



Brain Behaviour Relationship and Intellectual Disability: Correlation of Expressive Therapy with a sense of Wellness

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ABSTRACT

Although traditionally not an area of service delivered by special educators, the area of spirituality for persons with disabilities is receiving more attention as a quality-of-life outcome. With reference to Indian culture and education system, this particular component was existing in olden times but in a different way, e.g. Mantra chanting was considered to be a way of life. The literature review examined the extent to which ancient educators were given the responsibility of the holistic development of children irrespective of their cast, creed and ability with equal attention. The results indicated that in tune of curriculum adaptation and modification along with bringing changes in the instructional strategies would bring the outcome expected. Many authors have conceptualized spirituality and a sense of wellness as a personal experience of an individual searching for meaning, a higher quality of life that is accomplished through regular chanting of sacred mantras for their inner peace, harmony and connectedness to others.

KEYWORDS : Spirituality, Expressive therapy, Neuropsychological functions, Brain waves, Mantra Chanting, Inclusion

Historically, in India, persons with disabilities enjoyed co-existence with the general mass, though at different times, the treatment and attitude were at variance. In other words, they were never excluded from society by confinement to institutions. Rather, they lived with their families. As far as, education was concerned, even the Gurukula Ashram promoted the basic educational principles just like special education where individualized teaching was practised to meet the abilities and needs of each pupil. Out of all types of disabilities, intellectual disability poses greater challenges than the other types do. Persons with intellectual disabilities have a condition of arrested or incomplete growth and development of brain which is characterized by low level of intelligence thus, partially or totally restricting the person's ability to perform certain significant activities in his life. This is owing to impairment in cognitive, behavioural or emotional aspects. Now, it is an accepted fact that, all the children, whether they are disabled or not, have equal rights to avail educational facilities as they are the future citizens of the country. Some children with special needs may not benefit from regular classroom education due to various reasons including disability. Children with intellectual disability seem to have cognitive deficits such as deficit in thinking, attention, memory and adaptive behavior. This leads to disorganized manner in which they handle tasks and situations. Teachers, peer group, parents and others thus find them 'strange'. They also have difficulty managing their academic tasks. In general, the school environment provides opportunity for the students to learn under the guidance of the teacher. But the children with disabilities may not get benefitted with the existing school system. It is important that all the students should become independent learners, which helps them in applying learnt skills in practical aspects as well as prepare them for their future lives.

This entails changes in curricular decisions and classroom arrangements, provision of aids and appliances, arrangements for finances and above all, preparation of alternative strategy to achieve expected learning outcome. As far as, instructional strategies are concerned, different innovative approaches have been practiced from the beginning of the educational system itself. But, very few individuals with intellectual disability get benefit through so called instructional strategies for enhancing their learning outcome. Despite sporadic attempts made by educationists, very few have been achieved in the field of intellectual disability. Much has been done but much remains to be done as many milestones have been left behind in the path.

Global scenario

A survey on the situation of educational provision for children with special needs by UNESCO illustrates the types of programs offered in different parts of the world. The analysis of information from 63 coun-

tries that responded to the survey shows that special day schools, special classes in regular schools and residential schools, in that order, provide special education. Integrated and inclusive educations are emerging trends practiced in very few countries, in the form of support teaching in regular classes and establishment of resource room facilities. Especially in the very area of teaching learning process, there is a large scope to make experiments with emerging therapies and trends.

Expressive Therapy

Expressive Therapy is the therapeutic use of expressive and creative modalities (art, music, group chanting, poetry, drama, storytelling, movement/dance, sand play etc.), to address various mental health issues and to promote personal growth and wellness.

Expressive therapy is predicated on the assumption that people can heal through use of imagination and the various forms of creative expression. The foundation of expressive therapy is based on the fact that through creative expression and the tapping of the imagination, a person can examine the body, feelings, emotions and his or her thought process. However, expressive therapy is its own therapeutic discipline, an inter-modal discipline where the therapist and client move freely between drawing, dancing, music, group chanting, drama, poetry, etc. according to the National Coalition of Creative Arts Therapies Association (2004). Expressive Therapy is coordinated collections of personal growth method developed specifically to help children and adults neuropsychologically who are in need.

Unique characteristic of expressive therapy

While expressive therapies are considered as a unique domain of psychotherapy and counseling, within this domain exist a set of individual approaches, defined as follows:

- Art therapy uses art media, images and creative process and respects client's responses to the created products as reflections of development, abilities, interests, concerns and conflicts.
- Music therapy comprises music (vocal /instrumental) and group chanting to effect positive changes in the neuropsychological, physical, cognitive and social functioning of individuals with health, cognitive and educational problem.
- Drama therapy is the systematic and intentional use of drama / theatre processes, products and associations to achieve the therapeutic goals of symptom relief, emotional and physical integration and personal growth.
- Dance therapy is based on the assumption that body and mind are interrelated and is defined as the psychotherapeutic use of

movement as a process that furthers the emotional, cognitive and physical integration of the individual.

- Play therapy is the systematic use of a theoretical model to establish an interpersonal process wherein trained play therapists use the therapeutic powers of play to help clients prevent or resolve psychological difficulties and achieve optimum growth.
- Sand play therapy is a creative form of expressive therapy that uses a sand box and a large collection of miniatures to enable a client to explore the deeper layers of the psyche in a totally new format.
- Intermodal therapy involves two or more expressive therapies to foster awareness, encourage emotional growth and enhance social relationships.
- Expressive therapies add a unique dimension to psychotherapy and counseling because they have several specific characteristics not always found in strictly verbal therapies, including, but not limited to, (1) self-expression, (2) active participation, (3) imagination, and (4) mind–body connections.
- In view of Swami Vivekananda, while chanting, if the person is not able to understand the meaning, when he sits for prayer with the feeling that he is doing something virtuous and not sinful, then that itself is enough to yield good results
- As Chanting is concerned, brain uses more oxygen than any other organ in the body. Efficient brain function is vitally dependent on an adequate supply of oxygen. The deep rhythmic breathing systematically oxygenates the entire body, specially the brain, sharpening focus and attention. The sound does not have any particular intellectual meaning, but it can be measured in terms of frequency, low or high, volume or power, speed and movement. But if the intellect cannot grasp a sound, the body can, experiencing sensations, through not only audition, but also kinesthetic perception like inner rhythm, pulsation and movement.

Neuropsychological functions

Neuropsychology is a scientific discipline, directed at the study of brain behavior relationships. Behavior denotes a general concept and includes cognitive functions, affect, emotional functioning and observable / adaptive behavior. Language, attention, memory, visuo-perception, visuo- spatial ability, problem solving, reasoning and planning all belong to the domain of cognitive functioning (Derix, 1997). In a neuropsychological assessment, the most clinically relevant domains of functioning that are assessed are: (a) attention and concentration; (b) executive functions; (c) learning and memory; (d) language; (e) visuospatial (f) executive functions. There are many systematic investigations of **attention abilities**, although psychologists suggest that children with intellectual disability are inattentive. Vigilance and selective attention are often impaired in these children. Deficits in **verbal as well as non verbal memory** for newly acquired information have often been reported, especially reduced immediate and delayed recall. Children with intellectual disability have also been shown in various studies to manifest deficits in retrieval of information from semantic memory, for instance as examined with the controlled word association test. The memory deficits in children with intellectual disability are directly related to inattention and distractibility which leads to poor organization and encoding of information to be processed. **Speech latency** is often increased in these children so as, consistent findings of formal language impairment have been reported. Children with intellectual disability often experience difficulties on complex language tasks, in which attention, memory and cognitive efforts also play important role.

A fundamental assumption in developmental neuropsychology is that the overt behavioral difficulties involved in different developmental and learning disorder result from dysfunction of specific areas and systems of brain. Brain is considered to be highly differentiated organ comprised of numerous systems or neural networks that are specialized to mediate a particular domain of behaviors while acting in a dynamic integrated way. These neural systems sub-serve different roles in the acquisition, organization and use of information. Anatomically distinguishable networks have been identified that mediate aspects of behavior / functions such as language expression and comprehension, spatial abilities, attention, memory and general behavior. Following is the list of areas or domains:

1. Organizational and executive functions

- Vigilance and selective attention
- Mental tracking and cognitive flexibility
- Organized systematic functioning (e.g. visual search, planning / acting impulsively, problem solving – adaptive behavior)
- Initiating, sustaining and shifting of attention
- Dynamic motor coordination and integration
- Motor persistence and modulation

2. Memory functions

- Verbal memory
- Visual memory
- Memory and learning

3. Language related functions

- Auditory processing
- Phonological production and speech
- Language comprehension
- Expressive language

4. Visual related function

- Visual perceptual function
- Visual spatial function
- Visual cognitive function

5. Affect sensitivity

- Visual, vocal contextual processing

6. Academic functioning

- Performance on spelling, reading, mathematics and writing measures including analysis of the impact that specific neuropsychological weaknesses

7. Social – Emotional / Personality functioning

- Performances on projective measures, standardized questionnaires, clinical observations

Expressive Therapy uses a range of self-discovery processes to bypass the logical mind and tap into that world we know exists but cannot seem to comprehend consciously. This allows clients to not just express in words a particular issue, but to then feel the energy of their inner experience. When we connect with and really feel this energy we become open to new ways of understanding the problem. This method allows a feeling of release, insight, increased energy and a sense of well being and resolution.

Ghaligi et al. (2006) conducted a study to see the effect of Vedic chanting on memory and sustained attention. Matched group experimental design was used to find out the effectiveness of Vedic chanting on memory and sustained attention. Baseline data score of memory and attention were collected from the sample (35 in number) by using delayed recall test and cancellation test respectively. Data was analyzed by using Mann Whitney U test. The experimental group showed significant increased score in both the memory tests and considerable reduction in total error and total time taken for the cancellation test compared to non chanting group. He suggested that chanting influences both the hemisphere of the brain resulting in good memory and attention. Even though sound is the gross form of chanting, its effect can be seen in the subtle areas like brain cells. As chanting remains a sought-after psychosomatic route to physical and intellectual wellness. Regular chanting of mantras wipes out fear, anger and depression, and helps relieve disorders of the respiratory, digestive, circulatory, speech, intellectual and cognitive systems. Vedic chanting has been proved to help develop one's mental powers, strength and take one to a higher level of consciousness. Hence, the practice of Vedic chanting in a traditional way can be used as one of the powerful means to acquire and enhance attention and memory. Studies related to this line have not been conducted so far with respect to individuals with intellectual disabilities.

Traditional strategies like chanting mantra, undergoing meditation and Pranayama have been followed in the institutions to enhance learning outcomes of the children. D. Govinda (2011) successfully defended his thesis, entitled "Effects of the Hare Krsna Maha mantra on stress, depression and the Three Gunas", for Ph.D at Florida State University. The author conducted a 3 group study on the effects of

chanting Hare Krsna Maha mantra on stress, depression and the Three Gunas, described in Vedas as the basis of human psychology. 62 subjects self selected through newspaper advertisement in Southeastern University, completed the study. Average age was 24.63 years, with 31 male and 31 female participating. Stress was measured with the index of clinical stress, depression was measured with the Generalized Contentment Scale and the modes of nature / Three Gunas were measured with the Vedic Personality Inventory. Subjects were tested at pretest, post test and follow up with testing items separated by four weeks. Participants were randomly assigned to Maha Mantra group, an alternate mantra group and a control group. Subjects in each of the chanting groups chanted their mantra approximately each day. The investigator concocted a mantra as the alternate mantra, though subjects in the alternate group thought it was a genuine Vedic Mantra. Primary hypotheses of the study was based on Vedic Theory and that the Maha Mantra group would increase *sattva* and decrease stress, depression, *rajas* and *tamas* significantly more than the other two groups. ANCOVA results, controlling for gender and age, supported the hypotheses at $p < .05$ for the dependent variables except *rajas*, with effect sizes (η^2) for the four variables whose result supported the hypotheses ranging from .21 to .33. The investigator suggested that the Maha Mantra has its own potential in clinical areas similar to those where other interventions of Western origin have been still making efforts.

Conclusion

Though the available literature covers a wide variety of expressive therapy, the theme which emerges out as the gist, advocates to provide a strong and universal channel applicable to all regardless of their abilities and disabilities for releasing emotions and creating a bond of oneness with nature. The philosophy of expressive therapy mainly encompasses the psychological integration of all human beings. It facilitates stress tolerance level and inner peace. The persons get benefitted with a strong feel of being heard and it firmly enters into their subconscious level. It is viewed as an integral part of psychotherapy also which gives maximum relief resulting in increased level of contentment and inner discipline.

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