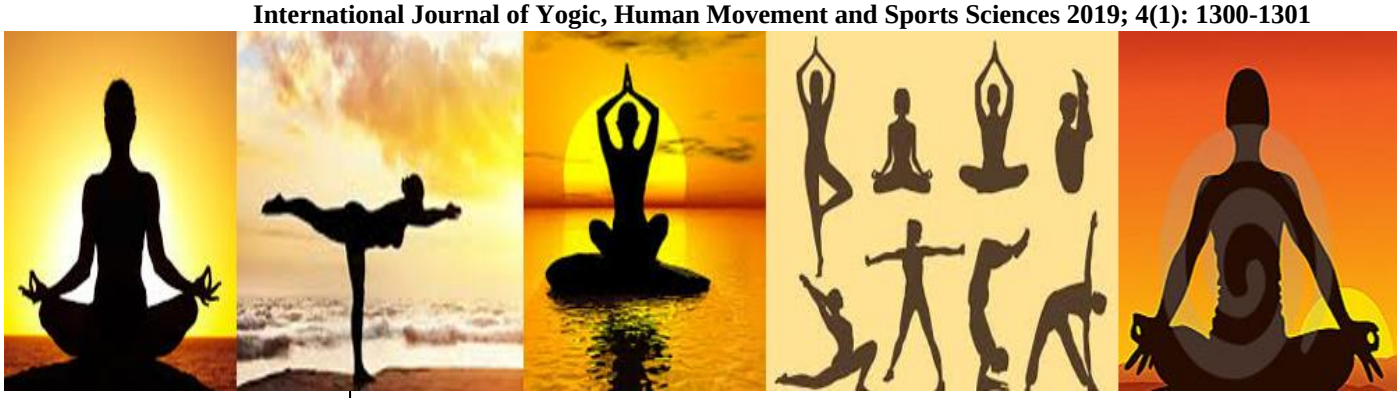
International Journal of Yogic, Human Movement and Sports Sciences 2019; 4(1): 1300-1301



ISSN: 2456-4419
Impact Factor: (RJIF): 5.18
Yoga 2019; 4(1): 1300-1301

www.theyogicjournal.com
Received: 24-11-2018
Accepted: 26-12-2018

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Effect of movement oriented music therapy and yoga on cognitive domain among mentally challenged children

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Abstract
The purpose of the study was to find out the effect of movement oriented music therapy and yoga on Cognitive Domain among mentally challenged children. To achieve this purpose, forty mild (educable) mentally challenged children were randomly selected from Mithra School, Kilpauk, Chennai. The subjects who were adolescent boys and girls ranged 12 to 17 years of age. They were randomly divided into two equal groups. Experimental group 20 mild mentally challenged children and control group 20 moderate mentally challenged children. The subjects were trained for 12 weeks with movement oriented music therapy like yoga, aerobics, calisthenics, and music therapy. The Cognitive Domain (Memory and Attention focus) selected as a criterion variables were recorded prior, mid and immediately after the training program by test (identification and reading) through the special educators. The 2 way repeated measures of ANOVA were applied to find out the significant difference if any in the criterion variables between pre mid and post-tests. The result of the study revealed that there was significant differences on Cognitive Domain (Memory and Attention focus) after a training period of 12 weeks.

Keywords: Cognitive domain, music therapy

Introduction
The power of music was recognized by the ancient people as a means of promoting health and well-being. Plato, Pythagoras, and even the apostles in the Bible wrote on the restorative and healing qualities of music [1]. The discipline of music therapy is a modality that harnesses the power of music to effect positive changes in individual. The health benefits of music to patients in Veterans Administration hospitals following World War II became apparent, leading to its use as a complementary healing practice. Musicians were hired to work in hospitals [2]. Degrees in music therapy became available in the late 1940s, and in 1950, the first professional association of music therapists was formed in the United States. The National Association of Music Therapy merged with the American Association of Music Therapy in 1998 to become the American Music Therapy Association [5].
Music can be beneficial for anyone. It can be used therapeutically for people who have physical, emotional, social, or cognitive deficits. Those who are healthy can use music to relax, reduce stress, improve mood, or to accompany exercise [3]. There are no potentially harmful or toxic effects. Music therapists help their patients achieve a number of goals through music, including improvement of communication, academic strengths, attention span, and motor skills. They may also assist with behavioral therapy and pain management [4].

Methodology
To achieve this purpose, forty mild (educable) mentally challenged children were randomly selected from Mithra School, Kilpauk, Chennai. The subjects who were adolescent boys and girls ranged 12 to 17 years of age. They were randomly divided into two equal groups. Experimental group 20 mild mentally challenged children and control group 20 moderate mentally challenged children. The subjects were trained for 12 weeks with movement oriented music therapy like yoga, aerobics, calisthenics, and music therapy [7]. The Cognitive Domain (Memory and Attention focus) selected as a criterion variables were recorded prior, mid and

immediately after the training program by test [6] (identification and reading) through the special educators.

Analysis and Interpretation of the Data

The following statistical procedures were used to analyze the obtained data. The 2 way repeated measures of ANOVA were applied to find out the significant difference if any in the criterion variables between pre mid and post-tests. To test the level of significance of difference between the means 0.05 level of confidence was fixed.

Results and Discussion

The statistical analysis comparing the initial, mid and final means of Cognitive Domain Memory and Attention focus due to the music oriented movement therapy of mentally challenged children presented in table and graphs.

Table 1: The Mean and Standard Deviation on Memory of Pre Test, Mid Test, Post Test of Mentally Challenged Children

Groups		Pre test	Mid test	Post test
Experimental group	Mean	6.95	7.40	8.05
	SD	1.316	1.142	.759
Control group	Mean	6.05	5.75	5.80
	SD	1.820	1.802	1.673

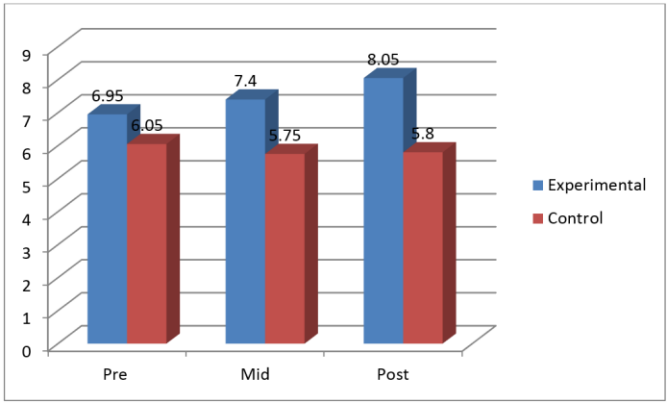

Fig 1: Mean Scores of Pre Test, Mid Test, Post Test of Experimental and Control Group on Memory

Table 2: Two way repeated measures of Anova on Memory of Experimental and Control Groups among Training

Source of Variance	Sum of Squares	df	Mean Squares	Obtained F-ratio
A factor (Group)	76.8	1	76.8	10.1*
B factor (Trial)	3.612	19	3.61	18.8*
AB factor (Interaction) (Group and Trial)	9.11	1	9.11	41.84*
Error I	90.000	19	4.737	

*Significant at 00.05 level

From the above Table, the obtained F-ratio value of interaction factor A x B (group x trial) is 41.84, which is greater than the table value of 4.38 with df 1 and 19 required for significance at 0.05 level of confidence. The result of the study shows that there is a significant difference among the paired means of interaction factor A x B (group x trail) on Memory.

Table 3: The Mean and Standard Deviation on Attention Focus of Pre Test, Mid Test, Post Test of Mentally Challenged Children

Groups		Pre test	Mid test	Post test
Experimental group	Mean	5.55	6.45	7.50
	SD	1.316	1.099	.827
Control group	Mean	5.05	4.55	4.55
	SD	1.731	1.538	1.468

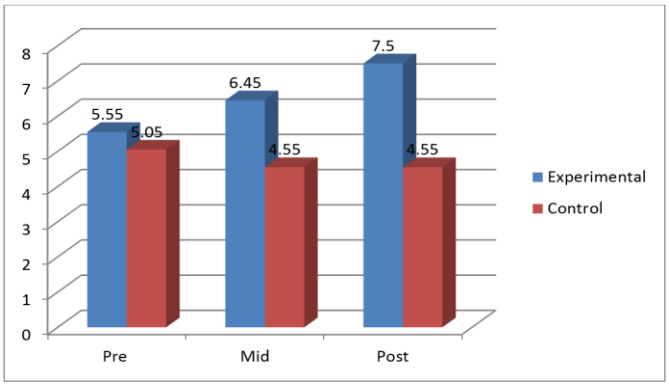

Fig 2: Mean Scores of Pre Test, Mid Test, Post Test of Experimental and Control Group on Attention Focus

Table 4: Two way repeated measures of Anova on Attention Focus of Experimental and Control Groups among Training

Source of Variance	Sum of Squares	df	Mean Squares	Obtained F-ratio
A factor (Group)	95.40	1	95.40	16.51*
B factor (Trial)	10.41	19	10.41	48.46*
AB factor (Interaction) (Group and Trial)	9.80	1	9.80	50.32*
Error I	88.09	19	4.63	

*Significant at 00.05 level

From the above Table, the obtained F-ratio value of interaction factor A x B (group x trial) is 50.32, which is greater than the table value of 4.38 with df 1 and 19 required for significance at 0.05 level of confidence. The result of the study shows that there is a significant difference among the paired means of interaction factor A x B (group x trail) on Attention focus.

Conclusions

1. It was concluded that the movement oriented music therapy and yoga had significantly improved Memory as a Cognitive Domain.
2. It was concluded that the movement oriented music therapy and yoga had significantly improved Attention focus as a Cognitive Domain.

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