Chapter-I

Introduction
INTRODUCTION

Dance can be conceived as a nonverbal expression of human emotions. From the very evolution of life movement has been the integral part of human existence be it psychological, physical and social. Postures, gestures, motives have always intrigued human civilization in determining its culture, cast, creed and religion. Human beings expressed different emotional and psychological behaviours through various gestures and postures, in course of time these different motives combined together in long movement phrases which later on can be termed as "Dance". In a nutshell we can also say that dance is a symbolic representation of movement behaviours which is attributed with emotional and psychological content.

As time moved on dance became a part and parcel of human civilization. They used to manifest joy, anger, passion, rituals through dance. Dance became such an important part in the human society that each ethnic groups used to manifest their religion, culture behaviours, through specific movement phrases, or we can say a specific type of dance which denotes their particular cultures and where the group or the society belongs from. Like in Europe dance started in the courts of the royals, where they have learnt to move in splendour, glamour and high esteem. So the movement started very up above the torso. In one word very elevated. While in the east specially movement has a very strong relationship with the ground, that is earth. It is found that the dancers demonstrated movement patterns very grounded and low in levels. The European forms which exhibited elevation are classical Ballet, Flamenco, Baroque Dance. Whereas in the east the dance forms which are grounded are Kathak, Bharatnatyam, Odissi, Kuchipudi, Manipuri, Mohiniattam, Kathakali etc. African dance also exhibits grounded ness and close relationship with the earth.

The concept of therapy through dance hails from hundreds of years of legacy. It started from the African voodoo cult where it is believed that the subject, who is possessed by spirits or various illnesses, is thought that can
be cured by exercising voodoo cult through chants and dance. Same kind of exercise is performed in a ritualistic format for healing and therapeutic uses known as “shaman” which has its roots in Korea.

In India various styles of ritualistic dance are performed for therapeutic uses and healing purposes are the “Tantric rituals” and the dances of “Chaat puja”.

Presently as world has become scientifically advanced, rationally developed so the therapy where dance is related has taken entirely a different format, which is sophisticatedly termed as “Dance Movement Therapy”. It has a multifaceted utilization in the human society. It is used for releasing stress, trauma, helping pregnant women, and mentally challenged people, used for helping depressed patients and for fun. Dance therapy is also used to give special recognition to the people who are far away from the acceptance of the human society. It gives them a new way of addressing themselves, developing acceptability among themselves and with the society, and developing self esteem which leads to better living and coexistence.

It has been always found that autism is one such disability where the individuals with autism finds it difficult to communicate and socialize with the society. This happens due to their inability to express their needs and reciprocate to the demands of the society with proper gestures and postures. Here lies the importance of Dance movement therapy as this particular therapy aims at improving body attitude which in turn increases the movement vocabulary of the individual for better communication with the society.

Autism does not follow typical patterns of child development. In some children the problem can be prevalent from birth but in others it can be only detected when the child attains age of 2 and above.

Autism is defined by certain set of behaviours that can range from the very mild to severe.
The following symptoms can be denoted as some implications of autism.

- Does not babble, point, or make meaningful gestures by 1 year of age.
- Does not speak one word by 16 months.
- Does not combine two words by 2 years.
- Does not respond to name.
- Loses language or social skills.

Other indicators are:

- Poor eye contact.
- Does not seem to know how to play with toys.
- Excessively lines up toys or other objects.
- Does not smile.
- At times seems to be hearing impaired.

Thus there is a common myth with psychologists that the term autism can be divided into:

A - Alone
U - Unusual play
T - Twiddle and Twirl with objects
I - Isolated
S - Socialization problem
M - Mute

**WHAT IS AUTISM?**

Autism is a severe type of developmental disorder. It is found that out of 1000 children only 2 to 6 children are diagnosed as autistic. Usually autism falls under the category of pervasive developmental disorders. Pervasive
developmental disorders are characterized by severe and pervasive impairment in several areas of development: reciprocal social interaction skills, communication skills, or presence of stereotyped behaviour, interests, and activities.

The autism spectrum disorders are more common in the pediatric population than are some better-known disorders such as diabetics, spinal bifida or Down’s syndrome. Prevalent studies have been done in UK, Europe and Asia regarding the issue. Prevalence estimate range from 2 to 6 per 1000 children. The essential features of autistic disorder are the presence of markedly abnormal or impaired development in social interaction and communication and a markedly restricted repertoire of activity and interests.

HISTORICAL BACKGROUND OF AUTISM:

The word autism has been derived from ‘auto’ and ‘ism’, which means ‘to be with oneself’. In 1906, Eugene Bleuler, a Swiss psychiatrist used autism as an adjective. Initially childhood schizophrenia was used to refer to this condition. Later, after several researches Leo Kanner (1943) used autism as a noun and differentiated autism from schizophrenia. In 1943, Leo Kanner identified 11 students who had ‘disturbance in affective contact’. The newly found group of characteristics in 11 students was named as Kanner Syndrome. Lastly, Kanner replaced problems with early infantile autism instead of Kanner syndrome. Kanner (1943) carefully and systematically observed some features in those 11 children. Furthermore, he noted that all these features made the disorder different from all other previously described schizophrenia or child psychosis. During the next decade United States workers and Europe’s workers observed children with similar features (Despert, 1951; Van Krevelen, 1952; Bosch, 1953; Bakwin, 1954). The features are:

An inability to develop relationships with people, delay in speech acquisition, the non-communicative use of speech after it develops, delayed echolalia, pronominal reversal, repetitive and stereotyped play activities, an obsessive
Insistence on maintenance of sameness, a lack of imagination, a good memory, and normal physical appearance.

ETIOLOGY OF AUTISM:

Kanner (1943) suggested in his description about autism that from early infancy symptoms were present. So it can be said that autism is the result of an inborn defect.

Although several studies have been carried out to find out the cause of autism but none of them proved worthy.

Kanner’s description gives rise to the role of genetic or biochemical factors behind the cause of autism. Many researches have ruled out the contribution of biochemical defect.

Some experts have claimed that certain genetic factors might be responsible for the development of autism. On the other hand, Paul’s (1987) observation confirmed that no specific genetic defect has been found out. Spence et al. (1985) reported only one genetic linkage study found in favour of autism and some statistics indicate that in families with already one autistic child, there is a great possibility of having another child susceptible to the development of the disorder.

MMR vaccine for measles, rubella and mumps has also been claimed as a cause of autism by some researchers.

Epilepsy is common in autistic adolescents. In the age range of eleven to fourteen years twenty percent to thirty percent of autistic adolescents develop seizures (Deykin and Mohon, 1979). This connection indicates towards organic defect. Fragile X syndrome is found in five percent to ten percent of autistic males (Schopler et al, 1993).

In the past, this was hypothesized that parents were most often blamed for developing autistic disorders in their wards. On the basis of ‘refrigerator mother’ theory, cold reactions of their mothers cause emotional traumas in
the child leading to autism. However, today this factor has been contradicted by the current researches.

Research results also reveal that there are environmental, metabolic and immunological factors involved in acquiring autism. Dietary interventions suggest that food allergies cause symptoms of autism. Presence or absence of some specific vitamins and minerals cause autism. Casein free diet (principle protein in milk) and Gluten free diet (wheat, oat, rye, and barley) are helpful in reducing autistic condition. Research over the last twenty years has also suggested a relationship between maternal diet and the birth of an affected infant.

But now, autistic condition is interpreted in the dimension of sensory dysfunction. Children with autism are hypo or hyper sensitive to some stimuli because their brain is unable to balance senses appropriately and this causes problem in them. Till date no study has confirmed a sole reason of becoming autistic. Hence, it is expected from the ongoing research that someday people will able to know the actual reason of autism.

But on the other hand Bauman and Kemper (1995) suggested that the abnormalities in autism can be attributed to two reasons.

- Dysfunctions in neural structures of the brain.
- Abnormal biochemistry of the brain.

Baumann and Kemper (1995, 2005) examined the post mortem brains of several autistic individuals and have located two areas in the limbic system that are underdeveloped- the amygdala and the hippocampus. These two areas responsible for emotions, aggressions, sensory input and learning. Researchers also found a deficiency of Perkinge cells in the cerebellum, vermal lobe, VI and VII, which are significantly smaller than normal in autistic individuals. These two areas are considered responsible for attention.
TRIAD OF IMPAIRMENT IN AUTISM:

Autistic children are characterized by a triad of impairments in social and emotional understanding, communication and flexibility of thought and behaviour (Jordan, 1999; Wing, 1996), each of which can occur with differing severity (Lord & Risi, 2001). According to Jordan et al. (2001), ASD’s can be considered as representing a conjunction of extreme functioning on three dimension of development, but the categorical nature of the system of medical classification misleadingly suggests an absolute distinction between those with an ASD and those with other developmental disorders.

The children with autism usually burrs socialization and they prefer to stay alone in their own world so they have least interest in socializing in a situation or an environment.

THE SOCIAL SYMPTOMS IN AUTISM:

The impairment in reciprocal social interaction is gross and sustained. There may be marked impairment in the use of multiple non-verbal behaviours (e.g. eye to eye gaze, facial expressions, body postures and gestures) to regulate social interaction and communication. (Criteria A1a) DSM-IV. Several candidates have shown deficits in joint attention skills (Mundy et al., 2003), which refer to ability to share a common focus of attention with another person (e.g. looking in the direction that another person is looking and following a pointing posture. Deficits in joint attention are central in the characterization of toddlers with autism (Lord, 1995), play a crucial role in subsequent development of language and social communication (Mundy et al., 2001). Another central deficit in autism involves – imitation (Rogers 1999) a key component of social learning that is also thought to be an important mechanism facilitating inter subjectivity (Rogers & Bennetto 2000).

Psychological processes are hypothesized to be causatively linked to autism, than levels of disruption in the given skill should hold a quantified and
proportional relationship to levels of social competence in real life. Few studies have tried to explain this predictive relationship (Dawson et al., 2002). Typical research designs involve simple comparison between group with autism and control group on the basis of measure of interest. Results show that social disabilities in autism are both extremely variable and severe. Other studies show that individuals with autism may achieve higher than expected result on the given task, but are found to be achieving these results using processes that contrast markedly from their peers. A small number of functional neuro imaging studies are suggesting that higher functioning adolescents with autism may achieve less impaired levels of face recognition skills using compensatory strategies rather than normative neurobehavioural mechanisms. (Pierce et al., 2000).

Many children with autism have tremendous difficulty in give and take of everyday human interactions. In first few months of life, many do not interact and they avoid eye contact. They seem indifferent to other people and often seem to prefer being alone. They may resist attention or passively except hugs and cuddling. Later they seldom seek comfort and respond to parents, displays anger or affection in a typical way. Research suggests that although children with autism are attached to their parents, their expressions of this attachment are unusual and difficult to read.

Social impairment in autism is highly heterogeneous and it varies with age, with IQ, with social circumstance, and with Interactive partner. Kanner (1943) suggested that affected children were happiest when left alone to engage in solitary activities. He regarded social aloofness as one of the cardinal features of the disorder and emphasized its importance in naming the disorder. Social deficits has been repeatedly described in autistic individuals (Rimland 1964; Wing 1976; Rutter 1978). Diagnostic assessment instruments for autism typically emphasize social factors (Parks, 1983).

Breaking the pattern of isolation and engaging the autistic individual in external rather than internal activities prove more beneficial. Here come the
importance of using lots of physical activities which always tries to engage 
the individual with one or other tasks associated with his own body, which 
needs lots of body awareness and body coordination. This in the long run 
also develops the insight of the Individual. Thut (1984) further suggested 
that problems with social relations are also more amenable to initial therapy 
than are other underlying disorders.

Many people with autism have deficits in social cognition, the ability to think 
in ways necessary for appropriate social interaction. For example the theory 
of mind describes the difficulty autistic individuals have in assuming the 
perspective of another person.

Psychological characterization of core deficits in individuals with autism plays 
an important role in search for factors involved in the etiology and 
pathogenesis of the spectrum of conditions defined by early onset of social 
disabilities. Early psychological research by Scheerer et al. (1945), and 
Hermelin and Conner (1970), has focused on disruptions of the symbolic 
and conceptual development. The research that followed bifurcated into the 
study of specific social cognitive mechanisms (with assumptions that the 
social disability is only an instance of more generalized learning impairment. 
(Klin et al., 2003).

In social cognitive domain the most influential framework emerging in the 
1990s was the theory of mind (TOM) hypothesis, which defines social 
dysfunction in autism as the result of disruptions in process leading to the 
acquisition of the capacity for conceiving of other people's and one's own 
mind (Baron and Cohan, 1995). Individuals with autism have difficulty in 
making attributions of mental states to others and to themselves, which 
results in an inability to construct a social world that is guided by intentions, 
desires and beliefs (Baron et al., 1999). Two influential frameworks have 
guided thinking about the learning profiles of individuals with autism. One of 
them focuses on tendency to process all stimuli in fragmented fashion, 
focusing on details (localized processing) rather than integrated and
meaningful wholes (configured processing), Frith (1984). This framework is termed as "Weak Central Coherence (WCC)" hypothesis.

Happe & Frith (2006) delineated an internal social world that is disjointed, lacking overall coherence which defines social context.

Another framework focuses on self-organizing elements required in general learning which guide attention, abstract rules, and generate goals that are maintained during task execution (Pennington and Ozonoff, 1966).

But the WCC hypothesis was questioned by some conflictual experimental findings by (Mottron et al., 1999, 2000, 2003).

The TOM hypothesis was criticized in terms of lack of specificity in autism, the possible social confounds involved in task administration, the overall encompassing range of neuropsychological phenomenon involved, and its unproven relationship to degree of social disability (Pennington and Ozonoff 1966).

IMPAIRMENT IN COMMUNICATION:

Deficit in Communication is another problem of autism. Children with autism are usually found to have problems in learning, engage in give and take of daily human existence, lack of imitation (Rogers 1999). The impairment in communication is marked and sustained and affects both verbal and non-verbal skills. They may delay in development of spoken language. In individuals who speak there may be marked impairment in ability to initiate or sustain conversation with others, or a stereotyped and repetitive use of language or idiosyncratic language.

According to Vygotsky (1978), language is the key component of cognitive development. Generally, normal children start speaking in second year of life. But before that they express a variety of communicative behaviours like variety of cooing for indicating pleasure and displeasure at end of first year.
At nine to twelve years of age the child begins to understand words. In a familiar context spontaneous action can be elicited from the child (e.g. hand flapping etc).

Conversational use of language begins around twelve months of age when, the child usually says first recognizable words (Paul, 1987). Around this time, child responds to the words outside the routine game (Huttenlocher, 1974; Sachs & Treswell, 1976).

During 12-18 months there is rapid increase in both receptive and expressive vocabulary. By that time children also learn to use rituals such as bye- bye etc (Bloom & Lahey, 1978).

In middle of second year their vocabulary size is fifty words and they can combine two words also. In two to five years they can use grammar. Variety of problem hinders language acquisition in children with autism. They have serious impairment in social imitation. So, they don’t wave hand to follow rituals. They are much delayed in appropriate use of miniature object, because, they lack imaginative or make belief play. As per Vygotsky’s theory, make belief play enhances a diverse array of cognitive and social development. According to him in this phase private speech is also very rich. On the basis of his theory it can be assumed that lack of communication hinder their social and cognitive development as well. Not only speech, but the pattern of babble are also impaired or abnormal (Ricks, 1975; Bartak et al., 1975).

One of the salient features of autistic speech is echolalia. Two types of echolalia are seen in them immediate and delayed echolalia. Bloom (1970) said some normal children also do echolalia but in their case it is just a part of language development. On contrary autistic children do echolalia because of their poor understandability so that they fail to respond appropriately.

Pronominal reversal is another characteristic of autistic speech. As they have problem in taking another person’s perspective they reverse pronoun (e.g.
using of you instead of I). This type of peculiarity is frequently associated with autistic syndrome.

Fifty percent of the autistic individuals are non-verbal or mute. Unlike other language disorder or impairment, the autistic individuals do not use non-verbal modes of conveying message. However, if they acquire speech, then acquisition of language, syntax and the conversational use of language is not adequate in the children with autism.

According to Kanner (1943), the features describing impairment of communication in autism can be outlined as:

- Mutism—which is rarely interrupted by the production of sentence, usually in situations which the child perceives to be highly stressful.

- Literalness, including an inability to accept synonyms or differing connotations of the same utterance.

- Echoic repetition of whole phrases.

- Utterance of sentences that appear to have no meaningful connection to the situation in which they are said due to the child’s idiosyncratic reference system. These utterances can often be understood only when a listener can trace them to their original context.

- Pronominal reversals, primarily involving the child’s reference to him or herself as “you”.

- Failure to use speech, when present for communicative purposes.

Cox (1975), report a lack of preverbal pointing, showing or turn taking in autistic children. In studies of young autistics Curcio (1978), showed that although requests are produced with gestures, these children did not show gestures used to call a listeners attention to self or object.
Ricks and Wing (1975) points out those gestures, facial expressions, head nods, smiles and other communicative means which normally helps in communication are absent from conversation of autistic children.

**IMPORTANCE OF FLEXIBILITY AND IS IMPORTANCE IN AUTISM:**

The term “Flexibility” is the key component which plays a great role in our daily human life and activities. Flexibility in the context of physiology means a joint’s ability to move through a full range of motions (Encyclopedia, 2003). Flexibility training usually helps balance muscle groups that are used in our daily life activities or are sometimes misused due to bad body postures and lack of understanding of the body. Usually a flexible person avoids injuries, and there is a marked improvement in physical performance. Moreover flexibility training leads to improved posture, low back pain. Studies in the field of physiology has already proved that regular flexibility training improves the blood flow and nutrients in tissues, leads to improved muscle coordination, which is highly necessary for a person leading a normal life as well in severe developmental disabilities like autism. Usually the term flexibility has a bigger range of perspective. Lack of flexibility to thought and behaviour in autism leads to problems like preference of sameness (Kanner, 1943), lack of spontaneity in movement (Park, 1922), lack of body attitude, body awareness, muscular coordination.

Behavioural training through movement analysis teaches the person with autism to be flexible to situations or needs along with development in muscular flexibility for better communication and socialization in the long run.

Mills (2005), suggested the importance of flexibility training. According to him for any human being, flexibility training increases or maintain an adequate range of motion in the body’s many joints (shoulders, back of the legs (hamstrings), hips, back and spine, etc.) so as to better perform tasks of daily life, including recreational activities, with comfort and safety. To maximize benefit, a stretching program should be performed at least 4 or 5 days a week, preferably every day.
Dance is considered as one such method of flexibility training, besides other techniques such as yoga, tai-chi, Pilates etc.

**HOW DANCE HELPS TO IMPROVE FLEXIBILITY IN AUTISM BOTH PHYSIOLOGICALLY AND PSYCHOLOGICALLY:**

Researches in the field of physiological aspect has shown that stimulation of neurons in the motor cortex resulted in body movements in a predictable way. The proportion of excited neurons in the motor cortex was far greater than the proportion of motor neurons in the spinal cord directly involved with the movement. Thus it can be concluded that the role of motor cortex is concentrated not in magnitude of the movement but in the degree of motor control necessary for movement to occur. The capability for integrative motor control arises from the interaction of the sensory and motor systems. It is postulated that if high-speed motor acts can be routinely carried out that extends "motor programmes" it increases the movement pattern in the body rather than strings of single motor acts. Dance is a combination of lots of motor acts and lots of body, movement, expression coordination which is supposed that if continued extensively may help the children with autism, where autism is assumed to be caused by incompletion of the full processing circuit by the sensory impulses and thus act as a hindrance to perception. *(Leventhal et al., 1969)* Thus it is expected that use of Dance Movement Therapy may help in exciting neurons and thus the neurotransmitters become active in passing organized, modulated sensory information to all the body and brain systems and structure needed, to activate communication and in the long run it will improve socialization as well. *(Note of Hong Kong Academy of Performing Arts, pg-156, 2001).*

Dance acts as a mode of non-verbal expression and communication. Research done by Winters *(2008)*, suggested the importance of postures in expressing emotions and emotion change. Dance is such a language which helps to correct body posture, body attitude, body coordination and body awareness which ultimately develops communication and socialization.
In his study Winters, questions whether our emotions change depending on whether we watch a person model postures or, rather, embody the postures ourselves. Since Darwin (1872), researchers have studied how people express emotion through various nonverbal channels, such as facial expression, voice, and body posture.

NEUROBIOLOGY AND MIRROR NEURONS:

The recent discovery of mirror neurons sheds light on the neurological underpinnings of embodiment. Mirror neurons were originally discovered by Giacomo Rizzolatti and his colleagues at the University of Parma, in Italy, while studying monkeys' motor activities. Those special neurons respond to audio, visual, and somatosensory stimuli. They fire when the monkey performs an action as well as when the monkey observes another performing the same action (Keysers et al., 2003; Rizzolatti, et al., 2001). Similar results have been found in human subjects (Gallese, 2005; Iacoboni, 2008). Certain parts of the brain have been found to help us identify individuals when facial cues are not available (Urgesi, et al., 2007). The extra striate body area, in the lateral occipital cortex in particular, appears to become active when we view the body and its parts to enable us to interpret the actions of others without seeing the entire body or face. This process is implicit, as suggested by Meeren et al. (2005).

The implications of this research are profound. The discovery of mirror neurons has provided us with a scientific explanation of how humans perceive actions, how action perception is linked to kinesthetic modes of communication, kinesthetic empathy first and then empathy, as a mental state (Bra ten, 2007). The research on mirror neurons is particularly pertinent to the work of dance/movement therapists in that it provides scientific support for the mirroring technique used in dance/movement therapy practice (Berrol, 2006).

Penfield (2006), used psychoanalytic framework in order to understand the relationship between patient, therapist and the process taking place between them. Bloom (2008), provides us with a synthesis of different but not
separate modalities: the body’s movement from a Laban perspective and the mind’s thinking from a psychoanalytic frame are blended in both theory and practice. Authentic Movement, which perhaps comes closest to paralleling the “free associative” process, which Freud advocated in psychoanalysis, (Castle, 2001; Penfield, 2003) might be the only other movement-based discipline integrating theory with practice.

TECHNIQUES AND INTERVENTIONS USED TO REDUCE PROBLEMS RELATED TO AUTISM:

There are number of interventions or techniques which are used to help these children with autism.


APPLIED BEHAVIOUR ANALYSIS:

Applied behaviour analysis (ABA) is recognized as an essential and scientifically valid method of educating and managing children and youth with autism spectrum disorders (Simpson, 2001). ABA, or Applied Behaviour Analysis, is a commonly used method for treating children who have autism. And most experts agree that this method is one of the most encompassing and useful treatments for helping the development of autistic children.

While Applied Behaviour Analysis may be growing in popularity, it is by no means new. Research began back in the 60’s, however it wasn’t until the early 1980’s that the ABA method became one of the most popular treatment methods. ABA also has a reputation for being a very comprehensive program, and offers behavioural teachings across a wide variety of situations.
Applied Behaviour Analysis claims to have a very pro-active style of teaching. For instance, rather than just identifying poor behaviour, and instilling a sense of wrongdo ing in the child, the program identifies the actions that should be taken, instead of simply identifying what actions to avoid. This is just one of the reasons that ABA such a universally accepted teaching instrument.

The ABA method can also be used with a wide range of age groups. And while early Intervention ABA has been the most studied with significant research into the effectiveness of the program, ABA for other age groups also offers ample material and endorsement.

Applied Behaviour Analysis is a very complicated and difficult treatment method and by no means is it a cure-all for autism. ABA requires significant work and time by the child and family. But, this hard work can really pay off in the form of very positive, visible results.

Again, ABA autism treatment is not a magic or quick fix to a complicated condition like autism. It will take hard work and patience on the part of all parties involved. But this hard work will likely yield some very positive results, which as we all know is an immeasurable benefit to the children who suffer from autism.

ABA is the oldest and most fully researched of any autism treatment. It is sometimes considered problematic because it is so intensive (up to 40 hours a week) and can be so expensive. Some parents feel that ABA can produce "robotic" behaviours, though the experts at the Lovaas Institute (the developer and premiere provider of ABA) claim that "robotic" behaviour is really the result of improper training.

The Lovaas Method of ABA starts with "discrete trials" therapy (sometimes referred to just as "discrete"). A discrete trial consists of a therapist asking a child for a particular behaviour (for example, "Johnny, please pick up the spoon"). If the child complies, he is given a "reinforcer" or reward in the form of a tiny food treat, a high five, or any other reward that means
something to the child. If the child does not comply, he does not receive the reward, and the trial is repeated.

**TEACCH METHOD:**

TEACCH is an evidence-based service, training, and research program for individuals of all ages and skill levels with autism spectrum disorders. Established in the early 1970s by Eric Schopler and colleagues, the TEACCH program has worked with thousands of individuals with autism spectrum disorders and their families. TEACCH provides clinical services such as diagnostic evaluations, parent training and parent support groups, social play and recreation groups, individual counselling for higher-functioning clients, and supported employment. In addition, TEACCH conducts training nationally and internationally and provides consultation for teachers, residential care providers, and other professionals from a variety of disciplines. Research activities include psychological, educational, and biomedical studies.

The administrative headquarters of the TEACCH program are in Chapel Hill, North Carolina, and there are nine regional TEACCH Centers around the state of North Carolina. Most clinical services from the TEACCH Centers are free to citizens of North Carolina.

Structured teaching via the TEACCH method was developed by Professor Eric Schopler and many of his colleagues at the University of North Carolina at Chapel Hill. The TEACCH method is not considered an actual therapy but rather a therapeutic tool to help autistic individuals understand their surroundings.

Autistic individuals often have difficulty with receptive and expressive language, sequential memory, and handling changes in their environment. The TEACCH method provides the individual with structure and organization. This method relies on five basic principles; a brief description of each is provided below.
PHYSICAL STRUCTURE:

Physical structure refers to the actual layout or surroundings of a person's environment, such as a classroom, home, or group home. The physical boundaries are clearly defined and usually include activities like: work, play, snack, music, and transitioning.

SCHEDULING:

A schedule or planner is set up which indicates what the person is supposed to do and when it is supposed to happen. The person's entire day, week, and possibly month are clearly shown to the person through words, photographs, drawings, or whatever medium is easiest for the person to comprehend.

WORK SYSTEM:

The work system tells the person what is expected of him/her during an activity, how much is supposed to be accomplished, and what happens after the activity is completed. The goal is to teach the person to work independently. The work system is also organized in such a way that the person has little or no difficulty figuring out what to do. For example, the activity or task should be performed from top to bottom and from left to right.

ROUTINE:

According to the TEACCH method, the most functional skill for autistic individuals is a routine which involves checking one's schedule and following the established work system. This routine can then be used throughout the person's lifetime and in multiple situations.

VISUAL STRUCTURE:

Visual structure refers to visually-based cues regarding organization, clarification, and instructions to assist the person in understanding what is expected of him/her. For example, a visual structure may involve using
coloured containers to assist the person in sorting coloured materials into various groups or displaying an example of a stamped envelope when the person is asked to place stamps on envelopes.

The TEACCH method is primarily used to assist the autistic individual in better understanding his/her environment. The techniques described above are not faded out over time; but rather, they are to be consistently used across a variety of environments (Edelson, 2008).

WHAT IS DISCRETE TRIALS?

It's important to note that the specific content of the discrete trials therapy is based on an evaluation of the individual child, his needs, and his abilities. So a child who is already capable of sorting shapes would not be asked to sort shapes indefinitely for rewards -- but would focus on different, more challenging social and/or behavioural tasks.

The very youngest children (under age three) receive a modified form of ABA which is much closer to play therapy than to discrete trials. As they master behaviours, well-trained therapists will start to take learners out the classroom or home setting and into more natural settings, where they can practice and adapt their new skills to the real world.

OPTION METHOD:

Founded by Barry Kauffmanm, 1976, a parent and a psychologist who claims to have "cured" his son of autism (has video documents). Parents of "selected" children are required to stay with the specialists at the institute at Sheffield, Massachusetts, and the Interventions are carried out round the clock. Only two children are treated at one time which perhaps justifies the prohibitive cost. The philosophy behind treatment is that we have to accept the child with his/her autism, rather than try to change the child to suit us, second the child is always given options or choices so that some amount control is given to the child rather than being controlled. Not all children with autism are eligible for the programme. The efficacy of option method has not
been open to research, so the educational community at large has not accepted the methodology.

**HIGASHI METHOD:**

Founded by **Kiyokitahara, 1984** of Japan, the school at Boston is perhaps the only segregated residential school in the country. Higashi in Japanese means daily living, the philosophy is based on the fact that autism is a motor disorder, hence intense physical exercises are carried out through out the day, and classroom activities are structured in between. Instead of individualized educational programming, the group is responsible for modifying the person's behaviour. Longitudinal studies have not been conducted on the Higashi method.

**LOVAAS METHOD:**

One of the earlier professionals to work with children with autism was **Lovaas Ivar (1966)**, who because of his behaviourist orientation, applied the principles of operant conditioning to teach new skills.

In **1966 Lovaas and his associates** conducted studies to teach verbal skills to children with autism through imitation. They met with some success. Children with autism learnt new words and socially appropriate responses. This method gained approval in the field of education as well and came to be known as "Lovaas Method".

The underlying philosophy is that autism is a manifestation of semantic conceptual deficit. The main draw back in this method was that the children did not learn to generalize the language. Some practitioners feel that the severe behaviour modification plan is not autism friendly.

**VISUALLY MEDIATED COMMUNICATION:**

Visually mediated communication was developed by **Hogdon (1995)** a speech pathologist. Her book "Visual Strategies for Improving Communication" (1996) is a must read manual. The intervention shifts from expressive
language to enhancing the receptive language of the child. The tools thus developed help the child in understanding the every day demands which ultimately would lead to effective communication. The method works with children diagnosed as Asperger’s, ADHD, LD and Traumatic Brain Injury (TBI).

SENSORY INTEGRATION THERAPY:

Sensory impairment in autism:

Many autistic Individuals seem to have impairment in one or more senses. This impairment can involve auditory, visual, tactile, vestibular, olfactory, and proprioceptive senses. Sensory impairment makes it difficult for the individual to withstand normal stimulation. These senses may be hypersensitive or hyposensitive.

For example, auditory hypersensitivity may result in person experiencing interference such as in case of tinnitus, (a persistent buzzing or ringing in the ears). In contrast some parents suspect their children to be deaf because they appear unresponsive to sounds (Pierce et al., 2005).

Some autistic individuals may notice the tiniest pieces of fluff on the carpet, dislike bright lights, look down most of the times, are frightened by sharp flashes of the light, etc. Others may be hyposensitive to light and can be attracted to light, they may stare at the sun or a bright light bulb (Gomot et al., 2002).

Some autistic children have tactile defensiveness and avoid all forms of body contact. Others in the contrast have little or no pain sensitivity. They are prone to self injuries and may bite their hands or bang their heads against the wall without feeling hurt (Cascio et al., 2007).

On the other hand some with olfactory hypersensitivity cannot tolerate how people or objects smell. Smell or taste of any food is too strong and they reject it no matter how hungry they are. Children with hyposensitivity to
taste and smell lick objects, play with faeces, eat mixed foods (Davis et al., 2006).

Children with vestibular hypersensitivity experience difficulty, changing directions, walking or crawling on uneven surfaces. Those with vestibular hyposensitivity often rock forth and back move in circles while rocking their body (Watson et al., 2000).

Proprioceptive hypersensitivity is reflected in odd body posturing, difficulty in manipulating small objects etc. this is often noticed in some autistic children. Children with hypo proprioceptive system often have a tendency to fall. They have problem in balancing. They have weak grasp over things (Minshew et al., 1997).

**Sensory integration dysfunction in autism:**

Sensory integration dysfunction is the inability of the brain to correctly process information brought in by the senses. Sensory integration dysfunction (SID/DSI) or sensory process deficit can come in many different forms. No two children are affected in the same way. SID/ DSI was first noticed in children with autism or who have autistic traits but also seen in children with disabilities such as cerebral palsy or ADD/ADHD. Children can have mild or moderate or severe sensory integration deficits (Ownby, 2008).

There is an assumption that autism is caused by sensory impulses not completing the full processing circuit, so that they are not properly integrated into coherent meaningful perceptions. This problem occurs due to the reason, earlier these impulses are interrupted in the processing circuit, the more basic the information it is going to be destroyed. The most basic information the brain receives is from our skin. Sensations of touch, temperature, texture, pain and pressure are conveyed from skin receptors through the peripheral nerves to the spinal cord and up to the brain stem.
At the brain stem, these sensations feed into the reticular core or formation; tangled web of nuclei that acts as a arousal centre for the nervous system. When stimulated these nuclei wake, calm, alert and excite us. They send messages to the hypothalamus to regulate heartbeat, breathing and digestion. They also send messages up to the cortex, signalling, it to shift our attention from one thing to other.

These vestibular nuclei have connections with almost every part of the brain and body. They process and coordinate sensations from the gravity and movement receptors in our inner ears with information from all our other sensory receptors. This process determines our basic relationship to gravity and physical world, and this gravitational security serves as a reference point for our interpretation of all sensory experiences. If the vestibular nuclei are not functioning properly, the registration and integration of sensory messages would be off.

Once we are aware of sensations from our body, one has to be ware of its function as well. This is the job of the ‘association cortex’. The association nuclei send signals to the basal ganglia and to the cerebellum, where precise motor commands are formulated and passed on to the thalamus. The thalamus receives these signals, coordinates them with incoming sensory information and forwards messages up to the motor cortex, where the commands were executed. The motor cortex consists of two neural strips located to and down the sides of the brain’s frontal lobes, with different sized patches or section devoted to specific body parts according to their degree of sensitivity. The left motor cortex controls the muscles on the body’s right side and the right motor cortex on the left side (Minshew, 2009).

Once the movement process might be further complicated if proprioceptive feedback is weak because muscle and joint are not receiving a healthy flow of input from the vestibular nuclei to keep them tones and functioning.

It is often seen that children with autism have a paucity of motor skills causing them to have difficulty in planning how to do things, coordinate
movements, associate them in order to complete a task. But the problem originates in associative cortex, the primary response area of the brain.

In autistics brain, sensory impulses flow unimpeded until they reach the nuclear networks in the brain stem where, if either network is malfunctioning, but particularly the vestibular one, they begin to unravel to scatter or fragment. Those impulses that do make it to the thalamus are filtered further through selective registration or through skewed interconnections to the cerebral cortex. The result is that fewer intact sensations actually make it all the way to the final association phase where a decision can be made to act upon it.

As the autistic brains are registering and integrating a selected portion of the sensations that pass through them, autistic children are not fully capable of making a well considered decision to do or not to do something. The short-circuiting of the cerebral neural impulses not only results in lack of inner drive, it also causes an inability to think things and decide before taking any action (Reynolds, 2007).

Thus in this context it is often seen in work done by Hanna (2007), motor actions like dance involves the culturally mediated body, emotion, and mind. So do illness and pain. Dance may promote wellness by strengthening the immune system through muscular action and physiological processes. Dance conditions an individual to moderate, eliminate, or avoid tension, chronic fatigue, and other disabling conditions that result from the effects of stress. Dance may help the healing process as a person gains a sense of control through (1) possession by the spiritual in dance, (2) mastery of movement, (3) escape or diversion from stress and pain through a change in emotion, states of consciousness, and/or physical capability, and (4) confronting stressors to work through ways of handling their effects. Moreover in earlier physiological studies it has already been mentioned that excessive motor acts increases the action of neurotransmitters and in the long run increases socialization and communication (Refer to page 10).
There are lots of research works using these therapeutic methods to establish their efficiency on improving the impairment of autism and to break the glass shell of autistic world. Most of the research works on intervention were emphasized on the communication and socialization problems of autism.

But little works were done to improve the flexibility impairment of autism though the problems of autistic children due to flexibility impairment are immense. Even the researches who emphasized on the impairment of flexibility had used the Sensory Integration Therapy (SIT) as method of intervention Dawson and Watling (2000); Jacobson and Mulick (2000); Goldstein (2000). SIT is one such therapy which deals with the sensory dysfunctions of five senses including proprioceptive and vestibular sensitivities directly in order to reduce problems of autism. Some of the works done on SIT and occupational therapy are by Smith and Bryan (1999), Schaaf & Miller (2005), Watling et al. (1999) who found significant positive result in improving sensory disability, if any, of the children with autism.

But it is well accepted that sensory dysfunction is not the only problem under 'flexibility impairment' of autism, or even the common problem for all persons with autism.

**BODY ATTITUDE AN IMPORTANT COMPONENT OF FLEXIBILITY:**

'Body Attitude' is an important component of flexibility of any living being. "Body Attitude" can be described as a state by which a person holds himself while moving while performing a task while standing still with appropriate body shape connected with the task being done.

Children with autism are not quite aware of their own self, their body parts, their body part relationship, and how to deal with a situation bodily. They have difficulty in body attitude, body awareness, understanding of space, body part relationship, usage of various parts of the body for a task, problem in coordination etc. These various difficulties make their movement and
ability to cope with situations more clumsy and inappropriate and thus they find a lot difficulty in communication, socialization and other important aspects of life.

For our daily life we use lots of movements to express our needs, our requirements, our difficulties and problems as well. The autistic children find a great difficulty in these spheres. So these problems in autism made the researchers to think about how to develop their body attitude in order to provide those easy ways of communication for better socialization.

All these factors are interrelated. If we are concerned in developing their body attitude which covers a vast arena of understanding of space, effort, shape, kinesphere, kinesthetic memory and at the end understanding of gestalt which is a vast concept itself.

To exhibit a comfortable body attitude the researchers have to consider the alignment of our body, which is highly connected with the spinal cord, the pelvis, along with the total grounding and support system of the floor and surrounding space.

To explain it in details the researchers have to consider the following factors. According to Cohan (1986) Centering, Gravity, Balance, Posture, Gesture, Rhythm, Moving in space and breathing, are the important points to understand body attitude.

**Centering:** It is maintaining a sense of one’s own body that helps a person to hold himself together and connected with the floor while moving.

**Gravity:** This second element is the force that holds the person down on the earth and he must learn to work with it as it constantly inhibits movement.

**Balance:** It is the understanding of inner sensibility. It is more importantly the art of achieving an inner relationship between all the points of your body, which you can hold in your awareness.
**Posture:** It is the way of understanding one’s body alignment. A subject’s posture not only reveals his or her feelings but also actually can produce feelings in him or her.

**Gesture:** The subject has to undertake or learn certain physical motifs, which will help him or her to express his needs, and wants through these patterns of movement or motifs, in these socio-communal strata of the human society.

**Rhythm:** It is an essential realization of human being. In other words it can be said it is the inner timing of the body, the important counts or intervals, which helps the species to put together all his senses in place. A subject will be good in this aspect when he or she will be able to coordinate and consolidate the inner and outer awareness of his or her body, and putting it in a proper balance where he or she can communicate move or express his or her feelings in accordance with the time.

**Moving in Space:** The subject should be given the training to understand the slightest variation of balance when he or she moves. That means the subject’s legs, feet and spine, which is incredibly complex, should be geared to adjust the above variation in balance. The body may have evolved for very functional reasons necessary for its survival but through moving in space the subject can express his or her thoughts and emotions.

**Breathing:** It is not only a physical function of the body but it is used as an expressive tool as a part of the language of movement that conveys meaning.

When a subject exhibits fast, shallow breathing for example implies excitement or stress, while calm and slow breathing suggests self-control. More abstractly breath denotes a specific quality of movement.

Children with autism usually are seen to have problem in understanding of movement perception.
**Perception**—means relationship of the self with one’s world or making sense of the whole world through information processing. Movement can be taught, directed and understood in two different perspectives one is goal oriented and other is exploratory oriented.

**Goal oriented**—When a subject acts to fulfil a task or to meet specific goals his attention will primarily focus on the goals of his act and perhaps nothing else.

**Exploratory oriented**—when there is no apparent goal to be achieved and movement is directed playfully as an exploratory means one is able to attend consciously to the process of doing. Therefore the subject is actually moving to perceive where every move is a perception.

Works done by Jarrold (2003), has shown that problems in body flexibility does reduce body movement in autism. He used pretend play as an intervention to develop body flexibility. The effect of pretend play on body flexibility of autistic children was found to be positive. Works done by Yilmaz et al. (2004) has emphasized on need for developing body flexibility in order to reduce problem behaviour in autism. He used swimming as a mode which deals with the body flexibility and Intervention of swimming was found positive on reducing clumsy behaviour and developing body motor coordination and flexibility in autism.

But these therapies do not deal with body flexibility directly. So sometimes it is found that though the children in autism are developing in encoding and decoding stimulus related to the various senses, but their body flexibility sometimes acts as a hindrance, as they are not quite aware of their own body and its uses.

Dance Movement therapy is one such therapy which deals with the body flexibility of the autistic children directly (ADTA, 1966).
DANCE MOVEMENT THERAPY:

Dance movement therapy, a creative arts therapy is rooted in the expressive nature of dance itself. Dance is the most fundamental of the arts, involving a direct expression and experience of oneself through the body. It's a basic form of authentic communication. The term Authentic Movement is used in the fields of dance and dance therapy for a contemplative practice of movement (Goldhahn 2009). Based in the belief that body, mind and spirit are interconnected.

DEFINITION OF DANCE MOVEMENT THERAPY:

Dance Movement therapy can be defined as “the psychotherapeutic use of movement and dance for emotional, cognitive, social, behavioural and physical conditions” (ADTA 1966). Dance movement therapy strengthens the body/mind connection through body movements to improve both the mental and physical well-being of individuals. As a form of expressive therapy, DMT is founded on the basis that movement and emotion are directly related. The ultimate purpose of DMT is to find a healthy balance and sense of wholeness (Wikipedia 2009).

HISTORY OF DANCE THERAPY:

Although dance as a ritual continued to play a vital role in the native cultures of the Americas, Asia, and Africa, a sharp decline emerged at the end of the twelfth century in its presence in Europe. Even the renaissance dances were stylized court entertainment. This superficial trend continued until the beginning of twelfth century when Isadora Duncan emerged bare foot and emotive on the stages of Europe, when modern dance was born.

The development of psychology has a part of its root in Darwin’s “The expression of emotions in Man and Animals”. Although it was published in 1873, it required a twelfth century mentality to begin to comprehend some of his ideas. Freud, the father of psychoanalysis, opened the door; but it was not until his students, Adler, Reich, and Jung, began their work that the
resurgence in an awareness of the whole person and bodily movement began to be reasserted. It was Wilhelm Reich who concentrated in the subject's body. He analyzed not only what the client repressed but how he repressed it somatically as well. Reich developed an elaborate character analysis system based on the defensive armouring of the body and the process of regaining adaptive mobility. Specific movement exercises were designed to contact blocked tense areas of the body allowing affective expression and release.

Carl Jung's development of techniques of "active imagination", affording the patient a vehicle for expressing unconscious material also paved the way for movement therapy.

Slowly dance therapy emerged as a methodology to deal with human unconsciousness and a mode to express needs and fulfill wants.

It was in fifties that Mary Whitehouse, a European trained American creative dance teacher who after, Jungian Analysis began to draw connection between the authentic movement expressions of her students and flow of symbolic material being shared at the end of her class.

Trained by Denishawn School, Marian Chace, began a dance studio in Washington D.C area utilizing a creative improvisational dance format. Chace writes, "Dance therapy, in making use of the basic form of communication, offers the individual means of relating himself to the environment or to the people when he is cut off in the majority of areas by patterns of his illness."

Slowly the bizarre movements of the individual become understandable to others and the subject can emote his needs through dance actions. As the feeling of isolation and fear of lack of understanding reduces, the subject is enable to function with a group and understand and communicate his needs along with what others are wanting from him in the whole group process (Chaiklin, 1975).
There are three other prime sources in the development of dance therapy in America. The first is Trudi Schoop who, with an improvisational development touch, paralleled much of Chace’s work, integrated into Adlerian depth psychotherapy which provided an approach to the retarded as well as the functionally impeded.

The other source emerged from followers of Rudolf Laban. Laban devised a system observation and notation of movement entitled “effort-shape” which focuses on how the individual moves. The Dance Nation Bureau founded in New York by Irmgrad Bartenieff provided a centre where the emerging dance therapists could learn a movement language for evaluative, communicational and testing purposes.

In many clinical settings in 1964, the need for a common conceptual language through which to communicate with the subject was felt. Thus the psychodynamic orientation developed during this period. When working with children and individuals with character disorders such as borderline conditions, an ego psychological/developmental approach was felt which will help the movement therapist to translate their work easily and make it communicable to the society.

Kestenberg (1964), from her training with Bartenieff developed Kestenberg movement assessment profile. This profile was considered to be most sophisticated in psychodynamic/ego psychological/object relational body movement assessment tool in the field of dance movement therapy.

By further the majority of practicing dance therapists in psychotherapy ADTA 1978, ascribe one or more of the theoretical frames of reference. The following approaches presently provide the conceptual basis for vitalization of dance movement therapy.
THEORIES OF DANCE MOVEMENT THERAPY

Chace Approach to Dance Therapy:

Chace’s major contribution lay in recognition and specification of those elements of dance which serve a therapeutic function.

The most basic concept behind this approach is that, dance is communication and thus fulfills basic human needs. There are four classifications that can explain the Chace concept more systematically.

1. Body action- Chace believed in the Intrinsic value of a graceful, coordinated, healthy body. She viewed distortions in body shape and functions as maladaptive responses to conflict and pain. Chaiklin (1975) said that when emotions become pathologically oriented, the body image becomes distorted. For example some people bind energy, limit the use of space, disconnect body parts or hold their breath, to guard against feelings such as guilt, aggression and sexuality. Others become hyperactive, exploding in time and space in response to real or imagined fears.

Since muscular activity expressing emotion is substratum of dance and since dance is a means of structuring and organizing such activity it is considered that dance is a means of communication for reintegration of the subjects who have problem in communication (Chaiklin, 1975).

Through dance actions the subjects gain motility of the skeletal musculature. Recognizing the body parts, breathing patterns or tension levels which block emotional expression, provide the therapist with clues to the sequence of physical actions that can develop readiness for emotional responsiveness; but this is not merely learning a movement that leads to change. There is a close relationship between the integration of postural changes and shift of psychic attitudes.

By understanding the inherent relationship between motility, dance and emotional expression, the therapist helps the patient to move and to be moved.
2. **Symbolism** - Both psychotic patients and the dancer make use of symbolic body action to communicate emotions and ideas that defy everyday use of language.

According to Chaiklin (1978), basic dance is the externalization of those inner feelings which cannot be expressed in rational speech but can only be shared in rhythmic, symbolic action.

Symbolism in dance therapy provides a medium by which a subject can recall, re-enact and re-experience. Some problems can be worked on purely symbolic level. Feeling understood leads the subject to continue symbolic statements. The dance therapist not only reacts to the symbolic expressions of the subject but also adds content. Together they create a new symbolic interaction. Since dance and emotional expressions share the same neuromuscular pathways, the dance therapist utilizes this linkage by selecting appropriate dance images. For example, to help a subject who is holding back anger the therapist may suggest an image of chopping down a tree. The dance actions can also evoke specific memories (Chaiklin, 1978).

3. **Therapeutic movement relationship** - Chace discovered how to establish a therapeutic relationship on a movement level. She accomplished this by visually and kinesthetically perceiving the patients' movement expressions. Employing her keen sensitivity and skills, she was able to incorporate the emotional content of the patients' behaviour into her own movement responses.

Chace entered a patients world by reenacting the essential constellation of movement characterizing his expression. As she recreated the patients' behaviour in her own body, she used to sense what was possible and further the interaction by doing similar, broader or complementary movements. She used to reflect, expand or complete a patient's tentative movement, thus letting him know that his behaviour was understood.

4. **Rhythmic Group Activity** - Rhythm permeates every aspect of human life. The ebb and flow of the breath and the steadiness of the pulse are very
personal human rhythms, yet a group moving together seems to have one breath and one pulse. Chace recognized rhythm as organizing individual behaviour and creating a feeling of solidarity and contagion among people. As feelings are expressed in a shared rhythm, each member draws from the common pool of energy and experiences a heightened sense of strength and security.

These four basic concepts which we have called body action, symbolism, therapeutic movement relationship and rhythmic group activity, according to Chace acts as a basic background for development of further works in dance movement therapy.

**Schoop Approach to Dance Movement Therapy:**

Schoop visualized her concept of dance movement therapy on the following continuum.

1. **Ur Experience**- Individuals make their passage through life and they experience two levels of existence. The first level is the “Ur Experience”. The term Ur is a German word, meaning ‘cosmic’, ‘universal’ and ‘transcendent’. The ‘UR’ experience denotes the eternal, ongoing process of cosmic order and harmony. It describes energy as the vital force which keeps the whole universe complex on the move. From the microcosm of the atom to the magnitude of the great, whirling bodies of matters in our heavens and beyond, there exists the ceaseless life-force of the UR energy.

Ur also describes time- time cycle without beginning, without end, time that continues its ongoing, rhythmic flow that can be comprehended except to continue. The Ur also describes space- limitless extensions of space, existing without boundaries far beyond the familiar stars, planets, sun and the moon of our galaxy into inconceivable regions.

Man’s second level of experience is his existence on this earth. He is born to a special human environment – energy-bound, time-bound, space-bound, with a particular societal structure, culture and race.
According to Schoop, dance expresses both spheres of awareness. Individuals dance within their lifespan here, in their time, in their space, using their individual energies. They feel the security of floor supporting their moving feet. They feel the muscles of their body stretching and contracting when performing a dance movement. Dance gives a sense of space as the performer leaps, sinks, whirls open and closes in various levels of space.

Dance patterns are created in space with the endless variety of space forms in motion. Dance helps an individual share their life processes through non-verbal methods of expressing feelings and provide a common ground for mutual understanding, recognition and communication. Besides development in muscular flexibility and anatomy the person who undergoes the session of dance develops a vocabulary that bypasses any language barriers. It is the vocabulary of human expression.

2. Wholeness— According to Schoop, all individuals encompass the complete range of every feeling, action or thought from the least to the most, from smallest to largest. Man is the only organism in this earth who hides a particular facet of his being; who carries the burden of a secret life. Human beings are the only ones who are selective about what they want to show and what they don’t want to show. But according to Schoop he visualized human behaviour according to following context.

Man manifests himself in his body; the body is the visual representation of the total being.

Mind and Body are in constant reciprocal interaction, so that whatever the inner self experiences comes to full realization in the body, and whatever the body experiences influences the inner self.

Whatever thoughts and feelings are rational, positive or negative, split or unified, acknowledged or inhibited, state of mind becomes embodied in physical being. It is manifested in the body’s alignment, in the way the body is centred, in its rhythmic patterns, in its tempo, sounds, use of tension and energy, in its relationship to space, in its potentiality for changes. All this
factors determines the body’s expression. They affect the way it moves and moves about.

Through the body, man’s mind experiences reality. This senses helps him to realize how he is, who he is, and where he is. Sight, sound, smell, taste and touch incite the mental processes.

Mind and body are fused by their reciprocal interaction. Their collaboration ensures human unity.

**Mind body interrelationship**—According to Schoop if psychoanalysis brings about changes in our mental set, it is obvious to reflect in our body and behaviourism. If dance movement therapy brings a change in body’s behaviour there should be a corresponding change in mind. Thus both the methods aim to change the total human, mind and body.

The transformation of a patient’s nonfunctional physical distortions presents an enormous challenge, but it is the work of the dance therapist to reestablish that sequence which will help the subject to operate effectively and perform normally, a body that will have a positive, remedial effect upon his mind.

### 3. The normal body

By the term normal body Schoop means, it is a human form as it was meant to be and to function, in its complete, perfect state revealing in its breathing, exulting in its motion, beautifully assertive in its total involvement with existence. It is an organic unity where mind and body are fused so that the thought is the action and the action is the thought. This exists in the optimal centre of gravity. It moves in balanced relationship between tension and release. Its breath adjusts and flows rhythmically. Its alignment is harmonious, well centred, and ready for change. Its muscle tone is functional, its movement and use of energy effective, and its adaptation to space. The senses are acutely tuned into the sights, smell, sounds, tastes and textures provided by the environment. Delighting in all its possibilities this body can make itself, long, short, wide or narrow, big or small. It can walk, run, jump, leap, turn. It can kneel, crouch,
sit, and lie down. It falls, climbs and swims. All such doings reflect the
quality of strong, soft, heavy light, active or passive, and perform tasks in
any tempo either slow or fast.

Such a body whole heartedly transforms its feelings into appropriate physical
manifestations. It shouts in joy, hisses in anger, laughs in amusement,
strikes out in hatred, blushes in shame, sobs in grief, relaxes in
contentment. It contracts in pain, slumps in exhaustion, stutters in
excitement, blocks in fear, yields in love, split in Indecision and disintegrates
in confusion.

4. The conflicted body- Schoop considered that by non-verbal expression
of his body one can understand the emotional content of the person. By non-
verbal body gestures one can sense whether the personality is fundamentally
open or closed, active or passive, aggressive or defensive. The reflections of
various emotions like protest, compliance, acceptance, rejection, affirmation,
confirmation or secrecy can be understood. This also expresses the body
attitude of a person in relation to the situation the person is in. But whatever
is the prevailing attitude it surely influences the person’s relationship to the
world around him.

The body expresses a person’s conflict as well as his moods. Disturbed
feelings which are so fixed in the body not only reduce and inhibit the
physical ability for free performance. All future experiences will be influenced
by whatever feeling originally created the body’s deviation from functional
norm. With pulled up shoulders, a person responds to any situation by
whatever these pulled up shoulders represent. With tightly crossed arms, a
person experiences life tightly crossed. The person is prevented from
experiencing the situation spontaneously and rationally.

Identification of the Health - dysfunction Continuum- Human
expression as expressed by the body is a source of psychological
evaluations. Alignment, centrality, tension, rhythm, use of space, are the
basic elements of movement and all their related aspects combine to create
body expression.
**Breathing** – Functional breathing enhances the expression of the body by conforming to its feeling; the sharp intake of air in fearful surprise, the heavy expulsion of air in sobs of grief, the deep rhythmic breathing of love, the full fluid breathing of joy. Breathing can adjust in various ways to expedite a person’s every action; it adjusts rhythmically to the tempo of running and walking. It releases with body in push and bend. It sustains the intake of air to lighten the body for a jump or a leap. Breathing actively and effectively assists whatever action or feeling the body undertakes.

**Alignment** – A person’s body design should ideally represent his affirmation of being, reflect the highest form of functional existence, realize the neutral, alert attitude which will help the person to act and react. It should indicate a free adaptable body that is capable of choice and decision, a body with a point of view.

**Centrality** – The centre is precisely what the word indicates: the middle area of the human body. It is the centre that makes the physical and emotional unity possible. Acting as a stabilizer for equilibrium, the compass for orientation, the coordinator for movement, the point of reference that defines physical boundaries, it tells a person where he begins and where he ends. This centre acts as the linking point and the individuals relationship toward his own being and toward the world around him.

**Tension** – Everyone has his or her own characteristic and degree of tension. Its from the basic level that a person increases and decreases his energy output. It represents a condition in which the same amount of tension is equally distributed over the entire body. Whatever the quality of individual’s natural tonicity – soft, strong, light, heavy, fluid, firm- it is unabashedly declared throughout his body. As a person reacts, it becomes more apparent that increasing tension parallels feeling-intensification, just as decreasing tension parallels feeling- abatement. This process permits an action to be fulfilled and an emotion to achieve its natural climax. If a person blocks either the feeling, or the action in its ascendancy, he will never know the gratification of fulfilment.
Rhythm- Everyone is included in the universal rhythm. From rhythmic acceptance a person can move to rhythmic disagreement. The subject can create his own rhythmic combinations within a given structural beat.

Use of Space- It is the understanding of direction, taking decision of how to relate to a certain space and facing reality.

According to Schoop, therapy is a dialogue. It includes the therapist and the subject. A therapist can never enforce her thoughts on the subject. The whole process depends on mutual correspondence. The process depends on understanding the insight of the subject so that the therapist and the subject can be involved in the whole therapeutic process with proper dependence of the subject on the therapist.

Carl Jung and His Concept of Dance Movement Therapy:

Whitehouse 1974 started her career as a dancer in Graham school of dance. She was the originator of the technique of authentic movement.

She was highly influenced by the concept of C.G. Jung. The main concepts behind the origin of this theory are as follows:

Depth Analysis: The client/patient cooperate with the analyst to enter the unconscious, a realm below that of daily consciousness. This is done by using dreams, being particularly sensitive to images and their associations, becoming familiar with what Jung called “Active Imagination”. This process helps in discovering the living reality of the unconscious.

“Self” and “self”- According to many psychologists the term “self” using the small letter “s”, means the ego, the individual, the personality. The world of the self is the world of the “Me” and all its concerns.

Jung, says, “Self” with capital “S” meaning also the world of the transpersonal, a word greater than the individual, more powerful than the ego. The Self is totality of aliveness; it is wholeness; known and unknown, good and evil. If this idea lies at the bottom of dance teaching, then it
becomes primary value leading directly to another— that of self knowledge. If the self becomes one that struggles with the self knowledge, taking the familiar structure of the personality apart and putting it together again with new elements, new understanding; but the inexhaustible is the big Self, the Unknowable, God.

**Individuation Process** — Cooperation means the long journey toward what Jung calls Individuation — the unique and the conscious development of potential in a particular person the slow unfolding of a wholeness already there. Through self knowledge individuation puts the ego in the service of the Self, the whole. The growth of personality is only possible through inter-penetration of the consciousness with the unconscious. Self knowledge and an introduction to the inexhaustible are what people come for, no matter what they consciously name as “the problem”.

**Polarity** — Polarity is present in physical body, through the personality, into all the pairs of opposites including conscious and unconscious. Life is never either/or but always the paradox of both /and. This statement looks simple but it is not the way individuals live. Individuals live as if things were always a matter of either/or. They have but to choose and the opposite will go away. In the world of movement a dancer does not stop to think curved/straight, closed/open, narrow/wide, up/down, heavy/light—this are myriad pairs. Applied physically, it is astonishing that no action can be accomplished without the operation of two sets of muscles— one contracting and one extending. Normally, when there is no acquired distortion, the human being takes steps by opposing arms and legs, the right leg balances the left arm, and the left leg opposes the right arm. Learning to change from the involuntary opposition of the right and the left to its conscious use is not at all easily, particularly in starting a forward motion. People have to see that they are freeing an arm and leg forward at the same time on opposite sides of the body. Once started, it is the powerful action of opposite weights on the two sides of the body that further lifts and carries us into the air. Leaps in a forward direction are a high, open extension of arm and leg against each other. When the two complete sides of the body are opposed, left and right
its learned – different but somehow mysteriously balancing. The right – left polarity is a recurring motif for exploration in movement; just as up/ down, open/ closed etc.

**Authentic Movement** – When movement was simple and inevitable, not to be changed how limited or partial, it became, this kind of movement is called authentic movement. This kind of movement is recognized as genuine, belonging to that person. The therapist helps people to function according to the capacity of the body. The therapist helps the subject to become familiar with ones own body, and helps the subject to become aware of his own body, which the subject was less aware of. It’s the work of the therapist to bring into consciousness the authentic movement and to distinguish between invisible movement and authentic movement. In the same way “I move” and “I am moved”, carry the same implication. Each is an act in itself, but a different act. I “move” is the concept that the subject is personally moving. Here this concept means that the subject has chosen to move and the subject physically produces the movement. But the concept “I am moved” means the subject is always cooperated in originating a movement. Once the mover has had the experience of being moved the subject feels that he does not do it at all. It is the work of the therapist to bring this confidence in the subject that he can complete the task alone with his own body as necessary in a particular situation. Balance between action and non action allows individuals to live from different awareness.

6. **Active Imagination** – it is C.G. Jung’s term for a process in which, while consciousness looks on, participating but not directing, cooperating but not choosing, the unconscious is allowed to speak whatever and however it likes. Its languages appear in the form of painted or verbal images that may change rapidly, biblical speech, poetry, sculpture and dance. There is no limit and no guarantee of consistency. Images, inner voices, move suddenly from one thing to another. The levels they come from are not always personal levels; a universal human connection with something much deeper than the personal ego represented.
Moments of insight, brought into focus by Active Imagination, have a natural effect on everyday life. They reveal a direction and show a development; acting as support and encouragement for what must be lived through, creating energy for the next step. The use of active imagination in movement is peculiarly valuable. It is the work of the therapist to involve people in their own fantasies and images, even moving out their dreams, provides raw material for understanding themselves.

One reason that the movement from active imagination is so valuable is that it is extremely difficult to censor. One move beyond one knows what is happening. Movement like dreams is ephemeral, one cannot will to repeat it exactly. Spontaneous movement, rehearsed and repeated, loses the very thing it shows: those inner processes take physical form and can be seen, their meaning apprehended, their value received by the person out of whose body the movement comes. The concept of improvisation is like active imagination.

**Role of Teacher/ Leader/ Mediator** - According to Whitehouse, implementation of the central concepts of polarity and active imagination depends on certain attitudes in the teacher/ leader/ mediator and the student/ client/ patient. It’s the subjects’ choice how he or she wants to cooperate with the therapist in the therapeutic sessions. According to Whitehouse it is the challenge of the therapist to create movements and relate to what the subject improvises to express his or her needs and emotions. Since the process leads to self development so it’s less directional and leads to development of self - knowledge, the growth of individuation and conscious.

Thus Whitehouse believes in self development through internalization rather than through external instructions. The development is long lasting when it takes place through natural realization but it is the job of the therapist to guide the subject to realize his own motives and needs.

**Psychodynamic Ego Psychology**: According to Bernstein 1971, learning the effort shape system and understanding how to notate while observing an
individual's movement is the most important aspect in the field of Dance Movement therapy. It has been observed by him that the movement patterns of the individual in relation to what they are saying and what they are responding to, both within the transference and within their own associations verbal and non verbal to their lives can be analyzed. Thus the level of the transference or the issues that constellate around a particular behaviour or pattern as well as the form of resistance and ego defense mechanisms that the individual is using can be assessed.

The Kestenberg Assessment Profile is a sophisticated device, that helps in computation and interpretation of movement and its analysis related to daily life activities and human living. Understanding movement assessment and body- movement interactions from psychodynamic / ego psychological perspective enables the therapist who is trained in dance movement therapy to see the next step in the treatment process. Being with subject and observing movement and one's own movement interaction from a psychodynamic developmental perspective, it reinforces the view that no individual should be fixed at any particular point in their life. Movement assessment personality profile is not used for purpose of statistically diagnosing any individual, but rather for the purpose of revealing interactive patterns and understanding their origin in the individual's life. Psychodynamic/ego psychologically oriented dance movement therapy offers a therapeutic process which continues and hopefully evolves the individual to higher levels of wholeness and individuality within their life.

Thus with subjects with sufficient ego functioning the interplay between the conscious and the unconscious is frequently simultaneous. Whether the individual is talking or moving, the flow or its lack of tension and shape communicates continuously as does the reception of the somatic unconscious through the counter transference.

As the body and its movement enables a more direct access to the unconscious, its use could provide a significant bridge upon which psychic energy could flow into consciousness and its potential utilization by the ego.
The more psychic energy that is made available the more possibility for ego adaptation.

The economic and dynamic perspectives alone would be insufficient without the influence of ego-psychology and the work of Heinz Hartman, Eric Erikson, and Anna Freud (1968).

The development of healthy body Image was crucial in the work done by Bernstein (1971), with children and severely disturbed adults. When Bernstein, worked with developmentally disabled population, the focus was more on various aspects of perception as well as the development of cognition. Understanding of group development and the levels of group functioning is an important criteria in the study of dance movement therapy.

Bernstein (1971) has worked with psychotic adults, autism, neurological and neuromuscular diseases, individuals with paralysis and amputations, and psychosomatic disorders.

The whole concept is based on following points:

**Mind-Body Gestalt**- The holistic view of the individual, acknowledging the complex interrelationship between the psyche and soma, is the most important concept underlying this mind-body relationship. The line between what is a "purely physical illness" and an "emotional problem" has been dissolving. The ego, the centre and mediator of consciousness emerges from the body; and according to psychodynamic theory, has a "body ego" as a prototype. It was Freud who first conceptualized this psychosomatic interrelationship. He stated "Emotions and instinctual gratifications and feelings of frustrations do not consist of mere thoughts but of physical alterations (Deutsch, 1973).

**Natural Flow of Psychic Energy** – In an adaptive functional individual, in all life forms there occur a natural flow of energy. This flow can be altered by internal conflict, maladaptive object relations or the lack of an integrated experience of wholeness. The keys to understanding the rationale behind
why individuals hold their muscles and thus their bodies in particular postures, why breathing is executed in various manners, why individuals move in certain patterns, and why illness effect particular physiological organs system, all lie in personal histories which distribute, sculpt, and design the psychic energy.

Psychic energy emerges from the unconscious for the purpose of conscious assimilation. The relationship between the conscious and the unconscious is a dynamic one. If the ego as mediators has sufficient boundary or lacks sufficient development, the unconscious will flood consciousness.

From a structural perspective without a functioning ego, the id, the repository for instinctual drives, the super ego, housing the parental judgment and the ego-self ideal will cover the whole individual psychological process and thus the sequences in the mind orients the individual for a particular kind of movement in order to fulfil his needs.

**Sequential Development:** Like all other life forms, human beings develop in an organized sequential manner. Each phase of the development has its somatic, physiological, psychic and Interpersonal elements, all of which are interrelated and necessary for the resolution and organization of each developmental phase. If individuals do not have the appropriate internal and external development, phase related maladaptive experiences get stored in the body. The specific muscular system or physiological organ in which these experiences are cathected depends on their actual or symbolic relationship to a person's development. Thus an individual may be autistic, psychotic, character disordered, or dysthymic, or may have chronic tension, habitual behavioural patterns, ulcers, asthma, low back pain, cystitis, continuous injuries to one or more limbs- all of which may be due to inadequate development in particular phases.

**Psychodynamic/Ego Psychological Dance Movement Therapy**- This embodies psychotherapy is a process entailing the observation and choreography of developmentally based body movement awareness,
expression, identification, exploration, and integration toward the experience of wholeness.

The theory is based on following criteria:

Adaptive patterns are those ego integrated components of an individual's psychology which enable the capacity to meet self needs and fully experience being-in-the-world.

Developmental Task is the process of integrating a developmentally based adaptive pattern.

Maladaptive behaviour is the behaviour which either does not adequately serve toward the satisfaction of self needs and toward the capacity to fully experience being-in-the-world.

State of function – an individual may be said to be in state of function when he has organized in an integrated manner those adaptive patterns which are in service toward the satisfaction of self need and toward capacity to fully experience being-in-the-world.

State of Dysfunction – An Individual may be said to be in a state of dysfunction when he has not fully organized in an integrated manner those adaptive patterns which are required in order to satisfy self needs and fully experience being-in-the-world (Bernstein, 1971).

PROCESS OF IDENTIFYING THE FUNCTION-DYSFUNCTION CONTINUUM:

The individual’s state of function or dysfunction may be assessed through the observation of his somatic behaviour. Either component related maladaptive behaviour which exhibits adaptive components may be observed while the individual is participating in total movement activities requiring the use of adaptive patterns. Verbal associations to past, present, and the future life experience may serve to enrich the identification process.
THE LEARNING PROCESS:

The learning of adaptive patterns is supported by two related concepts in the theory of development:

Werner's principles of orthogenesis

Piaget's process of equilibration

Orthogenesis may be defined as:

Increasing differentiation and specification of primitive action systems accusing the emergence of novel discrete action systems that also increasingly integrated within themselves.

The most advanced systems functionally subordinate and regulate less developed systems (Langer, 1969).

While Equilibration is a process of formative instability combined with progressive movement toward stability (Langer, 1969).

Like most developmental theorist Piaget feels that normal growth is not solely a physiological experience. It is rather an interactional process between the environment and the individual.

Therefore in order to learn a particular level of functioning the individual must not only arrive at a certain maturational level but he must also be in adequate and appropriate environmental set up, which is very essential for the learning to occur. The environment can be seen as either representational or symbolic of the appropriate environment needed to fully integrate a higher level of functioning.

The subject misidentifies from more primitive levels of functioning through the development of a therapeutic object relationship and the provision of an environment for the re-experiencing of existent maladaptive patterns (disequilibrium). As their origin is clarified, these patterns are gradually replaced by more age appropriate adaptivity. This therapeutic rite of passage
results in a new, more complex reintegration and an expanded experience of
the self (re-equilibration). This may occur through the client’s engagement in
unconscious free associational active imagination authentic movement; or it
may entail a transferential movement interaction between subject and the
therapist; or it may involve group rhythmic interaction with specific props
and music.

MOViMENT FROM STATE OF DYSFUNCTION TO FUNCTION :

This is a therapeutic process which occurs through engagement in and
integration of developmentally based intra and interpersonal movement,
verbal associations to the unconscious along with connections to past,
present, and future life experience.

Dance Movement Therapy Process – The dance movement therapy has
its root in shamanistic tradition. The movement therapist mainly deals with
the interrelationship of mind and body. Breathing patterns, body attitudes
and movements as well as organ systems, are dealt with simultaneously with
individual’s conscious and unconscious verbal expressions.

The use of body movement as a tool in the therapeutic process is a relevant
process for dealing with human problems in today’s world. Movement can
provide a direct, unedited avenue into the developmentally based origins of
psycho- physiological mal adaptations.

Based on the research done by Zwerling (1979), he suggested that dance
movement therapy evokes responses precisely at the level at which
psychotherapists seek to engage their subjects more directly and
immediately than the verbal therapies.

Theme related and free associational authentic movement, dyadic movement
involving the transference/counter transference within the transitional space
and rhythmic or thematic group dance from primary process the world of
unconscious provides not only images and verbal reflections, but it can
totally engage the person in re-experiencing the developmentally based
environment which negatively influences the natural development. These same avenues can eventually allow the individual to explore the elements required for building strong genetic foundations.

Another factor concerning the use of movement is the acknowledgement of the primacy of the body movement in communication and in development of healthy realistic self and object representations. It is through the often subtle nuances of the mothers’ movement that the infants first learn to trust or mistrust their environment and to feel positively or negatively about themselves and the significant other. It is through the empathetic movement reflection of the dance therapist that most severely disturbed subjects can begin to engage in therapeutic object relationship through movement which will later help them in their healthy development for better communication and socialization.

Finally dance movement therapy has been employed in many cultures since the inception of civilization as a vehicle through which communities assist individuals through life’s rites of passage and as means through which persons relate to the forces which govern their survival. Much of this dancing involves repetitive rhythmic body action. Through communal expression participants have often experienced personal transformations. Ecstasy and transpersonal relatedness are not uncommon phenomena in this type of group dance.

With hospitalized individuals whose affectual expressions have been atrophied due to continuous pervasive maladaptive environments, group rhythmic dance can afford the needed conduit through which they can begin to risk moving from their unconscious psychotic world into the conscious world of relatedness. This capacity of rhythm body action to provide a bridge between the conscious and unconscious world makes it a powerful tool with all populations. Those who need a way back into consciousness. And those who need to explore a way into the world of symbolic expression can all benefit. The group can afford a participant a powerful reverberation, and organization of needed developmentally related aspects of their psychology.
DEVELOPMENTAL LINES - ASSESSMENT AND THERAPEUTIC PROCESS:

Dance movement therapy facilitates more adaptive movement in an individual from the inside out, not from the outside in. It is poor reasoning to assume that if an individual does not utilize a particular movement pattern which he needs to live adaptively the therapist can teach it to him. A movement pattern is not superimposed. The foundation of this premise is based upon a major goal in therapy which is broadened and enlarges the existing repertoire of an individual for adaptive choices in his life toward that person's individuation rather than to try to affix not idiosyncratic ways of functioning on to his personality.

It is important to always consider the particular environment from which the individual comes as well as whether he needs to adapt to new surroundings.

Awareness of the qualities, and combination of attributes which are characteristic of an individual can be a vital and a useful tool when working towards the organization of a particular pattern. For example - if a person utilizes directness with slowness and it is desirable to facilitate the exploration and integration of more aggressive pattern the following combination might be utilized to evolve the person into: directness, slowness and strength and gradually as the person becomes comfortable with the addition of this new element of strength, evolve the slowness into acceleration.

Awareness of the sequence of a characteristic pattern can also be of importance when working with an individual.

FLOW OF BREATH IN DANCE MOVEMENT THERAPY:

The most basic of all areas in diagnosis and treatment in DMT is the flow of the individual’s breathing. It is basic in many ways-first because it is one of the indications of life. Secondly it is one of the most fundamental behavioural reactions to emotion. Anxiety, anger, and sadness are all reflected in the rate, depth and facility of breathing. Thirdly because of the
above two factors, it is usually thought of as one of the major agents in assisting the client toward more adaptive functioning. According to Christensen (1972) sucking, biting, chewing, micturition, defecation, orgasm, fear, anger, laughter and grief may all be considered as basic organismic responses, having the innate biological source. They are all closely related to respiration.

The flow of breath is also considered to be the initiating impulse to the individual's interaction with the environment (both internal and external). Symmetrical shape flow as it is referred to by Lamb and Kestenberg (1966), is characterized by the growing and shrinking of the body during normal breathing. Kestenberg states that the rhythm of shrinking and growing provides the motor apparatus for the continuous rhythmic transformation of the narcissistic libido into object libido and vice-versa.

The subject needs to breathe freely, fully and easily. This occurs when the whole body is allowed to participate actively in the respiratory process. Healthy breathing occurs only if the inspiratory and expiratory processes are complete. Inspiration commences with an outward abdominal movement brought about by the contraction of the diaphragm and relaxation of abdominal muscles. This is then followed in a rhythmic fashion by the upward and outward movement of the thorax. In expiration the reversal occurs. This flow is primarily felt in the torso and secondarily through out the whole body. Once this rhythmic flow is achieved at its normal pace, the movement of the individual will become integrated. Breathing plays a great role in occurrence and completion of a movement. In autism it has been found that the subjects have a problem in proper breath flow for better living, communication and socialization.

**EFFORT- SHAPE IN DANCE MOVEMENT THERAPY:**

The developmental lines of tension flow rhythms (Id based), effort and shape (ego based). And posture-gesture (Id, ego, and super ego based) are explored together as they constitute data for the Kestenberg Movement profile. Clinical grounding will be offered through an adapted profile. Shape
flow design and tension flow attributes have been omitted. Given the extensive constraints of computation, they have been less clinically noteworthy.

**TENSION FLOW RHYTHMS LINE OF DEVELOPMENT:**

The importance of the role of rhythm in human development as a vehicle for integration and learning has generally been acknowledged among both therapists and educators. Because rhythm originates in the unconscious, it is one of the few basic movement qualities that can be available to a regressed or pre-verbal individual.

The effort shape lines of development were devised by Laban and Lamb (1950). It is used to describe and analyze the quality of human movement. When divided into appropriate developmental lines, effort-shape becomes an invaluable tool in dance movement therapy.

Effort can be defined as the way in which kinetic energy is expended in space, force and time. Within this area, pre-efforts demonstrate the degree of defensiveness of an individual and are utilized in motor expression of ego-defense mechanism. Efforts serve to subdue and control the flow of tension. Kestenberg (1979) states that the ego translates the id will (tension flow rhythms) into actions (efforts).

Shape is defined as the form of the movement or how the body changes and moves through space as it is the arc-like or spoke like bridge between self and objects, while shaping is the three-dimensional system which adds complexity and subtlety to relationships. The shape flow helps in differentiating and relating the self from object. The qualities of growing and shrinking contribute to the motor apparatus for the discharge of libidinal and aggressive energy from self to the other which affects the transformation of the narcissistic libido to the object libido (Kestenberg, 1979).
Tension flow rhythms developmental line depends on following factors:

**Oral Libidinal** – It involves the ability to control libidinal oral rhythms of tension flow which aids in the development of a primary object relationship. The oral rhythm is smooth, repetitive undulations from free to bound flow which is characterized by sucking. The primary zone for this movement is the mouth. A body that is bound or flaccid-limp will transmit negative kinesthetic cues and promote an atmosphere of potential anxiety and mistrust.

**Oral Aggressive** – This involves the ability to control oral sadistic rhythm of tension flow which serve to aid in differentiation of the individual from his environment and serves body boundary formation. The oral aggressive rhythm can be defined as jerky, sharp repetitive fluctuations from free to bound flow. These rhythms can be found in other areas of the body such as reaching out for grasping, and releasing of objects and movements of patting and tapping reinforcing the boundary between self and other.

**Anal Libidinal** – This involves the ability to control anal libidinal rhythms of tension flow. This is characterized by low tension with small changes in intensity. Here the ability to coordinate breathing with defecation and the ability to coordinate breathing with abdominal pressure and to integrate the feeling of letting go is developed from this action mode. Thus the development in this stage leads to psychological development and gives birth to separation anxiety and how to deal with the same.

**Anal Sadistic** – This involves the ability to control anal sadistic tension flow patterns which further serves in presentation and confrontation as well as awareness of qualities of weight. This rhythm is defined as having a high intensity of even bound flow with eventual relaxation into free flow state. The individuals must be able to maintain high tension while squatting (shortening of body shape) and to lengthen while decreasing tension. Bowel control is present here as well as movements of a holding expelling quality in other parts of the body. The rhythm reflects the ability to hold back and persist with caution.
Urethral Libidinal – This involves the ability to control urethral libidinal rhythmic tension flow patterns which serve in the operation of tasks and decisions. The developmental task entails the capacity to experience the pleasure of letting go.

Urethral Sadistic – This phenomenon involves the ability to control urethral sadistic tension flow patterns which helps in building up the capacity to start and stop suddenly. The physiological task involves the muscle control of the bladder to start and stop its action as required. The rhythm involves the sharp reversal from free flow to bound flow and vice-versa. Thus an individual achieves object constancy and grows the capacity to self and object representation as he learns how to start an action and stop an action, which leads to better socialization and involvement in life.

Inner Genital Libidinal – This involves the capacity to control inner genital libidinal patterns which serve to aid in the development of receptivity. Identification with the mother happens during this stage. The inner genital rhythm entails the rhythm of inner sensation which helps in growing genital excitement in the body. This rhythm is characterized by undulant flat transitions between free and bound flow.

Inner Genital Sadistic – This involves the ability to control inner genital sadistic rhythmic flow which serves to aid in the development of organismic states during childbirth. This rhythm is characterized by undulant wavy flat transitions between free and bound flow.

Phallic Libidinal – The most important factor of this stage is that during this stage the identification with the father occurs. Differentiation between action thinking and word thinking also occurs during this stage.

Phallic Sadistic – This involves the ability to control external genital aggressive rhythms which helps in leaps and jumps and other athletic activities. Impulses from internal sex organs are externalized. The ability to move with body force is involved with this stage.
Genital Rhythm – This involves the ability to combine and control outer and internal genital rhythms.

During the various developmental stages of life, a person who undergoes proper fulfillment in growth for all these above mentioned stages comes up with the ability to use his body and muscles to cope up properly with the situation. From birth in all these stages ability of coordination, trust-mistrust, use of muscles and movement to leap and jump to release tension, are always involved. Thus this tension-flow rhythm lines does play a great role in organizing and developing innate movement patterns which are used by dance therapists in later period as a innate quality of an individual and used as a base for future development. Thus it is the task of the therapist to utilize the remaining quality of an individual and develop it with more movement as a tool for better socialization and communication.

ASSESSMENT IN DMT

A great contribution to DMT was the introduction of a system of observing, analyzing, and describing movement behaviour devised by Laban (1950). Laban was both a dancer and architect and his elaborate theory of movement, techniques of movement observation, and system of movement notation spread through Europe after World War II. His system of movement notation to preserve choreography is known as Labanotation, and he had many students who carried his work to England and America where his theories had a profound effect on dance and dance education (Thornton, 1971). His system of observation and notation describes the spatial and dynamic aspects of movement rather than only the actions performed, seeking to convey the qualities of the movements. The distinction between the action of movement and the qualities with which movement is performed is a key concept. This distinction allows analysis of movement behaviour apart from action that can be used to describe functional and expressive movement as well as posture and the body at rest. Bartenieff et al. (1951) adapted Laban's concepts into a system of movement assessment known as Effort/Shape (Dell, 1977).
The basic concepts of the Effort/Shape system including effort, shape, space, and body context proved to be essential to DMT. They served as a basis for the development of diverse movement observation scales, and essentially provided a movement language that is shared by dance/movement therapists. The Movement Psychodiagnostic Inventory (MPI) (Davis, 1970; Davis, 1991) is a Laban-based scale originally designed for observing and noting the movement patterns of hospitalized psychiatric patients and used today to investigate involuntary movement disorder associated with severe psychopathology (Cruz, 1995/1996; Berger, 2000). Kalish (1975) developed and normed a body movement scale for autistic and atypical children that was influenced in part by the Laban descriptive language. North (1972) also used the Laban system to develop an assessment of personality for children, and the Kestenberg Movement Profile (KMP) (Kestenberg, 1979) noting developmental movement patterns and using a Laban base, has been applied to a variety of assessment populations with a focus on clarifying treatment issues (Kestenberg et al., 1999). The variability of these applications demonstrates the usefulness of Laban’s system.

Because DMT developed as an applied practice based on the assumption that movement reflects aspects of inter- and intra-personal functioning that include pathological conditions, Laban’s work provided a key component of DMT by offering a systematic method of observing and describing the visible dynamic of movement devoid of particular movement tasks. This has proved useful in training, clinical practice, and research. DMT training programs teach movement observation using Effort/Shape and many dance/movement therapists obtain further training and certification in Effort/Shape at the Laban Institute in London and the Laban/Bartenieff Institute in the US.

PRACTICE AND PROFESSIONAL ISSUES:

The populations with which dance therapists work have become wide-ranging and include such groups as medically ill children (Goodill & Morningstar, 1993; Mendelson, 1999) women with breast cancer
(Dibbell-Hope, 2000; Serlin et al., 2000), individuals with eating disorders (Krantz, 1999), and individuals with Parkinson’s disease (Westbrook & McKibben, 1989). While dance/movement therapists report working in the areas of wellness and personal growth, palliative care, medical illness, developmental disabilities, and addictions, 60% of dance/movement therapists recently surveyed still classified their work as psychiatric (Cruz & Hervey, 1987). Work with other populations such as infants and parents, children with autism and developmental disabilities, and the elderly has been ongoing since the 1970s.

While dance/movement therapists have expanded the populations with which they work, there has not been a corresponding increase in the amount of research on DMT. The early DMT literature was largely composed of theoretical formulations and practice descriptions (Chase, 1953) and as the profession evolved, research oriented publications were added to the literature. Although results of studies on the effectiveness of DMT using a variety of methods can be found, the case study has been noted to be the most popular DMT research method (Ritter & Low, 1996). And while no efficacy studies have been published, effectiveness studies with multiple populations have been published. While research reflecting development and expansion of knowledge related to practice is available and some of this will be reviewed a little later in this article, the troubling fact remains that this is not a large body of literature. An issue of some concern to dance/movement therapists is that DMT research may not be keeping up with the demands of practice and healthcare policy, (Cruz & Hervey, 1995). Some of the explanation for this state of affairs is that DMT training programs focus on preparation for clinical practice rather than on research or the combination of the two, and remain limited to master’s degree training programs. Master’s theses abstracted in two volumes (Fisher & Stark, 1992; Chaiklin, 1998) create a large group of DMT literature, but with all of the attendant problems of design and execution that one might imagine when research is not a focus of training. Dance/movement therapists who desire doctoral degrees must take these degrees in other specialty areas and while some who do so remain in and contribute to the profession, others do not. For the maturity of
the profession, it is vital that more dance/movement therapists obtain doctoral degrees with the attendant exposure to and experience with the spectrum of research methods that this implies. It is also hoped that the option of taking a doctorate in DMT will be available in the near future.

As we sum up, in due course of time we can see that world has come up with interesting avenues of alternative therapies and India is not far behind. In this galore of alternative therapy we can distinctly say that dance therapy holds a special position in this kind of alternative therapy practice. India is a land of unity in diversity with myriads of emotion, culture, and social norms. As dance and movement language is a integral part of the Indian society so what can be better than this particular art form dance when it is put as a cause of psycho social healing and developing practice methodology.

From birth itself movement has been an integral part of human psycho-physical expression. Later on which has refined itself into a format of dance. Now it is the therapist who has delved deep into this art of movement practice in dance per say to create and discover new and exciting therapeutic implications which slowly and gradually became imperative in developing the social communicational behavioural mode in an Individual through a process which universally known as Dance Movement Therapy, an exciting and innovative approach to the world of alternative therapy practice.

In the west dance has experienced a great deal of upheaval, change and a mass revolution like from concert dance classical Ballet it slowly created its journey to the world of modern dance and contemporary dance which itself is a testimony of this huge change. In the field of therapies each and every moment great possibilities, discoveries and invention are making its presence in a dynamic way. Dance has made its presence in the world of alternative therapies in the west with a huge success. Through time it has been proved that dancers and performers has made their presence in the social and communal development through their valuable art form where they have created great awareness and socio-communal feeling when they
addressed the patients in the hospitals, old age homes, rehabilitation centres, urging them to create a spark of survival to these special and needy community in search of better life through the process of dance and movement, which slowly added in the field of alternative therapy with huge success and prominence.

India is a dome of cultural heritage. It is slowly waking up in the new dawn of globalization where exchange of art, culture, education is on the move. DMT is one such therapy where a practitioner can imply her own socio-cultural background through movement art of his or her own region to communicate the subject who needs a care or an aid of a special and of distinctive kind. Dance is one of the non-verbal modes of expression. At the same time when it is practiced it excites different muscle groups stimulating brain functions and exciting nerve cells, which creates a kind of a sensation in a normal body as well as in a body which needs special help. This kind of practice helps in developing overall flexibility, circulation of the blood flow and muscle group which helps in encoding and decoding numerous stimuli inputs and thus helps an individual communicate in a better way.

Autism is one such disability where the main problem lies in socialization and communication. Children with autism suffers from different problem behaviours and the main purpose of this study is to reduce the problem behaviour of these children and increase body flexibility through developing body attitude, body awareness, experiencing gravity and centring and understanding the overall special harmony.

Great masters, like, Freud, Jung, Adler, Schoop, Chace etc. has already introduced to the world their methods of psychological and physiological procedures through movements for healing and addressing different kinds of psycho-physical problems. Later on following their footsteps dance has herald its way in the world of therapeutic application by using an accepting the methodology of these great masters and later on named its unique approach as DMT in the world of special education.
The present study aims to find out the effect of DMT on autism - a psycho biological approach where the main aim is to bring out these children out of their shells and bridge the gap of society and an individual through efficient mode of communication, understanding, compassion, love and respect for well deserved acceptance in the society.