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Effect of dance movement therapy on gross motor functioning skills among children with visual impairment having additional disabilities

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Abstract
Given how inherent movement is to human existence, its significance is frequently undervalued. Nonetheless, it is essential for a child's social, cognitive, and physical development. Experiences also aid in the acquisition and growth of basic movement abilities. Early childhood education lays the groundwork for these abilities, which are crucial for promoting an active lifestyle. Movements are integral to development of fine and gross motor skills, and encourage young children to reach out and actively explore the world around them. Children with visual impairment having additional disabilities experience difficulties in motor co-ordination which reduces functional skills. The current research made an attempt to investigate the effect of dance movement therapy on gross motor skills among children with visual impairment having additional disabilities. Experimental method of single subject design was adopted for the present study. Pretests and post-tests of motor performance were given before and after a four-week treatment period to assess changes. Five children with visual impairment having additional disabilities from a special school at Navi Mumbai were selected as sample through purposive sampling technique. A researcher made questionnaire with 25 items was used to collect the data. Results of the study indicate that dance movement therapy could serve as a form of gross motor stimulation in children with visual impairment having additional disabilities.

Keywords: Children with visual impairment having additional disabilities, dance movement therapy, gross motor skills, movements

Introduction
The majority of people think that someone who has vision impairments is blind. In actuality, folks who are classified as visually impaired may not only be blind, but they may also possess some functional vision. They might also be those who can perceive light and dark visually. Resnikoff *et al.* (2004) [13] define visual impairment as blindness with a visual acuity of less than 3/60 and low vision with a visual acuity of fewer than 6/18 but equal to or higher than 3/60. Students who lose their vision will find it challenging to accomplish everyday chores without the assistance of customized adaptations.

A child may be blind or visually impaired, but they may also have other disabilities, such hearing, movement, developmental, or cognitive problems. Young children with movement and visual impairments are a separate population with special educational demands. These kids are frequently included in with the larger group of kids who have a variety of disabilities and visual impairments, like being blind or having low vision (Erin, 2000 & McLinden, 1997) [6]. The interactive nature of the disabilities and their combined developmental impact is the main feature of children with multiple disabilities and visual impairment. According to Hogg and Sebba (1986) [7], there is a variety of diseases that function in concert rather than a single "primary" or "secondary" disability in cases of multiple disabilities. This theory is supported by other researchers as well.

A person who has two or more disabilities is referred to as having multiple disabilities or additional disabilities. In a similar vein, those with "multiple handicapping conditions are persons with two or more disabilities that result in handicaps within functional living experiences," according to Raynolds (2000) [12]. Their associated impairments, such as intellectual disability and blindness, may necessitate special education programs that may accommodate their many limitations. Combinations of different disabilities can include mental retardation, learning disabilities, physical impairments, mental retardation, visual

impairments, hearing impairments, and many more. In addition to the various disabilities a person is dealing with, behavioural and social issues may also be apparent. According to Batshaw (2002) [1], "one-third of children with partial sight and two-thirds of children with blindness have other developmental disabilities; the incidence of blindness in children with multiple disabilities is more than two-hundred times that found in the general population."

An individual can be stimulated to move by visual information, and they can also learn how to correct and enhance their movement through this feedback. The organization of human motor activities is influenced by the perception of visual stimuli. In the absence of visual stimuli, a child's exploration is limited to the region that is closest to them and the items that they are in direct touch with. Therefore, it is anticipated that children with visual impairments may develop their motor skills differently from their peers who are usually developing. The decreased visual stimuli may alter all motions, particularly those involving limb coordination-dexterity and visual motor control. Their growth may also be hampered by other elements, such as their home and learning surroundings, any diseases they may have, and their intellectual and cognitive abilities.

Dance Movement Therapy (DMT), 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.

Since DMT may support movement confidence by enhancing posture (Dig-o, 2011) [5], body awareness, and balance (Murcia *et al*., 2010) [10], it may be one of the most effective strategies to improve physical abilities in this population, particularly in blind and visually impaired youngsters. Additionally, DMT aids in the development of emotional expression, which these kids may not have as much of due to social, psychological, and physical issues (Jay, 1991). DMT deepens participants' relationship with their own bodies by facilitating the investigation of both movement strengths and limitations (Weisbrod, 1974) [20]. As a result, DMT aids in the development of movement repertory, which is the range of options accessible to interact with the environment (Mason, 1980) [8].

In a study, Staum (2013) [17] found that DMT is an effective therapeutic approach for fostering cohesiveness in kid-led groups that had previously been disorderly and chaotic. Additionally, he argues that this cohesiveness offers the kids support and a secure, accepting environment where they can strive toward achieving therapeutic objectives. The basis upon which coherence is constructed is the formation of body image, self-consciousness, and awareness of others-all significant elements of DMT experiences that are discussed in this study. In order to demonstrate how DMT can effectively foster group togetherness, a particular session is explained. In the group and on the unit, behavioral changes were noted, including enhanced impulse control, increased tolerance for frustration, delayed reward, and enhanced interpersonal relationships.

According to Strassel (2011) [18], people with developmental, medical, social, physical, and psychological impairments have found success with dance therapy. It has been extensively utilized to treat mental and psychological issues, as well as to lessen the tension and worry brought on by cancer and chronic illnesses. Show additionally, dancing can improve one's range of motion and overall mobility of movement. Additionally, it has been discovered that dance therapy enhances patients' self-esteem, body image, and mood.

Motor skills which includes gross motor and fine motor skills is the most important skill that need to be developed properly especially among children with visual impairment having additional disabilities.

Thus, the research study focuses on whether DMT have an influence on gross motor skills of children with visual impairment having additional disabilities.

Research Question

1. Is there any effect of dance movement therapy on gross motor functioning skills among children with visual impairment having additional disabilities?

Research Objectives

1. To identify the level of gross motor functioning skills among visually impaired children having additional disabilities.
2. To study the effectiveness of dance movement therapy in improving the gross motor functioning skills among visually impaired children having additional disabilities.

Need of the Study

Planning and carrying out voluntary, goal-directed motions need the use of visual information, which is crucial and guiding, particularly during the developmental and learning stages. When it comes to their own body's position and movements in space, the relationship of their limbs to their bodies, and other persons and objects in a room, children with vision impairments feel uncertain and insecure. The acquisition of various modes of locomotion, such as crawling and walking, as well as the development of critical gross-motor skills, such as appropriate postural stability and control (e.g., sitting and standing), are negatively impacted by this inadequate spatial connection (Palazesi, 1986) [11]. Furthermore, they require greater effort to do fine-motor tasks including manipulating objects, engaging in object-oriented play, and using tools. Children with visual impairments, ages six to ten, performed finer motor tasks slower and more to one side of the body than children with normal vision, according to a comparison study (Reimer, 2003) [15].

There may be a connection between the developmental delays in fine and gross motor skills since the former provide a strong foundation for the development of the latter. The researcher attempted to investigate the "Effect of Dance Movement Therapy on Gross Motor Functioning Skills among Children with Visual Impairment with Additional Disabilities" because there is a dearth of research in this field.

Methodology

Research Design

In this study, the researcher wanted to know the effect of dance movement therapy to improve gross motor skills among children with visual impairment having additional disabilities so that to find out the level of motor functioning and effectiveness of dance movement therapy on gross motor skills. Hence the researcher has selected single subject research design, pre - post-test design with only experimental group as the research design for this study.

Sample Size & Sampling Technique

In the present study, children with visual impairment having additional disabilities are selected as sample. The researcher has selected purposive sampling method under non-probability sampling techniques. Researcher had selected students with visual impairment having additional disabilities those who had issues in gross motor skills between the ages of 6 to 14 years from a special school (Helen Keller Institute for Deaf & Deaf Blind, Mumbai). A total of 5 students with visual impairment having additional disabilities, both boys and girls were selected as sample for this study.

Inclusion Criteria

- Children with Visual Impairment having Additional Disabilities.
- Age ranging from 6 to 14 years.
- Both male and female.
- Special School.

Tools

The researcher formulated a criterion test in the form of a questionnaire as a tool for the study. The criterion test used for the study was developed on the basis of movements related to dance. Totally 25 questions were included in the questionnaire. This tool was the used for the pre-test and the post-test to check the achievement level of the sample before and after the intervention.

Procedure

A pre-test was conducted to check the level of motor functioning of students with visual impairment having additional disabilities. Then treatment was given to them using dance movement therapy for about 30 sessions. Duration of each session was scheduled for one hour daily from Monday to Friday in the school environment by the researcher. The responses of the sample during the intervention were observed and noted down. After the intervention post-test was administered to check the level of the progress in the gross motor skills due to use of the therapy and thus to know the effectiveness of the dance movement therapy. The researcher had pooled ten Marathi songs for the intervention.

Data Analysis

The researcher collected the following data from the sample chosen for the present study.

Subject 1

Table 1: Pre-test and post test scores in percentage of subject 1

S. No	Pre-Test Scores	Post Test Scores	Pre-Test (Percentage)	Post Test (Percentage)
1.	14/30	26/30	46.66%	86.66%
2.	4/12	8/12	33.33%	66.67%
3.	9/15	12/15	60%	80%
4.	6/18	15/18	33.33%	83.33%

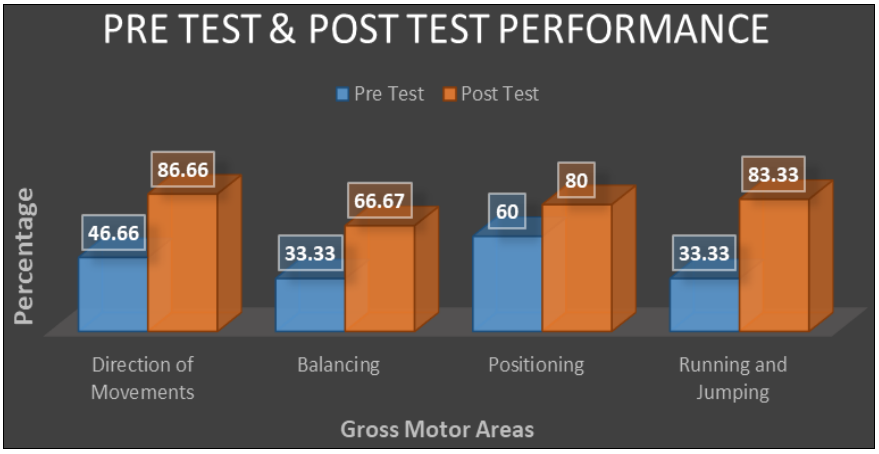

Fig 1: Pre-test and post test scores in percentage of subject 1

The above table shows the difference in the increase of the scores of the sample during the post tests. It is observed that his performance in Positioning and Running & Jumping (40% and 50% gain) is higher in comparison with the other areas. His interest and involvement in the dance movement was quite good. It is seen that he was strong in trying new movements and hence the rate of increase in the post test performance seems to be comparatively high when compared with other subject. It is seen in the scores of pre and post test scores that there is an improvement in his gross motor skills after intervention was provided.

Subject 2

Table 2: Pre-test and post test scores in percentage of subject 2

S. No	Pre-Test Scores	Post Test Scores	Pre-Test (Percentage)	Post Test (Percentage)
1.	11/30	21/30	36.67%	70%
2.	4/12	8/12	33.33%	66.67%
3.	6/15	11/15	40%	73.33%
4.	6/18	13/18	33.33%	72.22%

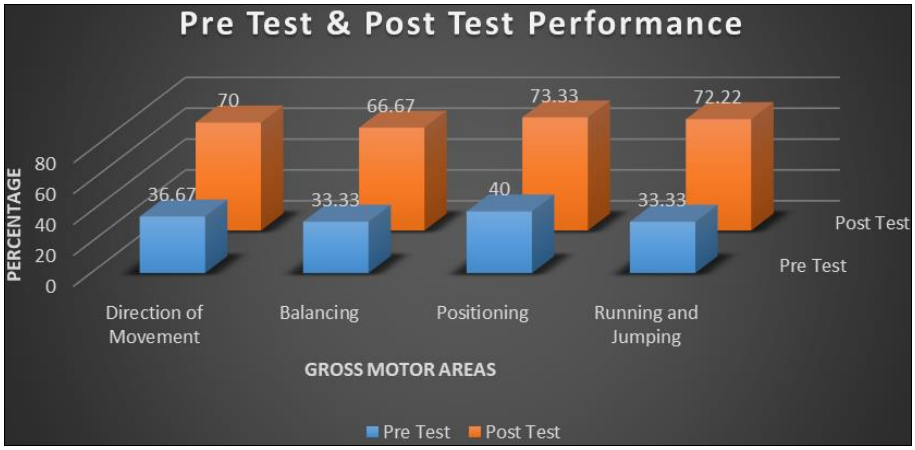

Fig 2: Pre-test and post test scores in percentage of subject 2

The above table shows the difference in the increase of the scores of the sample during the post tests. It is observed that the increase in performance of the subject in all the areas are equal (33.33% gain) except running and jumping which is 38.33% gain. His interest and involvement in the dance movement was quite good and gave equal attention in all the areas. It is seen that he was strong in trying new movements and hence the rate of increase in the post test performance seems to be comparatively high when compared with other subject. It is seen in the scores of pre and post test scores that there is an improvement in his gross motor skills after intervention was provided.

Subject 3

Table 3: Pre-test and post test scores in percentage of subject 3

S. No	Pre-Test Scores	Post Test Scores	Pre-Test (Percentage)	Post Test (Percentage)
1.	12/30	22/30	40%	73.33%
2.	2/12	7/12	16.67%	58.33%
3.	5/15	13/15	33.33%	86.67%
4.	3/18	10/18	16.67%	55.56%

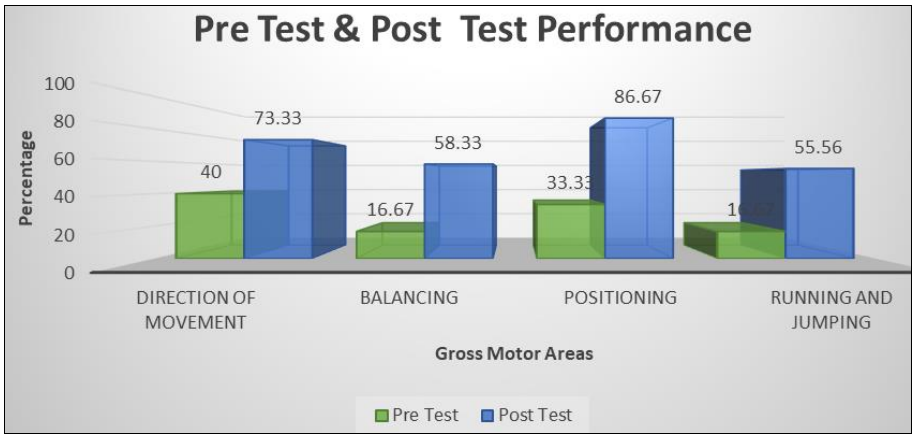

Fig 3: Pre-test and post test scores in percentage of subject 3

The above table shows the difference in the increase of the scores of the sample during the post tests. It is observed that the increase in performance of the subject in all the areas (approx. 35% gain). His interest and involvement in the dance movement was quiet. It is seen that he struggled a lot in learning movements and hence the rate of increase in the post test performance seems to be high. It is seen in the scores of pre and post test scores that there is an improvement in his gross motor skills after intervention was provided.

Subject 4

Table 4: Pre-test and post test scores in percentage of subject

S. No	Pre-Test Scores	Post Test Scores	Pre-Test (Percentage)	Post Test (Percentage)
1.	14/30	25/30	46.67%	83.33%
2.	2/12	8/12	16.67%	66.67%
3.	6/15	11/15	40%	73.33%
4.	4/18	12/18	22.22%	66.67%

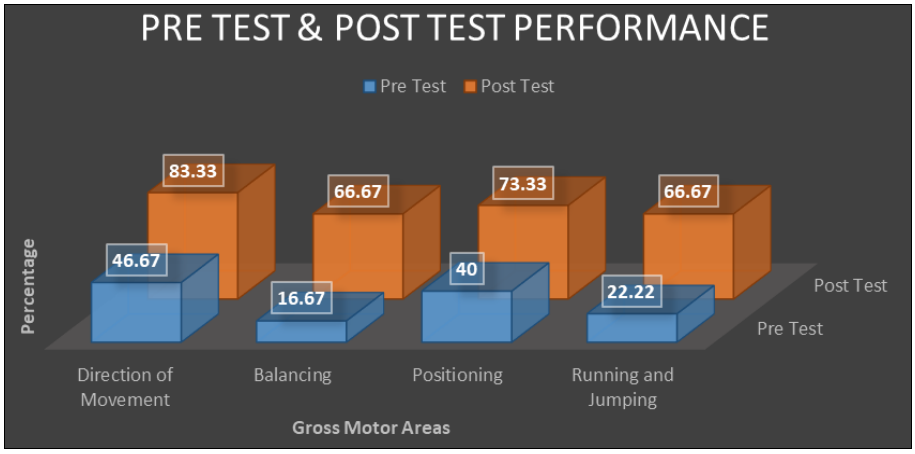

Fig 4: Pre-test and post test scores in percentage of subject 4

The above table shows the difference in the increase of the scores of the sample during the post tests. It is observed that the increase in performance of the subject in all the areas i.e. approx. 37% in 2 domains (Direction of movements & Positioning) and approximately 50% in other 2 domains (Balancing & Running and Jumping) which was a gain compared to pre-test and post-test. Her interest and involvement in the dance movement was good. It is seen that she struggled a lot in learning movements and hence the rate of increase in the post test performance seems to be high. It is seen in the scores of pre and post test scores that there is an improvement in his gross motor skills after intervention was provided.

Subject 5

Table 5: Pre-test and post test scores in percentage of subject 5

S. No.	Pre-Test Scores	Post Test Scores	Pre-Test (Percentage)	Post Test (Percentage)
1.	20/30	26/30	66.67%	86.67%
2.	5/12	9/12	41.67%	75%
3.	10/15	14/15	66.67%	93.33%
4.	7/18	14/18	38.89%	77.78%

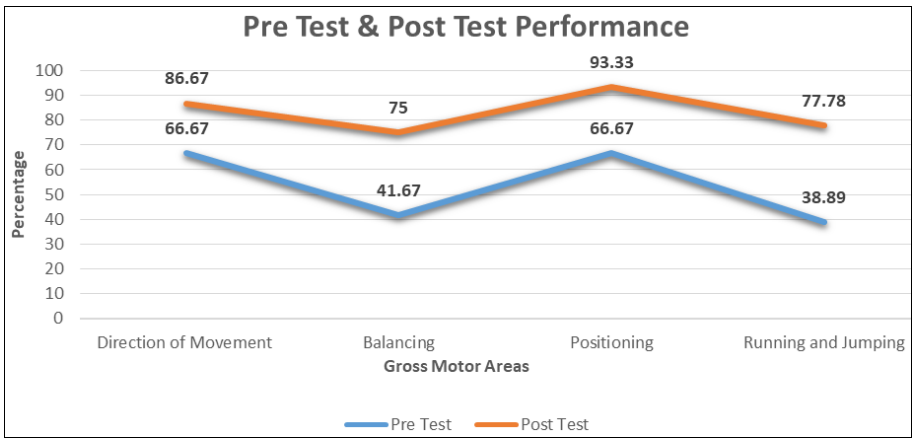

Fig 5: Pre-test and post test scores in percentage of subject 5

The above table shows the difference in the increase of the scores of the sample during the post tests. It is observed that the increase in performance of the subject in all the areas i.e. approx. 15-20% gain. His interest and involvement in the dance movement was good. It is seen that he struggled a lot in learning movements and also co-operated during the intervention. Hence, the rate of increase in the post test performance seems to be average. It is seen in the scores of pre and post test scores that there is an improvement in his gross motor skills after intervention was provided.

Findings of the study

As seen from the results, Dance Movement Therapy (DMT) helped to improve the gross motor movements for all the five sample with visual impairment having additional disabilities. The use of AB design in this single subject experimental research study showed clearly that the improvement in gross motor skills was due to the intervention provided by the researcher. Marked improvement in performance of the participants was seen only after commencement of the intervention. This finding is in line with the findings of Brunk (2004) [3] that music and dance bring out creativity in learners with visual impairment which contributes to enhanced self-awareness, self-expression and self-esteem. Students were presented with different strategies to accomplish a dance movement.

All the five students showed improvement from their baseline till the end of the intervention period which gave 30 sessions of dance movement therapy.

Educational Implications of this Study

- Special educators can give dance movement therapy to help children with disabilities to make them aware about body parts and the way they move.
- They can also use give dance movement therapy to help them in learning about their body, improving posture, balance, body awareness, coordination and motor skills. Because it is done with music and children see it as a fun thing to do, dance gets children moving and improves participation of children in exercises meant to improve gross motor skills.
- Children participating in dance/movement therapy usually see an increase in their self-esteem and confidence through mastering new skills.
- Dance movement therapy will also help in maintaining healthy brain function as executing complex moments are a fundamental function of brain.

Delimitations of the Study

- The dance movement activities developed through the intervention is limited to only gross motor skills and did not include fine motor skills for children with visual impairment having additional disabilities.
- The study focused on the effect of dance movement therapy in improving gross motor functioning skills among children with visual impairment having additional disabilities within the age group of 6-11 years and did not include children of the age 12 years and above or below 6 years.

Limitations of the Study

- The limitation of this study is that it does not address all the skills involved in the gross motor area.
- The size of the sample was five. Larger sample size would have brought more generalizable results.

Conclusion

The addition of dance/movement therapy enhanced the gross motor skills by strengthening the children's cognitive learning. Direction of movement and running activities promoted a sense of self and impulse control. Organization of auditory and visual processing occurred when participating in dance/movement activities. Social, emotional and physical skills were fostered when moving and connecting with their peers. During the dance/movement therapy sessions, the children focused on sequencing, following instruction, maintaining perceptual and motor skill awareness as well as coordination and internal regulation (Tortora, 2006) [19]. Dance/movement therapy for young children also released restless energy and encouraged creativity and imagination through movement-especially if music, props and other modalities were offered. To conclude, it is inferred that dance movement therapy is one of the innovative ways that would facilitate children with visual impairment having additional disabilities to develop gross motor skills. In addition to this, it also motivates them to do their work in a more independent manner with good self-confidence.

References

1. Batshaw. Children with Disabilities. Baltimore: Paul H. Brookes Publishing Company; c2002.
2. Berk L. Child Development. Sixth edition. Boston: Allyn & Bacon; c2003.
3. Brunk BK. Music therapy: Another path to learning and communication for children on the autism spectrum. Arlington, TX: Future Horizons, Inc; c2004.
4. Davies M. Movement and dance in early childhood. Second edition. London: Paul Chapman Publishing; c2003.
5. Dig-o JF. Aerobic exercises: A corrective measure to postural defects of children with visual impairment. International Journal for Cross-Disciplinary Subjects in Education. 2011;2(4):535-540.
6. Erin JN. Students with visual impairments and additional disabilities. In: Koenig AJ, Holbrook MC, editors. Foundations of Education. 2nd ed. Vol. II: Instructional strategies for teaching children and youths with visual impairments. New York: AFB Press; c2000. p. 720-752.
7. Hogg J, Seba J. Profound retardation and multiple impairment. Vol. 1: Development and Learning. London: Croom Helm; c1986.
8. Mason K. Focus on dance IX: Dance for the handicapped. Reston, VA: American Alliance for Health, Physical Education, Recreation and Dance; c1980.
9. McLinden M. Children with multiple disabilities and a visual impairment. In: Mason H, McCall S, editors. Visual impairment: Access to education for children and young people. London: David Fulton Publishers; c1997. p. 313-323.
10. Murcia CQ, Kreutz G, Clift S, Bongard S. Shall we dance? An exploration of perceived benefits of dancing on well-being. Arts & Health. 2010;2(2):149-163.
11. Palazesi MA. The need for motor development programs for visually impaired pre-schoolers. Journal of Visual Impairment and Blindness. 1986;80:573-576.
12. Raynolds CR, Fletches J. Encyclopedia of Special Education. Vol. 2. New York: John Wiley and Sons; c2000.
13. Resnikoff S, Pascolini D, Mariotti SP, Pokharel GP. Global data on visual impairment in the year 2002. Bull World Health Organ. 2004;82:844–851.
14. Skoning SN. Movement and dance in the inclusive classroom. Teaching Exceptional Children Plus. 2008, 4(6). Available from: http://search.proquest.com.myaccess.library.utoronto.ca/docview/1023531517?accountid=14771
15. Smits-Engelsman BCM, Reimer AM, Siemonsma-Boom M. Manuvis. ISBN 71534405; c2003.
16. Sooful A, Surujlal J, Dhurup M. Dance and music as mediums for the social integration of children with intellectual disabilities into mainstream society. African Journal for Physical, Health Education, Recreation and Dance (AJPHERD). 2010;16(4):681-697.
17. Staum MJ. Music therapy and language for the autistic child; c2013.
18. Strassel JK, Cherkin DC, Steuten L, Sherman KJ, Vrijhoef HJM. A systematic review of the evidence for the effectiveness of dance therapy. Alternative Therapies in Health and Medicine; c2011.
19. Tortora S. The dancing dialogue: using the communicative power of movement with young Children. Baltimore, MD: Paul H. Brooks; c2006.
20. Weisbrod J. Body movement therapy and the visually-impaired person. In Mason, K. C. (Eds.), Focus on Dance VII (pp.49-52). Washington, D.C: American Alliance for Health, Physical Education, Recreation and Dance; c1974.