make the adolescent even more sensitive to concerns about body image (Cohen & Walco, 1999). DMT interventions for children with cancer focus on mobilization, gross motor skills, and self-expression aimed to merge cancer-related changes in the body (Cohen & Walco, 1999). Group formats are ideal because each individual comes to the group with a unique set of needs. Overall, DMT offers elements of development, coping, and adaptation by using an approach to therapy that goes beyond vocal ideas, adding an extensive dimension to the holistic care of patients with cancer (Cohen & Walco, 1999).

**Mirroring.** An exercise which involves initiating qualities of movement, used to develop emotional understanding between a client and a therapist between members of a group is called mirroring (McGarry & Russo, 2011). During mirroring, two people make synchronized body movements. Therapists mirror the client’s exact movement and duplicate qualities of movement that imitate the client’s emotional tones (McGarry & Russo, 2011). The result of mirroring allows a therapist an improved degree of somatic and emotional understanding for the child (McGarry & Russo, 2011).

 Motor neuron research suggests that viewing another person being emotionally expressive, while remaining still, will stimulate the identical movement areas in the viewer’s brain, which will trigger emotion regions due to the emotionality of the movement (McGarry & Russo, 2011). This research suggests that it is not required to move in order for impersonation to occur at a natural state. Motor neuron research explains why individuals are able to recognize the emotion of others without visibly moving (McGarry & Russo, 2011). Therapists are trained to be observant and to recognize the client’s emotion before, during, and after a therapy session.

**Wheelchair Dance.** In a study by Goodwin et al. (2004) a case study of five dancers in a wheelchair dance group was developed. The program took place on a weekly basis. The program included music, technique, critical thinking, composition, and choreography. Wheelchair dance has four overlapping aims. The first aim is the physical growth that occurs through muscle strengthening, flexibility development, and balance training (Goodwin et al., 2004). The second involves the attainment of new movement patterns and the enhancement of existing ones (Goodwin et al., 2004). The new movement patterns can transform into better posture, enhance maneuverability of the wheelchair, and advance coordination of movements (Goodwin et al., 2004). The third aim relates to psychological benefits and improved self-esteem, self-confidence, and an expanded form of self-expression (Goodwin et al., 2004). Lastly, wheelchair dance promotes socialization through teamwork and cooperation, which are needed for success in pair or group formations (Goodwin et al., 2004).
 The results show four common themes that arose from the case study. The dancers experienced unconditional acceptance from the other dancers and their instructors (Goodwin et al., 2004). The dancers discussed their dance experience as joyful and a dream come true (Goodwin et al., 2004). The dancers discovered who they were and were able to develop a deeper understanding of their wheelchair. The wheelchair has always been a means to move independently. Now, the dancers have looked beyond the wheelchair and have found a creative and personal expression with the wheelchair. The dancers used the wheelchairs to express themselves through movement, communicate emotion, tell a story, and practice dance (Goodwin et al., 2004). Leadership roles were developed and the students of the wheelchair dance found a stronger self within them (Goodwin et al., 2004).

The wheelchair dance program allowed five individuals to find themselves and create movement with their bodies, imagination, and expression. The dancers danced for the love of being with others, to feel happy, to eliminate daily stress, and experience the pleasure of movements (Goodwin et al., 2004). Wheelchairs are viewed as a symbol of weakness and dependence, but to the dancers, wheelchairs provided an outlet for creative, emotional, and physical freedom. The dancers of this study used their power to create, question, and initiate change in how the body was viewed and how they were viewed as individuals with activity limitations (Goodwin et al., 2004).

**Project Development**

 A website will be developed from the evidence-based research found in this literature review. The purpose of the website will be to educate occupational therapists on the use of dance in pediatric therapy sessions. The following are elements that will be created in the website:

1. DMT will be defined and the benefits of dance will be justified.
2. Occupational therapy will be explained, as well as frames of reference and activity analysis, in order for therapists to use to validate using dance in therapy.
3. Benefits of group versus individual therapy.
4. Resources such as handouts, educational videos, links, articles, and activities will all be available for occupational therapists to utilize in future therapy sessions.

**Conclusion**

The research shows that dance movement therapy can play a significant role in a child’s therapeutic treatment. Dancing has the power to communicate an individual’s innermost feelings by allowing the individual to be aware of feelings through sensation and movement. DMT is a means of therapy for multiple disorders, mental illness, cancer patients, and mild depression patients. In addition, dance therapy can be used to facilitate learning in children. Occupational therapists provide a holistic approach to therapy, including the expression of emotions that is conveyed in DMT. Occupational therapists need to take into consideration the mechanics of DMT, and put it into future occupational therapy treatment sessions because it would benefit individuals by allowing self-expression. The future of occupational therapy is likely to see further expansion in the practice of DMT.

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