

ROLE OF MUSIC THERAPY ON OVERALL SKILLS DEVELOPMENT AMONG CHILDREN WITH AUTISM SPECTRUM DISORDER: A REVIEW OF LITERATURE

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ABSTRACT

Autism is a common Pervasive Developmental Disorder (PDD), a long-term developmental and environmental disorder found in children. Autism is caused by chromosomal anomalies as well as maternal viral infections. In this particular kind of disease, one cannot synchronise himself or herself with the outer world. Symptoms include muteness, mental retardation, and the development of lesser or non-communication skills. Medication is not a cure for autism. Also, autism, along with Asperger Syndrome, PDD not otherwise specified (PDD-NOS), and Autism together are called Autism spectrum Disorder (ASD). Music therapy can be used as a remedial therapy in the treatment of Autism and ASD. Music contains rhythm, melody, tune, harmonic, and dynamic structures, which together can create miracles and provide positive results in cases of ASD if they are used systematically and skilfully. This paper represents some discussions about autism and ASD by some previous workers to show the effectiveness of music therapy in the case of Autistic patients and how music triggers any change in their behaviour, finally concluding if music therapy can be used as a remedy for autism and ASD.

Keywords: *Autism, Music therapy, ASD, autism and music therapy*

INTRODUCTION

Autism is a long-term developmental disorder. Generally, symptoms of autism develop within the first three years after the birth of a child. They face difficulties in social interaction and communication. Infections during pregnancy like Rubella, toxins and poisons like alcohol, cocaine, BHC, and DDT, like pesticides, and some autoimmune diseases (APA, 2013)

Commonly, Autism comes under Pervasive Development Disorder (PDD). Pervasive Development Disorder is characterised by a wide range of abnormal behaviours regarding social perspective and communication. The affected person may be identified by several repetitive behaviours and have a lesser interest in the outer world or in rational things or emotions (WHO, 1992).

Speech and language Therapy, social skill therapy, Applied Behaviour Analysis (ABA), structured teaching, etc. A treatment procedure called Early Intensive Behavioural intervention requires 30 hours of treatment each week. Some interventional strategies use the parent training model, where they train parents all the aforesaid techniques so that they can deliver them to their child at any time. Many interventions and treatments being used with affected children with ASD do not have experimental evidence to prove their effectiveness (Heflin and Simpson 1998).

Music therapy is a previously proven highly effective therapeutic use of music to enhance an affected child's quality of life. Therapists, who can use music in various diversified ways that may affect the physical, emotional, mental, social, aesthetic, spiritual, etc. domains of clients, can also help improve their health and education by utilising active music experiences and passively receptive musical experiences. All of these experiences include improvement, entertainment, communication, different receptive methods, and the confabulation of music. "Singing and instrumental activities might have helped our species refine motor skills, paving the way for the development of the exquisitely fine muscle control required for vocal or signed speech." (Levin, 2007).

AUTISM

Autism was discovered by Swiss psychiatrist Eugen Bleuler in 1912 while defining a treatment for him diagnosed as schizophrenia (Eugen Bleuler, 2010). The term autism is derived from the Latin term *autismus*, which means lesser thoughts of logical sense in patients with psychiatric problems (Wells, 1919). Though the clinical terminology was coined in

1912, autism has a prolonged history dating back to the 1970s (Haslam, 1809/1976). Of every 160 children in the world, one is affected by autism (WHO).

Autism is one of the most critical Pervasive Development Disorders, a critical disorder that is totally influenced by genes and environment as well. Autistic patients generally cannot communicate with the outside world as their brain and body cannot sync together. Generally, children of 1 to 3 years of age first start to show the classical symptoms of autism.

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Commonly, Autism is a form of Pervasive developmental Disorder (PDD). Characteristics of Pervasive developmental Disorder include a wide range of abnormalities with public interaction and interpersonal communication, which obviously results in lesser interest in rational phenomena and repetitive activities sometimes.

- Asperger Syndrome has almost similar symptoms and causes to autism, but typically strong verbal language skills and intellectual ability differentiate it from other autism problems.
- Rett syndrome is a genetic brain disorder characterised by problems with language development, coordination, and repetitive movement in girls. Symptoms develop within the 6th–18th month after birth.
- Childhood Disintegrative disorder, also called Heller’s Syndrome, is sometimes called regressive autism because of its symptoms.
- PDD-NOS means Pervasive Development Disorder not otherwise specified. It is also termed as atypical Autism.

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Asperger Syndrome, PDD not otherwise specified (PDD-NOS), and Autism together are called Autism spectrum Disorder (ASD).

The emergence of Autistic symptoms covers a wide spectrum, from a silent, introverted, isolated, ill-developed child to a highly functioning but oddly pedantic communication skill-bearing individual. Sometimes Autism can be further divided into three categories based on

the IQ threshold level and according to the help and support they need. They are: high-functioning autism (HFA), medium-functioning autism (MFA), and low-functioning autism (LFA).

Autism can also be divided into Syndromes (severe intellectual disability) and non-syndrome (Congenital along with physical symptoms). It causes the loss of languages and other features that may sometimes cause regression but sometimes not. Autism has a distinct triad of symptoms that include genetic, cognitive, and neural levels. The genetic cause of autism is due to deletion, duplication, and inversion of chromosomes. Maternal malnutrition and inflammation, autoimmune disease, plastic product pesticides, smoking, illicit drugs, prenatal stress, etc. can cause Autism. The MMR vaccine can also cause outbreaks of disease (WHO, 1992).

The UN declared a total of 7 days related to health issues. Since 2008, April 2 has been designated as World Autism Awareness Day (UNO, 2008).

SYMPTOMS OF AUTISM

- Abnormal voice tone,
- Abnormal body postures,
- Abnormal facial expression,
- Poor eye sight, sometimes avoidance of eye contact,
- Discrete, monotonous or flat phonation,
- Limited interaction with society,
- Immense and acute concentration on a single topic,
- Less compassion and lack of emotion,
- Disturbed, pampered behavior,
- Lack in language comprehension,
- Delay in language development,
- Muteness,
- Preoccupation in specific topics,
- Problems in bi-directional conversation,
- Repeating words, phrases or sentences,
- Restless and repetitive movement,

- Abusive and self- aggressive behaviors,
- Lesser sleep,
- Retraction from social life,
- Unexpected reactions in social settings,
- Abnormal or improper use of words during conversation.
- Irresponsiveness in social stimulus,
- Difficulties in acquirement,
- Mental retardation,

MUSIC THERAPY

Music is a healer. Music therapy has been found to be an effective way to fight autism. Now the question arises of what music therapy actually is. The description of music therapy may be described as – a complicated process by which the therapist helps his or her client to live a quality life, which can also result in a healthy life with the help of music. Music experience develops a relationship between therapist and client that results in the promotion of health and wellness (Bruscia, 1998). Too many early studies have shown different therapeutic values for Music therapy.

Various techniques can be used in Music therapy to improve different cognitive, motor, communication, etc. areas of the affected child. Some of these are:

- Morning Greetings: Individually composed songs implemented by the therapist for Morning Greetings (Kern et al., 2007)
- Improve eye contact ability by starting and ending music when eye contact begins and stops (Starr & Zenker, 1998).
- Imitation, Awareness, Motor skills, and leadership—stop and start the game with a song (Woodward, 2004)
- Emotional expression and understanding: the playing of recordings of offhanded background music as a representative of a particular emotion at that time It is also possible to sing a song with exact lyrics that match an emotion or situation. (Katagiri, 2009)
- Inappropriate vocalisations: here the client listens and learns the songs related to a particular emotion, then sings the same song with an exact tune and modified lyrics related to social stories. (Pasiali, 2004)
- Self-care tasks: songs are composed by the therapist himself or herself to teach the client in a classroom within a playful environment. (Kern et al., 2007)

- Self-Expression: Different songs and situations are created in a structured and unstructured environment and delivered to the client. (Allgood, 2005)
- Attitude: Music and art therapy are provided to the child with a definite curriculum (Hairston, 1990), and musically adapted social stories are played before them (Edgerton, 1994).
- Outdoor play: Here a musical playground is designed, where the therapist allows the child to be set free with songs composed for individual use, creating a playful environment around the client. Kim et al. (2008)
- Receptive Communication: Improvisation of a Song (Donnell, 2007)
- Social Skill: Family-based social stories are applied to clients with changed lyrics (Hairston, 1990).
- Communication: here a special classroom is formed where art and musical intervention are incorporated together to get a more successful result. (Hairston, 1990)

Many interventions and treatments being used with affected children with ASD do not have experimental evidence to prove their effectiveness (Heflin and Simpson 1998). Many studies, both qualitative and quantitative, with smaller sample sizes have shown that in the case of autistic children, music therapy is an important and beneficial therapeutic procedure. (Accordino et al., 2007; New York State Department of Health Early Intervention Programme, 1999; Wigram & Gold, 2006).

Music therapy for ASD is generally individual therapy. Children with autism may be unresponsive in an emotional context, even to the structural complexity of music (Huron, 2001). It is also to be noted that a visible effect is seen with music therapy while studying person-to-person interaction and building social relationships in the case of a child with ASD (Wingram and Gold 2006).

HOW MUSIC THERAPY CAN BE EFFECTIVE IN AUTISTIC CHILDREN?

Melody, tune, rhythm, lyrics, etc.—the synchronisation of these elements makes music a perfect blend of emotion, so that Autistic and ASD patients show positive responses in proper musical circumstances.

Most autistic children do not respond to social appraisals like praise or affection, but music, which is inherently pleasurable, might be an important motivator or reinforcer in their development (Toigo, 1992). Autistic children have consistently shown unusual sensitivity and attentiveness to music (O'Connell, 1974).

Autistic children with language problems like immense silence, echolalia (immediate and delayed both), learning behaviour, simple conversation, repetitive activities, and pronunciation reversals (Kanner, 1946) Conclusions can be drawn as both the silent and the verbal autistic children had the same results when successful communication was set up. How language is used for various purposes, which are now seen as universal features of Autism (Frith, 1989).

Different studies of workers have shown that Music therapy in Autism can cause improvements in Vocal imitation skills (Saperston, 1982), Task accuracy (Burleson et al., 1989), self-expression (Cecchi, 1990), shopping skills (Staum & Flowers, 1984), etc. Autistic children have also been found to have deficits in means-end behaviours (Abrahamsen & Mitchell, 1990).

Music therapy may be considered helpful for autistic children to improve their outcomes at the primary level, but continuous practise with the same therapy may increase the level of improvement in outcome, especially in social interactions, verbal and nonverbal communication, socio-emotional reciprocity, and initiating behaviour, but the total outcome will depend on two chief factors, i.e., the specialised academic and clinical training of the music therapist (Geretsegger, et al., 2014). They administered 10 tests on 165 children for one to seven months to see the outcome and found positive results in ASD children with short- and long-term effects of Music therapy.

At the time of measurement of the effect of socio-emotional reciprocity by Music Therapy in Autistic children, it was revealed that children showed 'emotional synchronicity' (duration and frequency) and 'emotional synchronicity' (duration and frequency) after successful music therapy (Kim, 2006).

Children suffering from autism and ASD can identify single pitches more efficiently and retain them in their long-term memory than typically developing children; they can recognise tunes in major mode representing happiness as well as tunes in minor mode representing sorrow. It is also proven that Music therapy for Autistic Children shows more positive results than for Down syndrome-affected children in cases of showing emotions like anger, fear, love, etc. (Heaton et al., 2008).

Improvisational music therapy in autism is gaining rapid recognition and has proven effective in improving spontaneous self-expression, emotional communication, intrapersonal initiatives, responsiveness, and social engagement (Gold et al., 2006).

During Music therapy, the therapist first identifies musical elements (Rhythmic patterns, temporal beats, pitch range, contour, etc.). Autistic children's musical and non-musical behaviour requires an empathic, predictable, and supportive structure with music to attract and engage them in oral, non-verbal, and dynamic contexts, including vocal and instrumental interactive environments, eye contact, expressions, and changes in behaviour and activities. (Holck, 2007; Wigram, 2002).

Some of the workers suggested that music therapy in Autism should be excluded from the area of research as the autistic patient needs more sympathy and a humanitarian and friendly environment during their therapy, therapist and client both need some privacy and free space for an effective outcome of therapy, and a flexible but rigid systematic but scientific protocol should be followed in Music therapy courses (Thompson, 2012).

CONCLUSION

After much discussion on this topic, it has been proven that Music therapy has a positive effect on Autism and ASD patients. But it is also clear that proper Music knowledge, definite protocols, and systematic approaches are needed as much to imply music therapy in children. Proper music therapy can affect different domains of an autistic child, like emotional, behavioural, communicational, etc., but music therapy should be taken over a prolonged period to fetch the best result because practise makes those children with autism and ASD more efficient.

Music therapy may affect Vocal imitation skills, Task accuracy, self-expression, shopping skills, motivational behaviour, interpersonal communication and relationship-building skills, socio-emotional reciprocity, etc. Music therapy may directly or indirectly affect the verbal and nonverbal communication skills of children.

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