

EFFECTIVENESS OF MUSIC THERAPY AS A THERAPEUTIC INTERVENTION ON BEHAVIOR AMONG AUTISTIC CHILDREN IN SELECTED SPECIAL SCHOOL

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Abstract

Autism, otherwise referred to as autism spectrum disorder (ASD), is described as a complex progressive condition among children, instigating behavioral disabilities, communication, and social interactions. Music is a domain in which people with Autism Spectrum Disorder- have retained talents and interests. Autism patients generally have intact or better pitch and timbre processing ability, enhanced melodic memory, preserved abilities to grasp and process melodic complexity and intact rhythm synchronization capabilities. " Music can alter human behavior in obvious, traceable, measurable, and predictable ways through affecting the brain and other physical components. It is the only sensory event that can simultaneously stimulate all sections of the brain. Music therapy is a well-established profession that employs music to help people with their physical, emotional, cognitive and social needs. Making music, singing, dancing to music and listening to music are all examples of music therapy practices. The global incidence of autism has raised up. Comprehensive electronic search of key words, "Music Therapy.", "autism interventions", and Vagus Nerve Stimulation "was done in internal electronic databases such as PubMed, ,Scopus, Google Scholar and Google books between 2000and 2021.**Objective;**This study intends to, assessing the behavior before and after the intervention, Effectiveness of the post intervention behavior, to associate the pre interventional findings with selected demographic variables. A experimental research design was adopted with 12 samples who met with the inclusion criteria. Data analyzed through descriptive and inferential statistics. with the Post test I; Mean 105.58 and SD 19.95, Post test II; Mean 79.17 and SD 21.47, Post test III; Mean 72.83 and SD 9.81. The study shown highly significant.

Keywords: Music Therapy, Therapeutic Intervention, Behavior, Autistic Children.

INTRODUCTION

Autism spectrum disorders have gotten a lot of press lately, especially among children. In recent years, the number of people diagnosed with autism has risen considerably. Autism has also been a more typically diagnosed childhood brain condition. These patients exhibited a wide range of behavioral issues and were less effective communicators. ^[19] Increasing in ASD global incidence indicates that environment may be a significant component for in its etiology. Genetic is the main role in majority of people with autism. Autism revealed in early childhood. Children with autism have repetitive patterns in their behaviors and activities and non-verbal communication. Lots of evidence show the importance of early interventions for improving cognitive ability, language and adaptive skills. Music therapy uses music as a safe method as one expression, organized with combination of sound such as intensity, rhythm, and pitch. The majority of the children respond positively to music. Music therapy evokes them for social engagement and practice of social skills in therapy sessions they are included to be active singing or playing the instruments or listening the music. The services can be provided with the participation of families and treatment teams. Music therapy offered in schools, homes, music therapy clinics or hospitals. Music therapy

can leads to joint attention and also help boost nonverbal communication skills in therapy procedure and socio emotional reciprocity. Music therapy affect via its music and music affects via vagus nerve. Music stimulates the vagus nerve, which in turn stimulates the ANS system via VNS and relaxes the body. It means music activates PNS and have prominent role in relaxation of body systems.

METHODS AND MATERIALS

A evaluative research approach with Experimental research design was used to conduct study at Vihang special school, Aurangabad. Total 12 sample of autistic children was participated using Random sampling technique. The criteria for the sample selection was who are clinically diagnosed autistic children with the age 5 to 18 years, condition mild to moderate, who are attending special school, Parents who were given willingness to participate themselves and their children in the study. The data collection was done with prior permission from the principal of special school and Ethical clearance was obtained from the institution.(Dr.D.Y.Patil Vidhyapeeth,Pune).The investigator written the consent from parents and assent from participants. The tool consists of Section; A-Demographic variables, Section-B; ISAA (Indian Scale for Assessment for Autism).Section –C; Pilu- Raga.to assess the behavior on autistic children. Data collection period was 10 weeks with 16 sessions of music therapy and 3 posttest done with 2 weeks once.

RESULT AND DISCUSSION

Section; A; Description of the demographic variables of study population

Majority of autistic children were 8(66.7%) aged between (5-10 yrs.),Most are male 8(66.7%), Diagnosis of autism at age group 4-6 yrs. 8(66.7%),Joint family 8(66.6%),Residence 8(66.7%) from rural, Father education 7(58.45%) not had formal education, Mother education 4(33.3%) had higher secondary and primary school education respectively, Consanguinity 6(50%) consanguineous and 6(50%) non consanguineous, Child birth order 6(50%) first child birth order, Age of mother at conception up to 25 yrs 5(41.7%),History of complications during conceptual period 9(75%) were un-eventual, Health status of baby at birth 7(58.3%) were normal, Family history of disability 7(58.3%) were not had, Motor and speech development mile stones 9(75%) were delayed, Any kind of treatment child received 8(66.7%) were not had availed.

Table 1: Frequency and percentage wise distribution of pre-test, post-test-1, post-test-2 and post-test-3 of the level of autistic behavior among autistic children in Experimental group[Music Therapy group]. (N=12)

Level of autistic behavior	PRETEST		POST TEST 1		POST TEST 2		POST TEST 3	
	N	%	N	%	N	%	N	%
No Autism (< 70)	0	0	0	0	0	0	0	0
Mild Autism (70 to 106)	3	25	8	66.7	10	83.3	11	91.7
Moderate Autism (107 to 153)	9	75	4	33.3	2	16.7	1	8.3
Severe Autism (>153)	0	0	0	0	0	0	0	0
Total	12	100	12	100	12	100	12	100
Mean+Standard deviation	124.50+25.3		105.58+19.95		79.17+21.47		72.83+9.81	

Table 1: shows that frequency and percentage wise distribution of pre-test, post-test-1, post-test-2 and post-test-3 of the level of autistic behavior among autistic children in Experimental group [Music Therapy group].

In pretest, Majority of the autistic children 9(75%) had Moderate Autism and 3(25%) had Mild Autism and the mean and standard deviation the level of autistic behavior among autistic children is (124.50±25.3) respectively. In post- test 1, Majority of the autistic children 8(66.7%) had Mild Autism and 4(33.3%) had Moderate Autism and the mean and standard deviation the level of autistic behavior among autistic children is (105.58±19.95) respectively. In post- test 2, Majority of the autistic children 10(83.3%) had Mild Autism and 2(16.7%) had Mild Autism and the mean and standard deviation the level of autistic behavior among autistic children is (79.17±21.47) respectively. In post- test 3, Majority of the autistic children 11(91.7%) had Mild Autism and 1(8.3%) had Moderate

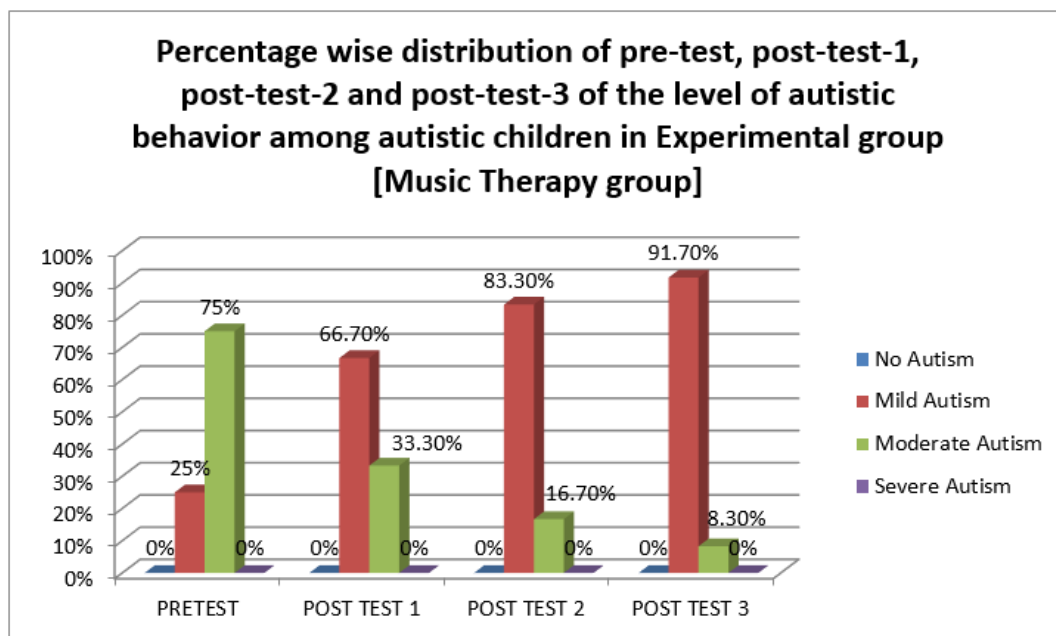


Figure 1: Percentage wise distribution of pre-test, post-test-1, post-test-2 and post-test-3 of the level of autistic behavior among autistic children in Experimental group [Music Therapy group]

Table 2: Effectiveness of the level of autistic behavior among autistic children in Experimental group [Music Therapy group]. (N=12)

Level of autistic behavior							
GROUP	TEST	MEAN	STANDARD DEVIATON	MEAN DIFFERENCE	't' VALUE Paired -t test	df	'p' VALUE
Experime ntal group [Music Therapy group]	Pretest	124.50	25.3	18.9	2.28	11	0.04 *S
	Posttest 1	105.58	19.95				
	Pretest	124.50	25.3	45.3	6.0	11	0.001 **HS
	Posttest 2	79.17	21.47				
	Pretest	124.50	25.3	51.6	5.88	11	0.001 **HS
	Posttest 3	72.83	9.81				

**-p < 0.001 highly significant , S – Significant, NS-Non Significant.

Table 2 shows that, Effectiveness of the level of autistic behavior among autistic children in Experimental group [Music Therapy group].

The mean score of Effectiveness of the level of autistic behavior among autistic children in Experimental group [Music Therapy group] in the **pre-test** was 124.50 ± 25.3 and the mean score in the **post-test 1** was 105.58 ± 19.95 . The calculated **paired 't' test** value of $t = 2.28$ shows **statistically significant** difference of Effectiveness of the level of autistic behavior among autistic Experimental group [Music Therapy group].

The mean score of Effectiveness of the level of autistic behavior among autistic children in Experimental group [Music Therapy group] in the **pre-test** was 124.50 ± 25.3 and the mean score in the **post-test 2** was 79.17 ± 21.47 . The calculated **paired 't' test** value of $t = 6$ shows **statistically highly significant** difference of Effectiveness of the level of autistic behavior among autistic children in Experimental group [Music Therapy group].

The mean score of Effectiveness of the level of autistic behavior among autistic children in Experimental group [Music Therapy group] in the **pre-test** was 124.50 ± 25.3 and the mean score in the **post-test 3** was 72.83 ± 9.81 . The calculated **paired 't' test** value of $t = 5.88$ shows **statistically highly significant** difference of Effectiveness of the level of autistic behavior among autistic children in Experimental group. [Music Therapy group].

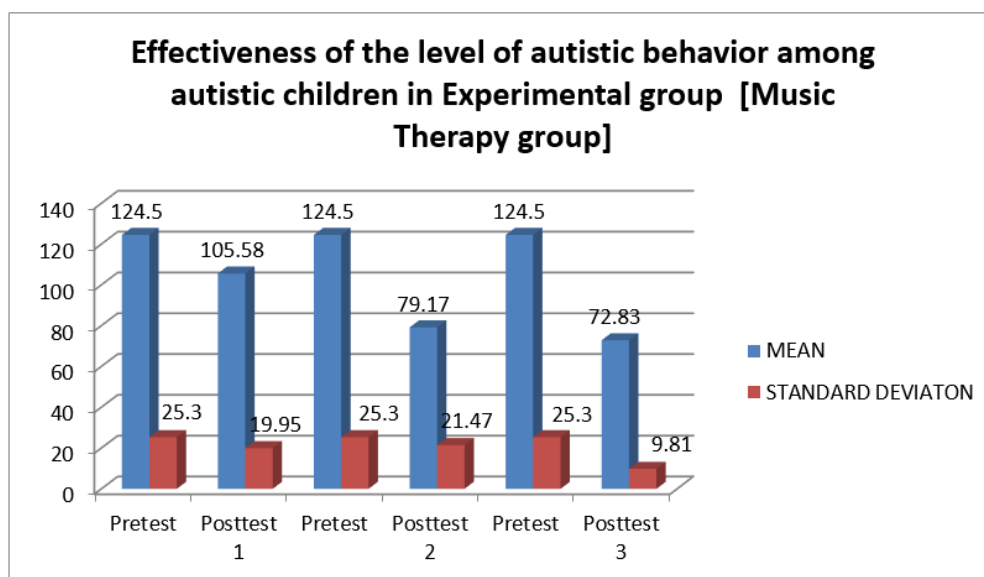


Figure 2: Effectiveness of the level of autistic behavior among autistic children in Experimental group [Music Therapy group].

CONCLUSION

All beings produce, have, send and receive the energy from different sources. Energy makes human alert and defines whether sick or not music is one of energy that is utilized daily and use of music as a therapeutic tool is very useful for the autistic children. It was concluded from the study that the behavior of autistic children was found poor adaptation behavior before the administration of Music therapies on Autism. The Music therapies are more helpful on Autistic behavior which was evident in the post test significant of the study.

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Conflict of Interest: Author declare no conflict of interest.

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