

Effect of Rhythmic Music on Learning in Students with Autism in Iran

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ABSTRACT: *Autism, or autism spectrum disorder, refers to a range of conditions characterized by challenges with social skills, repetitive behaviors, speech and nonverbal communication, as well as by unique strengths and differences. Autism's most-obvious signs tend to appear between 2 and 3 years of age. In some cases, it can be diagnosed as early as 18 months. Some developmental delays associated with autism can be identified and addressed even earlier. Autism Speaks urges parents with concerns to seek evaluation without delay, as early intervention can improve outcomes. One of the therapies for children with autism, is music therapy. Music helps children to the coordination or integration between emotions find their meaning in other emotions between hearing and listening to music harmony exists that can be very effective in the treatment of these children. Another thing about music web with autism arises, this is the hidden talents in their musical education. Music helps these children to achieve harmony or integrity between their feelings, that is, between hearing and other emotions when there is a harmony of music that can be very effective in the treatment of these children. The other thing about music and children with autism is to develop the latent talent in the field of music.*

Keywords: *Autism, musical education, harmony, integrity*

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I. INTRODUCTION

Autism is a developmental disorder (a type of social relations) with which communication behaviors, verbal abnormal is determined. Symptoms of this disorder occurs before the age of three and the main reason is unknown. The disorder is more common in boys than girls. Economic, social, lifestyle and socioeconomic status does not play a role in autism. This disruption of normal brain development in the areas of social interaction and communication skills affect. Children and adults with autism, communication verbal and nonverbal, social interaction and activities related to the game, have a problem. From 60 to 70 live births in the world, a person with autism. Experts believe that, machine life and its related factors such as stress is known to the increasing risk of the disease involved. Results of a study showed that women who are obese or diabetic, if they become pregnant than normal mothers face the possibility of having a baby with autism.

Leo Kanner first identified autism in 1943. Kanner estimated that autism occurs in approximately four out of every ten thousand children (Kanner, 1943). Autism is "the second most common developmental disability...even more common than Down syndrome" (Division TEACCH, 2006, 1). According to Tidmarsh and Volkmar (2003), autism is considered to be a delay in social development, in language, or in symbolic play must be present before age 3 years. A typical example is a 3-year-old child who does not speak and does not respond when parents call his or her name. Such children seem to be in their own world when left alone; in day care, they tend to isolate themselves from the group. They do not play with toys but, instead, perhaps repetitively stack blocks or push a toy car back and forth while lying on the floor. They are sensitive to loud noises and cover their ears when trucks pass by. They flap their hands and turn their bodies in circles. (2003, 6) Children who are diagnosed with autism begin showing symptoms before the age of three. Some of the symptoms include: problems with language development, problems with engaging in social interactions, and highly focused and repetitive actions and interests in objects (Division TEACCH, 2006). Autism is considered a spectrum disorder. According to the DSM-IV (Diagnostic and statistical manual of mental disorders, Vol. 4), there are several different types of disabilities classified under the autism spectrum. These include: Asperger's syndrome, pervasive developmental disorder (PDD), and autism or autistic disorder. Each of these types ranges in severity from mild to severe (American Psychiatric Association, 1994). "Asperger's disorder is a milder variant of autistic disorder. The name "Asperger" comes from Hans Asperger, an Austrian physician who first described the syndrome in 1944." (Asperger's Disorder Homepage, 1996, 1). Pervasive developmental disorders are characterized by severe and pervasive impairments in several areas of development: social interaction skills;

communication skills; or the presence of stereotyped behavior, interests, and activities (American Psychiatric Association, 1994).

This disorder is difficult for them to communicate with others and the outside world. In some cases, self-injurious behavior and aggression too. In these repetitive movements (hand flapping, jumping), unusual responses to people or attachments to objects and resistance and may also be seen against the five senses (visual, auditory, tactile, olfactory and gustatory) also unusual sensitivity to be seen. The core disorder of autism, impaired communication .autism in children is defined as children living in a world of their own. According to Leo Kanner (1943) autism refers to individuals who lack the capacity to adapt themselves to their environment in the normal way. Currently, one challenge in the Malaysian education system is to shift the paradigm toward change in approach to the latest learning using technology, ICT such Facebook, YouTube, video, Twitter and others as alternative approaches. Special needs teachers need to look for new ideas and teaching aids which are attractive and suitable such as video for teaching students with autism.

Children with autism need effective communication strategies to support them in their interactions with others. To develop better communication skills, it is essential to develop receptive and expressive language skills as much as possible. Children with autism struggle daily with communication. There are many different approaches to teaching communication skills to individuals with autism. Music therapy is an emerging therapy approach to teaching a variety of skills to children with autism, and most importantly, communication skills. Music therapy can be a non-threatening and enjoyable way for many children who struggle with both expressive and receptive communication to find a way to let them be understood by others. Many parents report that communication is the most important skill they hope their child with autism will develop. Music therapy is a way to approach teaching communication that is both educational and functional for a variety of children on the spectrum.

One of the therapies for children with autism, is music therapy. Music helps children to the coordination or integration between emotions find their meaning in other emotions between hearing and listening to music harmony exists that can be very effective in the treatment of these children. Another thing about music web with autism arises, this is the hidden talents in their musical education. In this lies with recommendations for nurturing the talents of autistic children will be familiar. The fact is that some children with autism, the islands are undiscovered talents, that may genius in various fields such as music, math, smell and ... show and overall length, one of them in a certain sense, is strong. This, however, should know that these guys are so clear signs of the genius of the day you need to try to discover the talents we have, for example, in the movie "Rain Man" with a protagonist with autism face that can in short, all the phone numbers in the city to maintain. Some children with autism can even read text in a language other than their native language, without understanding the meaning of these words have. As we said, the culture and the talents of some of these guys, so it is clear that much needs to spend money to explore them. To discover the talents of normal children or children with autism just the way they recommend to families not, that does not pushing back on it, it is not necessary to force them to kill our desired direction; that's mean going to classes and intensive training for children with autism and a good way to discover talent dealing with this group of children whose parents do not know and do not need to resort to intensive training, your children will be hurt. (Johnson, 2007)

1.2. Purpose of Study

The purpose of this research and study is to explore the benefits of communication, if any, to using a music therapy approach to teach both verbal and non-verbal communication skills in a classroom setting with children diagnosed with moderate to severe autism. Prompted communication is language that is used after an appropriate model has been given. Spontaneous language can be gestured by the child, a physical response, a verbal response, or a response through the use of an alternative communication system or device, for example, PECS (picture exchange communication system) or an AAC (alternative assistive communication) device. These devices include both static and dynamic voice output systems. These systems allow a child to communicate with others when they are unable to do so verbally.

1.3 Research questions

This study was implemented in order to answer the following research questions:

1. What is the behavior of students with autism when learning with rhythmic music is being carried out?
2. What are the limitations of rhythmic music and how do we overcome them?

II. LITERATURE REVIEW

The American Music Therapy Association (2002) reports that music therapy enhances one's quality of life and can assist with the development of relationships. According to the American Music Therapy Association (2002): Music therapy is the clinical and evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship by a credentialed professional who has completed an

approved music therapy program...the prescribed use of music by a qualified person to effect positive changes in the psychological, physical, cognitive, or social functioning of individuals with health or educational problems. Music therapy is considered a powerful and non-threatening medium and because of its unique outcomes are possible. (AMTA, 2002) Music therapy is used in a variety of non-threatening mediums and with many different approaches. Gourney (1998) describes how music therapy is an evolving discipline. The American Music Therapy Association (2002) also reports that there are many different ways to use music with a therapeutic approach. Music therapists can be used to treat patients with Alzheimer's, people who are terminally ill, children and adults with a variety of special needs, individuals on chemical dependency, at-risk youth living in disadvantaged areas, teachers on the verge of burn-out, children with autism, and many others. Music therapy reaches a broad range of people with a variety of needs all over the world. Music therapy is performed by trained professionals and is most commonly used for individuals with special needs. The focus of music therapy is using a music approach towards development of goals in the areas of motor skills, social development, self-awareness, and cognitive development (Patterson, 2003).

According to Patterson (2003), the role of a music therapist in the school setting is to assess a child's needs and teach to academic and social skills in areas of deficit both with and without music. One purpose of using music in therapy is to use songs to teach a skill (Zoller, 1991). In his 1987 study, Hicks (as cited in Zoller, 1991) discovered that when he taught using rap music, children who were 3 and 4 years old learned more names of unfamiliar body parts as opposed to those who instructed without the rap music. There was a similar study in 1981 conducted by Get Ready Inc., which explored the use of rap music as a motivational tool to learning the eight parts of speech with fourth-grade students. The results showed a considerable increase in recognition with the group that received the rap music approach (Zoller, 1991). A music therapist is trained to implement strategies that will help to strengthen certain skills through participation in musical experiences (Patterson, 2003). The goal is to help all skills learned to generalize into everyday situations. The purpose of a music therapist in a school district is to use music to achieve non-musical goals in a classroom setting. Music therapists structure lessons around music or rhythm to teach skills such as math, reading, social skills, communication, and other areas of need. Music therapy is being used for a variety of children in the school systems, but research shows that it is particularly useful in addressing the specific needs of children on the autism spectrum (Thaut, 1998; Nordoff & Roberts, 1977). Gourney (1998) described the role of music therapists' work with teachers and other therapists, which is to plan and implement treatment tailored to a specific child's needs according to the Individual Education Program (IEP). Music therapy, as a service provided according to an IEP, is recommended when it has a certain level of significance in motivation and or benefit towards a child's educational program (Patterson, 2003). This therapy service falls under the IEP category of related services.

Related services are services that may include corrective, developmental, or support services, such as music, art, and dance therapy (Patterson, 2003). The US Department of Education (1999) reports if these services are necessary in assisting a child with special needs to benefit from special education in order to be given free and appropriate public education (FAPE), then the service is considered a related service. Parents have had a difficult time getting school districts to provide music therapy as a related service. In response, Dr. Kenneth Warlick (2000), director of the Office of Special Education Programs for the Department of Education, states: "If the IEP determines that music therapy is an appropriate related service for a child, the team's determination must be reflected in the child's IEP, and the service must be provided at public expense and at no cost to the parents" (p. 28-32).

III. METHODOLOGY

The design used in this study was a One-Group Pretest-Posttest Design. This design was selected to determine the effects of the treatment by comparing pretest and posttest scores. Pretest from all six children during small group sessions allowed for a comparison of growth to be determined after treatment with the use of a posttest. A pretest and posttest were done through observations in the classroom setting during twenty-minute group sessions. Each pretest and posttest was a combination of three sessions that were compiled to get a mean score for each child. Tally marks were documented for each incident of communicative intent from each child during a twenty-minute work session.

3.1 Setting

The school district in which this study was in Aeein Mehrvarzi School in Tehran. There are 52 students in this school but for our study we collected randomly 6 students from 7 to 9 years old.

3.2 Materials

The subjects who were exposed to the music therapy approach during treatment sessions were exposed to music developed by Coast Music Therapy. The program used is called Tuned In to Learning (CMT, 2005).

The program had a 100- page spiral-bound book with photographs corresponding to the song lyrics but not use all pages. (Only according to student level)

3.3 Procedure

The subjects were selected from the six participants (divided two groups, each group include 3 students) available for inclusion in the study due to accessibility to subjects diagnosed with autism. The investigators are the classroom teacher who performed this study and the music therapist assigned to this classroom. The music therapist was essential for the study because a licensed therapist is necessary for providing therapy in the classroom setting. The investigator and the music therapist worked collaboratively with the subjects, both collecting data and teaching sessions. The study lasted over nine days, involving twenty-minute sessions for each group. In order to address the issues of history and maturation associated with this study design, the subjects received the nine sessions in a short period of time. All the subjects received the same treatment for the first three days, or baseline period. During the next three days, the subjects received the treatment of teaching using a music therapy approach. On the final three days, the group received the same treatment as they had during the first three days.

IV. RESULTS

All tables show the number of attempts to communicate by eye-contact, nonverbal communication (gestures, pointing, touching materials or observer) and verbal communication, during pre-test sessions, music therapy sessions, and post-test sessions. Each subject had ten opportunities to communicate during each session. The investigator documented each incident of communication by tallying on a data sheet For each session. Median scores were taken for each scoring period: pre-test, intervention of the music therapy approach, and post-test. The tables represent the scores from each subject across all sessions.

Figure 1. The average of group A scores

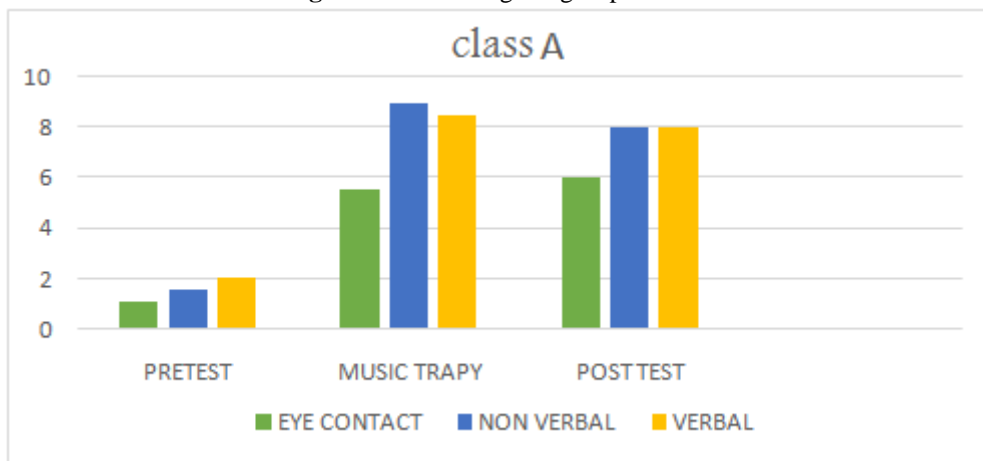


Figure 1. The average of group A scores in Growth Chart

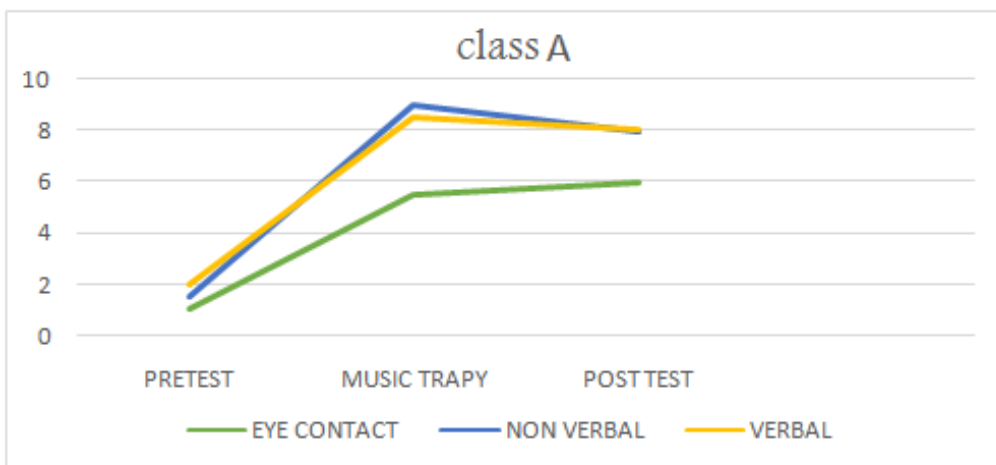


Figure 1. The average of group B scores

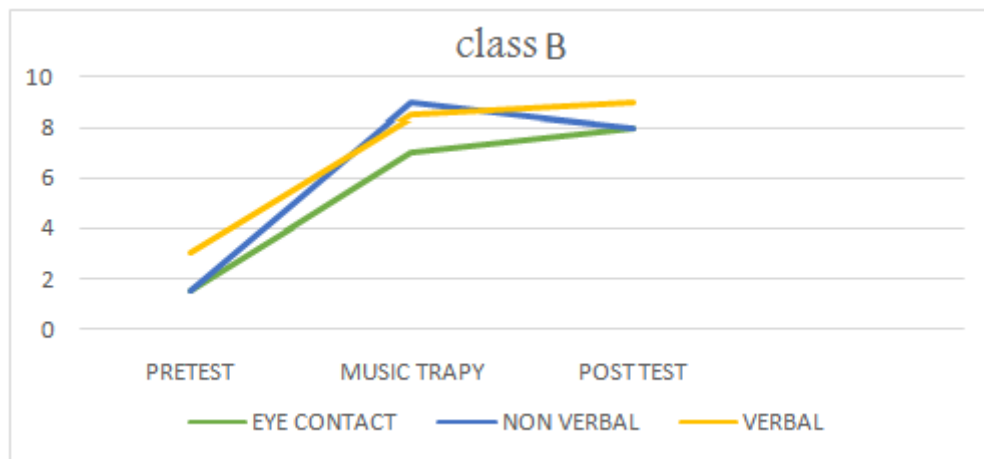


Figure 1. The average of group B scores in Growth Chart

V. CONCLUSION

The use of a music therapy approach to teaching students with severe autism was effective for all six children. When the pre-test sessions began, each child had an area of communicative weakness and most of the subjects had a preferred method to communicate either non-verbally or verbally. After analyzing the data, most of the subjects increased their use of eye-contact both during the music therapy approach sessions and during post-test sessions. The majority of increases in all three of the communication areas were most prevalent during the music therapy approach sessions. This increase in communication is Encouraging shows that children with autism do benefit from a music therapy approach to learning. Because the children all did not sustain the same levels of communication during the post-test phase, one could assume that they benefit from the music therapy approach.

Music and sounds of harmonies are very useful to the human brain, so that music can be used as a therapeutic remedy. One of the treatments for children with autism is music therapy. Music can be an effective weapon to enhance the cognitive and motor abilities of children with autism. Music helps these children to achieve harmony or integrity between their feelings, that is, between hearing and other emotions when there is a harmony of music that can be very effective in the treatment of these children. The other thing about music and children with autism is to develop the latent talent in the field of music.

REFERENCES

- [1]. Autism, American Psychiatric Association (2000). «Diagnostic criteria for 29900 Autistic Disorder». Diagnostic and Statistical Manual of Mental Disorders (4th, text revision (DSM-IV-TR) ed.). ISBN 0-89042-025-4.
- [2]. Myers SM, Johnson CP, Council on Children with Disabilities (2007). «Management of children with autism spectrum disorders». Pediatrics 120 (5): 1162-82. doi:10.1542/peds.2007-2362. PMID 17967921. [5]. Lay summary – AAP (2007-10-29).
- [3]. rmdt TL, Stodgell CJ, Rodier PM (2004). «The teratology of autism». Int J Dev Neurosci 22 (2): 189-99. doi:10.1016/j.ijdevneu.2004.11.001. PMID 15749245.
- [4]. Patterson, A. (2003). Music teachers and music therapists: Helping children together. Music Educators Journal, 89(4).
- [5]. Pronovost, W. (1961). The speech behavior and language comprehension of autistic children. Journal of Chronic Diseases, 13, 228-233.
- [6]. Shore, S. (2003). The language of music: Working with children on the autism spectrum. Journal of Education, 183(2).
- [7]. Stokes, S. (1999). A developing expressive communication skills for non-verbal children with autism. Retrieved November 4, 2006, from
- [8]. www.cesa7.k12.wi.us/sped/autism/nonverbal/non11.htm
- [9]. Thaut, M. (1998). Measuring musical responsiveness in autistic children: A comparative analysis of improvised musical tone sequences of autistic, normal, and mentally retarded individuals. Journal of Autism and Developmental Disorders, 18(4).
- [10]. Thaut, M. (2000) Transformational design model for functional music therapy practice. Retrieved September 1, 2006, from <http://coastmusictherapy.com/otreatment.html>

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