Chapter-IV

Literature Review
LITERATURE REVIEW

The quantity and quality of research in autism and related conditions have increased dramatically in recent years. An attempt is always made to highlight directions for future research. There is a doubt, whether the rate of autism is increasing with generation or its awareness about the identification and diagnosis with scientific research. Moreover, researches are still in an indecisive state about the problem and causes of autism.

It has been found that children with autism have lack of flexibility. They are no aware of their own self, their body parts, their body part relationship, and how to deal with situation bodily. Lack of proper coordination in using movement in order to deal with situations occurs due to lack of flexibility. Development in body flexibility leads to better living in autism and thus development in communication and socialization as well.

Dance movement therapy is one such therapy which deals with the body flexibility of autistic children (ADTA 1966). Dance movement therapy has been widely used in both clinical and non clinical population in order to develop body flexibility and thus help to heal the problems the subjects were undergoing both clinical and non clinical.

Western movement therapies generally developed out of the realm of dance. Many of these movement approaches were created by former dancers or choreographers who were searching for a way to prevent injury, attempting to recover from an injury, or who were curious about the effects of new ways of moving. Some movement therapies arose out of the fields of physical therapy, psychology, and bodywork. Other movement therapies were developed as way to treat an incurable disease or condition.

Eastern movement therapies, such as yoga, qigong, and tai chi began as a spiritual or self-defense practices and evolved into healing therapies. In China, for example, Taoist monks learned to use specific breathing and movement patterns in order to promote mental clarity, physical strength,
and support their practice of meditation. These practices, later known as qigong and tai chi eventually became recognized as ways to increase health and prolong life.

**Benefits:** The physical benefits of movement therapy include greater ease and range of movement, increased balance, strength and flexibility, improved muscle tone and coordination, joint resiliency, cardiovascular conditioning, enhanced athletic performance, stimulation of circulation, prevention of injuries, greater longevity, palm relief, and relief of rheumatic, neurological, spinal, stress, and respiratory disorders. Movement therapy can also be used as a meditation practice to quiet the mind, foster self-knowledge, and increase awareness. In addition, movement therapy is beneficial in alleviating emotional distress that is expressed through the body. These conditions include eating disorders, excessive clinging, and anxiety attacks. Since movements are related to thoughts and feelings, movement therapy can also bring about changes in attitude and emotions. People report an increase in self-esteem and self-image. Communication skills can be enhanced and tolerance of others increased. The physical openness facilitated by movement therapy leads to greater emotional openness and creativity.

There are countless approaches to movement therapy. Some approaches emphasize awareness and attention to inner sensations. Other approaches use movement as a form of psychotherapy, expressing and working through deep emotional issues. Some approaches emphasize alignment with gravity and specific movement sequences, while other approaches encourage spontaneous movement. Some approaches are primarily concerned with increasing the ease and efficiency of bodily movement. Other approaches address the reality of the body "as movement" instead of the body as only something that runs or walks through space.
USE OF DMT TO IMPROVE BODY FLEXIBILITY IN NON CLINICAL POPULATION:

Westland (2009) has tried to find out the importance of verbal and non-verbal communication in body psychotherapy through Dance Movement Therapy as intervention, entitled "Considerations of verbal and non-verbal communication in body psychotherapy". In his study Westland, described the theory about the use of language in body psychotherapy, ways of the psychotherapist relating to the client's language, and the psychotherapist using language with different therapeutic purposes in mind. Links are made to current thinking in neuroscience and cognitive psychology. Language in the therapeutic relationship is discussed in terms of emotional regulation and spiritual awareness by combining verbal and non-verbal communications with intention, presence, contact and awareness, through dance movement therapy. According to Westland, communication with others has both verbal and non-verbal aspects.

Dillenbeck & Melers (2009), in their study "Death and Dying: Implications for Dance/Movement Therapy" emphasized, Death and the dying process often present various transitions, which have a significant impact on one's physical and psychological states of being. Dance/movement therapy, drawing from a strong theoretical base, as well as a rich body of experiential work, offers integrative support to individuals experiencing physical degradation and confronting their mortality. Dance/movement therapists are equipped with specific techniques, deep body knowledge and a philosophical frame to enable them to skillfully work with individuals who feel disconnected from their bodies as a result of the physical degeneration often accompanying one's transition to death. The purpose of this study is to explore the experiences and the support needs of dying individuals and to identify how dance/movement therapists can assist in the process of dying. The investigation also intended to begin to identify various dance/movement therapy theories and skill sets which might be utilized when working with the dying population, as well as acknowledging areas in which dance/movement therapy may expand its knowledge base.
Participants included five hospice workers. Eligibility was based on caregivers having had direct contact with terminally-ill individuals for no less than 2 years. The sample for the study was comprised of four Caucasian women and one Caucasian man. Their ages ranged from 26 to 65 years old. The amount of time they had been death, demonstrates the innate qualities of dance/movement therapy deemed useful to individuals moving into the final stages of life as well as to the entire field of palliative care working in hospice varied between 3 and 25 years. Each hospice employee worked in a different capacity serving individuals who were dying. Open-ended questions were asked by the researcher during the interview with the intention of obtaining information the interviewee deemed pertinent from his/her experience working with and supporting the terminally-ill.

Results show that, Dance/movement therapy utilizes techniques and philosophies that offer dying individuals holistic support as they begin the process of leaving their bodies. Dance/movement therapy “encourages new behaviors and symbolically communicates hidden emotions, releases anxiety and serves as a vehicle to integrate mind, body, and spirit” (Loman, 2005). The integrative approach to health, healing, and wellness can serve to nourish the whole person as he/she prepares for death on physical, psychological, and spiritual levels.

Kaylo (2009), tried to establish a relation between Jungian principles and its relation to Laban Movement Analysis the major principal in operation in dance movement therapy. In his article “Anima and animus embodied: Jungian gender and Laban Movement Analysis” hypothesized that the binary framework of Laban Movement Analysis (LMA) can be correlated with Jung's descriptions of 'anima' and 'animus', with the intention to demonstrate polarities in movement quality operating as expressions of power. Like Jung's descriptions of Anima and Animus theory, LMA is a binary model which relies on qualitatively oppositional descriptions to indicate functional and expressive aspects of the lived body, lived world phenomenon. Laban also referred to some movement as 'masculine' and 'feminine', although LMA's fluctuating, interdependent binary system can (and should) serve as a
movement palette for either gender. Jung's original theories of anima/animus were purportedly living in the unconscious of psychological men and women, respectively. They are here further transported to a Laban-based movement duality that can be expressed by either sex.

**Ginsburgs & Goodill (2009)** In their research entitled “A Dance/Movement Therapy Clinical Model for Women with Gynecologic Cancer Undergoing High Dose Rate Brachytherapy”, generated a clinical dance/movement therapy program intended for patients with gynecological cancer to run concurrently with the high dose rate (HDR) brachytherapy treatment. A ten-week clinical model combines elements from established dance/movement therapy practices to specifically address psychological and psychosocial issues relevant to the targeted patient population. In order to develop an appropriate intervention, the movement tasks and themes chosen were based on findings of their effectiveness in various studies.

Dance/movement therapy has been shown to directly address psychological issues, such as self-image, anxiety and depression, through a holistic approach which serves to aid the healing process of the individual by strengthening the mind-body connection. These psychological issues occur as secondary stressors to medical conditions, such as cancer, and may reduce a patient's quality of life and abilities to cope with their illness. For patients diagnosed with gynecologic cancer these secondary stressors may include altered self-image, sense of isolation or betrayal by one's body, anxiety, depression, and complications related to sexuality. The following article correlates the efficacy of dance/movement therapy applied to patients with gynecologic cancer being treated with HDR brachytherapy.

In the qualitative findings, **Dibbell-Hope (2000)** discovered that many of the women felt that the group provided a safe environment that decreased their sense of isolation and increased their ability to cope with their negative feelings towards their body and their mood disturbances. Sessions were held on a weekly basis for ninety minutes, in a closed group format.
Dance/movement therapy’s holistic approach uniquely allows participants to explore their emotional, social, cognitive, and physical selves. **Dibbell-Hope’s (2000) study** was motivated by the belief that a trauma to the body should be treated with a body-oriented therapy. Successful outcomes have been measured for dance/movement therapy based interventions in the medical field, even for brief interventions. The underlying goal of this ten-week intervention is to create a psychologically safe environment for gynecologic cancer patients, integrating the various techniques that have proven to be effective in psychosocial interventions and dance/movement therapy based interventions. By building a social support system early on in the patient’s treatment plan, the hope is that adaptive coping skills and emotional expression will allow the patient to combat the potential decrease in quality of life found in most studies. Future research is encouraged to modify this intervention as needed; however, the groundwork has been laid for a viable opportunity to address the emotional needs often ignored in the medical treatment of gynecologic cancer patients.

**Appleton (2009)** in his study entitled "Aspects of posture and personality" described by a typology of muscle tonus patterns proposed that some variations in generally fixed muscle tonus found in people are linked to postural patterns and personality. According to Appleton, it is suggested that the pattern originates from, or at least matches, dorsal-ventral undulation, an evolutionarily early form of locomotion. Drawings demonstrate, with simple line, how muscle tonus patterns define whole bodies and individuals, much in the same way that cartooning does. In addition, whole-body mental imagery provides a kinesthetic experience of the concepts and types. New tools for dance movement therapy, body psychotherapy, and kinesthetically based postural reeducation could arise from the concepts. This variety of physical typology has not been previously proposed, though we notice the types in everyday life and in cartooning.

**Devereaux (2008)** said that Domestic violence affects not only the battered victim, but all members of the family. Dance/movement therapy, through its active and metaphorical process, can provide a new therapeutic
approach to assist families exposed to domestic violence. This paper provides a case illustration of the use of dance/movement therapy with a family exposed to domestic violence, as the primary therapeutic intervention. It is grounded in theories of attachment, on the primary hypothesis that dance/movement therapy offers not only a way to address the physical and emotional patterns of immobilization but also, as a reparative tool; it assists victims in integrating healthy self-regulatory capacities that have been stunted by trauma experienced through the body. The case illustration highlights how dance/movement therapy provided a direct approach to addressing specific symptoms of abuse that appeared in particular individuals in this family, as well as how “re-choreographing” the family dynamics and relationships dysregulated by the domestic violence was pivotal in helping this family to learn new ways to self-regulate.

Seibel (2008) worked with prisoners in the topic entitled Behind the Gates: Dance/Movement Therapy in a Women’s Prison. The sessions continued one-time, three-hour sessions per month continued for two years, always with movement, drawing, and talking. Each session was unique: sometimes with the same people, sometimes different. It became clear that the importance of these sessions was to help inmates tune into themselves amidst inner chaos and external rigidity of prison life. After sessions change was found in the subject’s communicative skills, muscle tone relaxed, interpersonal skills improved.

Lima & Vieira (2007) discusses a dance action-research project developed with elderly people in Brazil. The meanings of ballroom dancing and its benefits are explored for 60 elderly Brazilians through participant observation and questionnaires. This study adds to the growing number of dance projects and research for older people, responding in part to evidence that dance is a form of therapy for its valuable means in augmenting mental, emotional and physical well-being and to counteract social isolation. The dance project took place through the Third Age Club, which was founded by The Viçosa County’s Social Assistance Department and the Federal University of Viçosa. At the end of one year taking the ballroom dance classes, the
senior citizens were asked to answer a questionnaire in order to provide subjective information on the meanings of ballroom dancing and its benefits for them. The outcome of this inquiry was analyzed under a qualitative approach, phenomenological hermeneutics. Five major categories of therapeutic meanings of ballroom dancing for participants are: ballroom dancing is fun; it brings health benefits; it brings back good dancing memories; it allows participants to establish cultural connections to the larger Brazilian dancing culture; it provides opportunities for socializing. The article ends with reflective analysis of the researchers’ observations and field notes by suggesting that the ballroom dancing classes created a culture of inclusion that embraced both understanding and acceptance among senior citizens, which in turn might improve their quality of life.

Lewis (2006) said that dance/Movement Therapy, like all psychotherapies, is in need of assessment methods that meet the demands of managed care. Through Laban Movement Analysis therapists are able to assess dynamic qualities of movement, known as Effort elements. This study is concerned with the possibility that specific images can be presented to children in an attempt to evaluate their health through their functional and expressive use of the movement responses, i.e., range and repertoire within the Effort system. This study tests the hypothesis that the introduction of imagery can be used as a reliable and valid method of eliciting movement in preadolescent aged children as used in the Moving Story Effort Assessment. This study introduces the Moving Story Effort Assessment (MSEA), a movement assessment for preadolescent children, which uses imagery as a catalyst for Effort production. The assessment was administered to 31 healthy children aged 8–11 years, and the movement rated by 3 trained observers. The assessment task (i.e., ‘moving’ to the stories) allows the therapist to gain insight not only on the child’s Effort and other movement preferences, but potentially also about the child’s creative abilities, his/her ability to focus and follow directions, and numerous other non-verbal behavioral and psychomotor characteristics. The findings suggest that the tested images consistently result in eliciting a specific Effort quality. The data collected from this study may therefore be used to assist dance/movement
therapists in the assessment of children by comparing this study’s normative results to the child being assessed.

**Hung Ho (2006)**, in his research on *Regaining Balance Within: Dance Movement Therapy with Chinese Cancer Patients in Hong Kong*, emphasized that balance is an important concept in Chinese culture. Holistic health in Traditional Chinese Medicine is defined by a balanced and integrated body, mind and spirit. Although the importance of living in a state of balance is implanted in Chinese people, the concept moves into the background, becoming ignored or disturbed, when an individual becomes overwhelmed by physical and psychological distress, such as a diagnosis of cancer. Dance Movement Therapy (DMT), which works at both the physical and psychological levels, also asserts that total well-being is a function of the interconnected body, mind, and spirit, making it a particularly suitable and potentially powerful intervention for Chinese clients who find themselves out of balance. This paper demonstrates how a mix of eastern approaches such as meditation and tai-chi like movement, eastern philosophy such as living in the moment and nonattachment, and DMT’s western emphasis on spontaneous movement and expression, can help Chinese clients, accustomed to containing expressive behavior, regain and embody the traditional wisdom of balance. Steps in this approach include acknowledging the influences of Confucianism and traditional education, loosening the established controls and disciplines, awakening the traditional wisdom of mind-body interconnectedness (as well as the ‘sentimental side’ that lies inside), and regaining the sense of balance of body, mind and spirit.

**Jeppe (2006)** said that Improvised dance and live music played by the participants themselves define a dance/movement and music (DMM) model in which interactive, variable geometries of sound and movement open up a novel theatre for emergent imagination and drive the interplay of intrapsychic and interpersonal domains. The model is conceived as a mixture of therapeutic and artistic exploration leading to performances prepared mainly by the participants. It incorporates poetry. One outcome of the model’s optional modalities is the “holding” of the dancer by the music; another is
the musical instrument as a transitional object. The expanded therapeutic environment derives strength from the non-verbal movement-and-music coupling, which may favor access to pre-verbal and unconscious psychic provenances, and from the potent triadic formation of therapist, dancers and musicians. It contributes to participants’ freeing themselves from their isolation and, more generally, offers a new prospect to the expression of unresolved trauma and distress.

Koshland et al. (2004), in their pilot research evaluated the use of a 12-week dance/movement therapy-based violence prevention program with 54 multicultural elementary school children, and found that it was effective in reducing aggressive behaviors. The program used a dance/movement therapy group process that focused on socialization and engagement of children in creative, problem solving experiences. Pro-social behaviors and methods of self-control were introduced using movement, children’s stories and discussion. Statistical results showed that teachers noticed a significant decrease of these behaviors in their students instigating fights, failing to calm down, frustration intolerance, and throwing articles. The children reported significant decreases of these behaviors both seen and experienced: “someone doing something wrong,” and “someone throwing something.” Significant changes in the students’ perceptions and feelings about experiencing or seeing aggression were noted in their “not feeling happy” when seeing such incidents, and their observations of handling themselves and responding in such situations showed a decrease of “feeling happy,” and a decrease in “feeling scared.” Classroom observations showed a significant decrease in the frequency of negative behaviors. However, there was not significant increase in pro-social behaviors noted. Comparative data of aggressive incidents reported to the office for classrooms participating in the program (first, second, and third grades) before and after the program were compared to data from non-participating classrooms (fourth, fifth, and sixth grades). While data showed a decrease in the number of aggressive incidents reported to the principal for the entire school, the decrease in number of incidents for participating classrooms was
greater than that for those that did not participate (p<.001). Limits for the study and suggestions for future research are presented.

Pylvänäinen (2004) presents a theoretical, literature-based study of the body image concept. Conceptualizations of body image in philosophy, psychology, psychiatry, and dance/movement therapy are briefly reviewed. A tripartite model for the concept of body image is proposed in order to clarify the meaning of body image. The author differentiates body image into three interrelated aspects: image-properties, body-self, and body-memory. Image-properties refer to one's perceived appearance of the body and to societal and cultural attitudes regarding the body. Body-self is the body-based interactive, experiencing, and emotional core self. Body-memory stores the lived experiences and serves as a background for evaluating present experiences. The tripartite model is then discussed in relation to conceptualizations of treatment goals and intervention in dance/movement therapy.

Blahnik (2004), said that Flexibility presents a unique system that blends the best stretching methods from yoga, Pilates, and various kinds of movement patterns into stretching sequences that challenge muscles with multiple techniques to attain maximum flexibility, strengthen muscles so that they can support the body throughout specific moves in the entire range of motion, and balance muscles equally in opposing muscle groups and on both sides of the body.

The stretch sequences are organized by body region and by type of movement so that you can quickly find a flexibility workout ranging from 10 to 40 minutes. The workouts help you to target tight muscle groups and relieve tension around problem joints, increase effectiveness of specific movements, and warm up and cool down for your specific activity.

Full-Body Flexibility also includes performance and recovery stretch sequences for the most popular sports, including sports that involve throwing and swinging, jumping and power, and running and endurance.
Stretches are accompanied by photos and detailed instruction to help you execute each technique correctly.

Full-Body Flexibility offers the most advanced, effective stretching system available, head to toe.

Rebecca (2003), used dance movement therapy as creative arts therapy as a correctional method for healing of violence and stress of the prisoners. Dance movement therapy acted as a non verbal method of expression in revealing their hidden needs and thus they were able to express their wants and communicate easily with the society and people around them.

Maria (2003), in an article “Human Structural Dance” followed a brief history of the development of dance therapy emphasized the benefit of dance therapy in enabling patients to verbalize their feelings. The author supported her opinion by research findings relating to group of 30 patients who have been diagnosed with archaic ego disorder.

Vassiliki and Patricia (2001) identified important characteristics of dance movement therapy practices and procedures related to assessment or evaluation. 41 dance therapists in UK were subjects. Most of the therapists (84.5%) worked with clients with emotional behavioral difficulties, 54.1% worked with clients having stress out of work. Reports said that Dance movement therapy acted as a healer for these clients.

Rossenberg et al. (2000), in creative dance program for children of frail older adults, describes a 12 week intergenerational creative dance class involving 21 children (mean age 8 years 6 months) and 15 frail adults (mean age 83 years 7 months). Programs include warm up exercises, specific movement combinations relaxation/cooling down, program duration, teaching methods, dance content, attention, dancer’s need, discipline, music and physical space which benefited older groups as well as younger ones. Results showed that creative dance movements positively affected social skills. Noted signs of cooperation among the young and the old were noticed after the sessions. Caring attitude also increased incase of younger children.
Leventhal & Chang (1991), highlights the contributions that dance/movement therapy can make to the treatment of battered women. By motivating female victims of domestic violence to act, dance/movement therapy addresses patterns of helplessness, ambivalence, and inactivity. Dance/movement interventions help women internalize a positive self-concept as well as gain physical and emotional control. In keeping with the short-term, crisis-oriented nature of standard treatment of battered women, a psychosocial plan of intervention which addresses their isolation and immobilization is recommended. Lastly, implications for in-depth, dance/movement therapy are made.

As Dance/Movement is a very new therapeutic inclusion in the field of disease and disability, it demands special experimental approach to reach a conclusion. But most of those above mentioned studies were based on observation both structured and unstructured. In one of the studies language in the therapeutic relationship is discussed in terms of emotional regulation and spiritual awareness by combining verbal and non-verbal communications with intention, presence, contact and awareness, through dance movement therapy. But to define or deal with spiritual awareness and emotional regulations more scientific analysis is required especially when the study dealt with both verbal and non-verbal communication. All this notions vary from individual to individual. Scientific approach through quantification is required to prove the validity of the research.

Dance/movement therapy did not prove to be effective in working with non-responsive patients in a study where the age of the sample ranged from 26 - 65 yrs (Dillenbeck & Meiers 2009). It is debatable that whether the result would be attributable to DMT or an error variable like heterogeneity in age of the sample. Likewise, the scale developed by Lewis (2006) was not developed following a scientific test construction method as reported. Only 30 individuals and 3 raters were the sample size for construction of a test which is too small to construction of a scientific tool.
The studies (Lima & Vieira, 2006; Rossenberg et al., 2000; Vassiliki & Patricia, 2001 et al.) which were based on qualitative approach again were based on too much subjective perception and interpretation rather than following a true qualitative analysis, mainly emphasized on subjective information. Most of these articles end with reflective analysis of the researchers' observations and field notes only. So, more quantified analysis is required to prove the point.

Though there are many limitations in the work with DMT but at the same time we cannot overlook the impact of DMT in all these studies. Criticism encourages development and thus keeping in mind the limitations of the earlier work the present work was designed to prove the "Effect of Dance Movement Therapy on Autism".

**DANCE THERAPY IN CLINICAL POPULATION:**

Dance movement therapy has been found to heal various problems related to the clinical population. Some studies can be noted down as follows:

**Xia & Grant (2009),** in their study with schizophrenic patients suggested Dance therapy (also called dance movement therapy) uses dance and movement to explore a person's emotions in a non-verbal way. The therapist will help the individual to interpret their movement as a link to personal feelings. It was a community-based project involving 45 people and both groups were followed up after four months. The study included 10 weeks of group dance therapy plus standard care to one group and to another group supportive counseling plus other standard care for the same length of time was provided.

Of the outcomes measured (mental state, satisfaction with care, leaving the study early, quality of life and adverse effects) the majority showed no difference between the two groups. However, when negative symptoms were specifically measured after 10 weeks of treatment, there was a significant improvement in the mental state of the dance therapy group. At the four month follow-up more than 30% of the participants had been lost from both
groups, making it impossible to draw any valid conclusions from the outcomes measured.

Overall, because of the relatively small number of people, the data from this trial were inconclusive. However a larger randomized trial measuring outcomes such as relapse, admission to hospital, quality of life, leaving the study early, cost of care and satisfaction with treatment would help clarify whether dance therapy is an effective treatment for schizophrenia; especially for negative symptoms that don’t respond so well to medication and talking therapies.

Röhrich (2009) found the importance of heterogeneous field of body oriented psychotherapy (BOP) provides a range of unique contributions for the treatment of mental disorders. Practice based clinical evidence and a few empirical studies point towards good efficacy of these non-verbal intervention strategies. These particular research concepts are more relevant for those disorders with body image aberration and other body-related psychopathology, but also for mental disorders with limited treatment response to traditional talking therapies, e.g., somatoform disorders/medically unexplained syndromes, PTSD, anorexia nervosa or chronic schizophrenia. Qualitative research is needed to further investigate the specific interactive therapeutic relationship, the dynamics of touch in psychotherapy and the additional self-helping potential of creative/arts therapy components. Provided that these requirements will be fulfilled, BOP could be established as one of the main psychotherapeutic modalities in clinical care, alongside other mainstream schools such as psychodynamic and cognitive-behavioral systems.

Cruz (2009), in the study entitled "Validity of the Movement Psycho diagnostic Inventory: A Pilot Study analyzed Dance/movement therapy practice uses observation and assessment of movement as a key clinical component that guides intervention. Several movement observation systems are used by dance/movement therapists, yet few have documented information on validity and reliability for their use. The purpose of this study
was to examine the validity of the Movement Psychodiagnostic Inventory (MPI; Davis, *Guide to movement analysis methods part 2: Movement psychodiagnostic inventory, 1991*) for evidence of its relationship to other measures and its potential to document patterns of movement with diagnostic utility. Results of multidimensional scaling with the data produced solutions for variables and patients in three-dimensional space. The variables solution demonstrated a clear relation of the MPI to the traditional dichotomy of excessive or reduced motility associated with movement disorder. The patient solution distinguished between two diagnostic groups, patients with personality disorders and those with schizophrenia spectrum disorders. Results are discussed as they inform further research with the MPI, and the need for movement indicators used in dance/movement therapy to be thoroughly and simultaneously examined due to their coexistence in complex patterns. Thus the scale was validated keeping in mind the psychological and clinical aspects with relation to dance movement therapy.

Morlinghaus & Fuchs (2007), investigated the specific effects of a dance intervention on the decrease of depression and the increase of vitality and positive affect in 31 psychiatric patients with main or additional diagnosis of depression. Patients participated in one of three conditions: a dance group performing a traditional upbeat circle dance, a group that listened just to the music of the dance (music only), and a group that moved on a home trainer bike (ergometer) up to the same level of arousal as the dance group (movement only). While all three conditions alleviated or stabilized the condition of the patients, results suggest that patients in the dance group profited most from the intervention. They showed significantly less depression than participants in the music group (p<.001) and in the ergometer group (p<.05), and more vitality (p<.05) than participants in the music group on post-test self-report scales immediately after the intervention. Stimulating circle dances can thus have a positive effect on patients with depression and may be recommended for use in dance/movement therapy and other complementary therapies.
Grönlund et al. (2006), in her research with attention deficit hyperactive disorder worked on a pilot study concerning a short-term dance/movement therapy (DMT) for two young boys with symptoms related to Attention Deficit Hyperactivity Disorder (ADHD). The aim was to investigate the effect and value of DMT as an alternative treatment and to describe the process. The DMT lasted ten sessions and took place once a week during three months. In a case study multiple data sources were used to triangulate the data and describe the DMT process. The DMT has promoted a positive change to a certain extent. Two hypotheses, which will be tested in a forthcoming study, are generated from this study.

DMT provided in paired groups for a minimum of ten weeks will (1) improve the motor function and (2) reduce the behavioral and emotional symptoms of boys aged 5-7 diagnosed with ADHD.

Payne (2006), in her book "Dance Movement Therapy Theory, Research and Practice" echoes the increased world-wide interest in dance movement therapy and makes a strong contribution to the emerging awareness of the nature of embodiment in psychotherapy. Recent research is incorporated, along with developments in theory and practice, to provide a comprehensive overview of this fast-growing field.

Helen Payne brings together contributions from experts in the field to offer the reader a valuable insight into the theory and practice of dance movement therapy. The contributions reflect the breadth of developing approaches, covering subjects including: dance movement therapy with people with dementia; group work with people with enduring mental health difficulties transcultural competence in dance movement therapy; Freudian thought applied to authentic movement; embodiment in dance movement therapy training and practice; personal development through dance movement therapy.

According to her Dance Movement Therapy will be a valuable resource for anyone who wishes to learn more about the therapeutic use of creative movement and dance. It will be welcomed by students and practitioners in
the arts therapies, psychotherapy, counseling and other health and social care professions.

Krantz (2004) presents a model of treating women with eating disorders through dance/movement therapy based on the methods of Blanche Evan. Evan's theoretical viewpoint and methods of treatment are described with specific applications to working with women with eating disorders. Finally, a summary of an individual dance therapy treatment of a 24 year old bulimic woman is presented, illustrating the potential of this approach to promote therapeutic change. The symptoms of eating disorders serve to disconnect affect from the body, particularly as sexuality, trauma, and cultural influences contribute to conflicts in the woman's developmental struggle toward self-identity. Reconnecting the body with feeling allows the client to experience affect and express her inner world, to recognize meaning in her behavior and relationships, and to develop healthy psychophysical unity, with the help of dance movement therapy.

Mills & Janet (2001), in mindfulness of movement as a coping strategy in multiple sclerosis, investigated the effectiveness of a short course of mindfulness of movements to help with the symptoms and manage the same. The study was carried on eight people (mean age 48.6 years) with multiple sclerosis. Program was compared to a control group who were asked to continue with their current cure. Each participant were given 1to1 session. They were also provided with video tape aids. Each participant was assessed on a test of balance; pre and post intervention and three follow up sessions. All participants completed rating of change of 22 symptoms relevant to multiple sclerosis. A close relative or a friend was asked to observe the degree of change. Improvement was observed. The control group showed no signs of improvement, but deteriorated more. Thus, training in mindfulness of movement appeared to result in improved symptom management for this group of people with multiple sclerosis.

The clinical symptoms associated with these disorders such as schizophrenia, PSTD, ADHD, other mental disorders, eating disorders, multiple sclerosis
were found to be reduced due to DMT. The critical review of these studies does reveal that most of the studies are from scientific dependent variables, i.e. most of them concluded on the basis of observation.

Though the study carried out by Xia & Grant (2009), had started with a relatively good number of subjects (N=45) but there was a significant drop out (30%) at the end of the study which is very detrimental to reach any conclusion. However a larger randomized trial measuring outcomes such as relapse, admission to hospital, quality of life, leaving the study early, cost of care and satisfaction with treatment would help clarify whether dance therapy is an effective treatment for schizophrenia; especially for negative symptoms that don't respond so well to medication and talking therapies. Similar small sample was evident in the work of Cruz (2009) and Mills & Janet (2000) where the sample size was as small as 2 children with ADHD and 8 children with multiple sclerosis.

Although these studies and their symptoms are not directly related to our purpose of study and their symptoms but the reduction of the clinical symptoms does reveal that dance therapy can also try to relief the related problems of autism, which are sometimes related to the problem behaviors associated with other disorders as well. Thus it can be assumed that the problems related to autism can be healed by DMT and thus help the children with autism reduce problem behavior and thus increase communication and socialization not only verbally but also nonverbally with the improvement of body language and expression.

DANCE THERAPY AND ITS EFFECT ON AUTISM:

Recent studies have expressed that dance movement therapy has acted as a mode of non-verbal expression for those suffering from autism or other developmental disorders. Some studies related to autism are as follows.

Functioning” found that the increasing number of able and neurologically challenged infants and toddlers attending full-time day care programs decreases the opportunity for dyadic relationships. The reflective aspect of dyadic relationships provides the blueprint for attachment, security, and relationship building. Current literature proposes that dormant mirror neurons may impede basic social functioning, including empathy.

A concern entitled rainbow dance comprising of a clinical group working with the subjects affected with autism and severe deafness encourages through the repetition of integrated gesture, vibration tones and movement, the experience of collective harmony, self esteem, and self regulation. Rainbowdance is a developmentally specific, multi sensorial program created to reinforce or establish healthy attachment and attunement for children (socially and cognitively) aged 1 to five years. Through the use of music, gesture, natural movement and story, this intervention promotes the self esteem, social empathy, and self regulation necessary for mastery, healthy exploration, and competency Individual and collective trust emerges as the children are soothed and energized in the natural flow provided by rhythmic rituals and archetypal movement patterns. Encouraging the dynamic of resonance, each child experiences the balance between reception and expression in his relationships to peers, to his environment, and to himself.

Rainbowdance Intervention As It Applies to Mirror Neuron Functioning and Autism: To distinguish, neurologically and developmentally, the child with autism, they consider first, the normal range of development, with its full range of empathic perception. Infants maturing via experience and neural development have the capacity for joint attention, gesture symbolization, comprehension of separate mind, and implicit and explicit, recognition of the “other’. Autism phenomenologically includes: 1) lack of empathy, 2) deficits in social understanding, language, social cues, with impairment in pragmatic use of language, lack of eye contact, 3) self stimulating behaviors, including rocking and head banging, 4) difficulty with imitation or miming actions, 5)social isolation, 6)difficulty understanding symbolism or metaphor. Children with Autism experience the range of emotions: rage, fear, pleasure, sadness, but don't recognize it in others. The Mirror Neuron system is

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directly responsible for the development of Empathy, the direct internal understanding of another’s actions, intentions, and emotions. The capacity for Affect Resonance and Symbolism, such as language communication and metaphor, are also determined by this neural system. The mirror mechanism creates a bridge between individual brains for communication and connection on multiple levels. In a normal brain the neurons respond equally to performing actions and to observing others performing the same action. With emotional intention behind the action, it appears that there is stronger activity in the Mirror neuron firing. It appears that, in the case of Autism, the neurons respond when engaged in an action, but no when observing others performing the same action. “Mirror Neurons appear to be performing precisely the same functions that are disrupted in Autism”. Rainbowdance has three core theoretical components to its foundation: 1) Patterning, 2) Emotional Intention, and 3) Vibrational Rhythm. The sessions continued each day, five times a day, for thirty minutes at a time, teams of five people, would move the child’s limbs and head, in the rhythmic pattern of “crawling”. Their brains eventually held the pattern, and the children learned to crawl and, later, walk. It was observed that the group of children with autism and profound deafness, mirroring rhythmic and integrated sounds and movements, occurred to reciprocate a similar neurological process underway. “If the child's mirror neuron functions are dormant rather than lost, it may be possible to revive this ability”. Emotional Intention: in the work with children with profound cerebral palsy, I observed two young men, best friends, begin to uncurl their distorted and paralyzed hands when “dancing to music”, they were asked to reach to each other. This contributed to the understanding of the power of emotional intention behind an impossible action. Vibrational Rhythm: Rhythm is inherent in all life forms, so it is that which links us all, regardless of impairment, age and cultural or social differences. We detect a wider range of vibration by feeling, through skin, teeth, and bones, than by hearing. The Law of resonance states that anything that vibrates reacts sympathetically to its harmonic vibrations. Sympathetic vibration occurs when two objects have the same or resonant frequency. Greenspan determined the value of repetitive gestural intervention: He stated that the combination of repeating gestural and
orofacial communication until the cause effect dynamic emerges with engaging the child in circle of communication via mirroring, with persistent practice of such social exchange, could produce an enhancement of the mirror neuron system. Finally, the remarkable plasticity of the multi modal neural system implies the emergence of empathic and communicative deficits regardless of environmental (neglect) or biological (autism) etiology. Intensive clinical interventions such as those described by Greenspan may yield effective results.

The study emphasized that use of dance movement therapy does help in socialization and communication by increasing the sensitivity by developing the neurons and action of neurotransmitters within the body and thus developing encoding and decoding for better communication in their living standards. But the study is based mostly on utilizing various modes such as lecture, slides, film, interactive audience demonstrations which are mostly based on observation and the study is qualitative rather quantitative.

Torrance (2003) worked with autism. She tried to reduce anger and aggression which occurs out of frustration and lack of need gratification in an autistic individual and how to reduce this through dance movement therapy. In this process she tries to develop a therapeutic contract. This author examines the question: How can a therapeutic contract be created and maintained with clients who regularly display violent behavior? This question is one that is particularly relevant to dance/movement therapists given the physical sphere within which they operate. When a dance/movement therapist is working with autistic people, there is always the real possibility that anger will manifest itself in action. Just as angry verbal outbursts can be seen by the therapist as opportunities for change, for example, as in Gestalt therapy techniques (Patterson & Watkins, 1996), so the dance/movement therapist may be able to utilize physical anger in a constructive manner. The first line in the therapeutic contract is: "I am here." The therapist responds with "I am here too." Schmais (1985) writes that it is "Not until people actively participate in each other's symbolic statements that group cohesiveness takes root." In this group of students, the difficulty is in finding
a way to share symbolic statements safely. It is useful to turn to humanistic values. Rogers (1990) said that these values were facilitated in the group in movement terms Is by using strongly rhythmic, mid-tempo music, which creates a simple, rhythmic group cohesion. It can also be used for expressing the fighting elements (Bartenieff & Lewis, 1980), such as punching, slashing and kicking. At first the individuals were cautious about their movement while expressing their anger but after sometime they became free to move and create movement as McMahon (1992) commented that the fighting aspect was transformed into working aspect. According to (Laban 1980; Bion, 1961) says that within this work ethic, the fear of oneself and others starts to dissolve. As time passed, the movement evolved into students doing dances and turns in the center of the circle. Sometimes a student would do a move in the center of the circle, and then the rest of the circle would copy or match the movement, thus creating a reflecting team in movement. Friedman (1995) considers, how effective the reflecting team method can be in resolving disputes verbally, it is not surprising that it proved to be effective in the nonverbal domain.

The second line of the therapeutic contract is: "I want to be accepted for who I am." The therapist’s response is: "Be who you really want to be, I will accept you."

The third line of the therapeutic contract is: "I want to be heard and understood." The therapist’s response is: "I can hear you and you can hear me: let us create a language which is meaningful, safe and easily shared."

There are three reciprocal statements which are steps of a contract which could be made with any individual. In fact, these three steps are similar to simple social standards for meeting and starting a conversation. Initially, there is usually a movement cue for group members to introduce themselves to each other, such as eye contact, turning to face each other, etc. (I am here.) Then a reciprocation of some sort follows, perhaps the exchange of hellos. (I want to be accepted.) Then there begins the constantly journey
into the space in between, probably through verbal call and answer skills. (Creating a shared language)

Many young autistic people govern themselves and others with bizarre and idiosyncratic rules, but they are nothing compared to the all encompassing rules which society demands. To autistic people, those who fit into the social norm always seem to have the upper hand. Rather than become entrenched in separate worlds of rules, it is necessary to create spaces where rules, and the language that is used to describe them, can be explored. Clear voice, focus and grounding movements, perhaps incorporating a rhythmic aspect of the student’s own movement or varying tension flow rhythms can be useful. (Kestenberg, 1975). Touch of any sort is also a very powerful tool and needs to be used cautiously. It is helpful to bear in mind, even in those situations when physical restraint might be required, that touch can contain and nurture (Fischer & Chaiklin, 1993).

The fourth step in therapeutic contraction is to heal which aims at the concluding and driving line of the therapeutic contract is: “Let us work together with our presence, acceptance and shared language to promote healing.” The ongoing process of being together through movement communication, accepting individuals and creating a shared language made tangible differences in this group. With the passage of months, the likelihood of a violent outburst by individuals in the group diminished. This not only generalized to other activities in the day, but also gave staff opportunities to look at behaviors in different ways and to respond differently at times. Some group members would absent themselves from time to time, then return to the group. Observing video footage showed that by using methods such as turn taking, there was an ongoing rhythmic call and answer conversation taking place, which group members honored and utilized for self-expression.

Adler (2003), in her study entitled “From Autism to the Discipline of Authentic Movement” tried to develop communication in autism and bring them into the discipline of authentic movement. Forty years ago, autistic children were described as those beings that never had an experience of
relationship with another human being. In such a child there is no hint of an internalized other, a mother, an inner witness. There is no internalized presence. In the process of authentic movement the connection is about a call, a call within relationship, because of relationship, toward the unknown, toward a developing inner witness. The development of an inner witness is an excellent way of describing the development of consciousness. With the children and within the discipline of Authentic Movement, there is much learning about distinguishing between when we are here and when we are not here. In times of grace there is a shared presence and in these moments, with the children and in the Authentic Movement studio, ritual occurs. When this happens, an immediate sense of inherent order becomes apparent within a felt sense of a sacred space.

In order to understand the needs of these children, Adler felt to concentrate into the very stuff of each gesture by actually entering the precious detail of their bodies moving. In doing so, he had the privilege of learning their silent language. He found them in a merged state with their own movement, because of an absence of an inner witness, fervently focused on their idiosyncratic movement patterns. These children taught him about movement patterns.

The center of the work in the discipline of Authentic Movement is about relationship between a mover and an outer witness, between the moving self and an inner witness, between the self and the collective, the self and the Divine.

Beginning with a mover in dyads and then triads, the evolution of the work continues as the mover becomes a moving witness, the moving witness becomes a silent witness and the silent witness becomes a speaking witness. In the next portion of the book, beginning with small groups, the Collective Body is explored. It is here in the development of the practice that individual movers and witnesses have the opportunity to experience themselves as part of a circle of witnesses and a body of movers within it.
Cornman, Douglas (1997), Dance/Movement Therapy (D/MT) has been a successful intervention in the treatment of autistic children. Depending on the needs of the child, intervention may be individual (therapist and child) or include members of the child's family. In the past, most family D/MT intervention has focused on the mother/child dyad since this has traditionally been the primary care giving relationship. In an effort to document the importance of the paternal influence on the development of an autistic child, this study examined the relationship between a father and his autistic son and the effects that D/MT had on that relationship. The following three hypotheses were proposed: 1) D/MT would promote positive change in the relationship by expanding both the father's and son's movement repertoire, thus providing options for more successful interaction; 2) the son's level of functioning would increase in correlation with this positive change; and 3) the father's stress level concerning both his relationship to his child and his own parenting style would decrease based upon his gaining an understanding of their relationship on a movement level. The subjects participating in this study were a thirty-seven-year-old father, who is diagnosed with degenerative Cerebral Palsy, and his three-year-old autistic son. The dyad received six weekly D/MT sessions. They were rated pre- and post- D/MT intervention. The father's relationship to his son, the son's relationship to his father, and the father/son relationship was rated on the Nonverbal Assessment for Family Systems scale (Dulicai, 1977), the child's relationship to his father was rated on the Relationship to an Adult, Communication, Drive for Mastery, and Body Movement scales of the Behavioral Rating Instrument for Autistic and Other Atypical Children (Ruttenberg, Kalish, Wenar, & Wolf, 1977 & Ruttenberg, Wolf-Schein, & Wenar, 1991) and the father's stress levels were rated by the Parenting Stress Index (Abidin, 1986). Results at post-test supported the study's initial hypotheses. Both the father and son displayed a broader movement repertoire which increased their interactional options. The son demonstrated increased skill in each of the four scales of the BRIAAC. Finally, the father's overall level of stress concerning his son and his parenting style decreased. The positive results of this study suggest that fathers are important participants in the treatment of autistic children. They also suggest that
using the design of this study with a larger sample size and research concerning the father/child relationship in general is warranted.

It is evident from the above survey that there are very little reported research work on DMT on autism. Moreover, most of the above reported studies are based on the researchers' own observation and finally almost all of them were based on western population. So, more scientific studies are needed in Indian population to prove the effect of DMT on different characteristics of autism.

Dance movement therapy does play an important role on general population dealing with clients of sexual abuse, violence and stress, archaic ego, intergenerational groups, emotional difficulties, mentally and physically tortured patients, subjects suffering from cancer. DMT acted as a healer in this entire research continuum and helped in reducing stress, acted as a mode of non-verbal communication for expressing hidden needs for all the individuals suffering from various kinds of emotional, psychological and physical problems. DMT helped in increasing the energy level of older adults through the scientific techniques of dance. It helped in reducing the anxiety of the patients suffering from cancer and helped in adapting in a better way with the present physical and psychological condition and developed the ability to cope with stress.

Like Jung's descriptions of Anima and Animus theory, LMA is a binary model which relies on qualitatively oppositional descriptions to indicate functional and expressive aspects of the lived body, lived world phenomenon. Both the concepts of this study are mostly based on theoretical approach where the concept of Jung is expressed in LMA through various movements' idioms to express various needs of a living body.