

Exploring the Impact of Music on Child Development

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Abstract: Music is a part of our life from the time we are born. It is a combination of melodies and harmony that one not only hears but also feels, touches the soul. It is the universal language that has the power to control our emotions -happy sad angry relaxed accepting. Scholars over years have proposed many functions that music and listening to music might fulfil a person. There are different theoretical approaches, different methods and different samples used, that have been provided a very heterogeneous picture about the applications of music therapy. To a child its parents baby talk is a powerful stimulus to the auditory and speech perception that he or she latter on develops into the baby talking. The song hummed to come the child acts as an accomplice and companion to the adult when he or she has moments of anxiety or euphoria. By this the emotional quality of life of the adults is tremendously affected and enhanced. Song and dance moving rhythmically to music develops articulation, motor perception and breath control even helping in their social perception and cognition, relationship and interaction. As the child finds it difficult to express the emotion, music is his getaway that enhances the sense of self awareness and the use of language, hearing and memory. Music helps in sharpening and fine tuning the five senses that are instrumental in assisting the children with psychological disorders. Music may be used as a tool to treat children those who need more focused clinical support.

Keywords: Music therapy, cognition, conduct, interpersonal skills, arousal regulation, mood regulation, child development, emotional development, psychosocial wellbeing.

1. INTRODUCTION

‘Music maketh Man’. Music is a warm and welcoming sound that is comprised of rhythms and harmonization, as well as tranquil tones. It may also be referred to as the art of composing such natural sounds with the help of instruments. Will that be the online definition of music? Isn’t the silence around us be the music to our ears & mind when we are in pain, frustrated by the hub of the maddening crowd of life? Yes, music can’t have any simplistic definition. Music as we know it consists of Sargan, Raaga, Taal, etc. It is the creation but not the created (composed by man), It is said the world began with the sound of ‘Om’ the primordial sound of the universe. Nature is full of music, the sound of the waterfall, flowing stream, rustling leaves, chirping of birds, cry of animals and more. Wolfgang Amadeus Mozart observed that music isn’t only in the compositions, but in the quietness between them,".

Music can be experienced all throughout the world. So, man is a part of this music. However, we have yet to understand the varied benefits of music in our daily mundane life. A lot of research is taking place every day as it is known that listening to music is when the whole brain is activated. As a result, Plato asserted that music education is a far more significant tool than many more, because the concord between the rhythm finds its road to the spirit. Training in music has also been shown to impact communication - speech improvement and attentional function. If we get interested in a certain genre of music, we listen to it frequently and unknowingly, unconsciously. Imbibe the culture and language which constitute it.

In the immediate wake of the pandemic, there was a spike in musical engagement and its perks. The Sudden lockdown adversely affected not only the old but even the young. Cooped up within the four walls of homes saw many mental problems and several suicides, abuse, etc. Music was the universal machine as it reduces pain, expression of anxiety. Despite the social distance, it assisted people in bonding.

Significance of the study:

Modern music therapy originated after World War 2 when musicians began to visit veteran hospitals to play for soldiers suffering from PTSD. Remarkable results were noticed where modern medicine failed music won. The question is, who is music therapy for? In my research I have tried to find an answer that is music therapy is for 'anyone' and 'everyone', 'anytime' and 'always'. It develops a sense of bliss and significance in children. As the baby responds it starts moving that is dancing- stress buster. A child starts communicating and socializing as music allows interaction. Light instrumental music helps the child explore, concentrate and gain other cognitive skills.

This paper will redound to the benefit of society as music plays an important role in nature and nurture. The youngsters are the immediate beneficiaries of this study's findings. Any advancement in classroom learning tactics can pave the path for student achievement and discipline, which are both vital for sustainability and growth in society. The research benefits the parents and teachers as they get the idea to include music in various aspects of life. For researchers, the study will help them uncover critical areas in music applicability. It will be beneficial to psychologists for the therapies to include under their practice. This study may be one of the bases for new theories for music.

2. LITERATURE REVIEW

Roberts et al., (2003, January) stated that 'music promotes experiences of the extreme for its makers and listeners'. According to their study, they suggested emotional 'sound' of music influences more than the lyrical aspect of it. In comparison to other more visual violent media, the effects of violent music lyrics are not that powerful in children. This may be because the child is unable to comprehend the lyrics and only be captivated by the visual violence with the music. Different children decipher differently so their reaction differs. Visual effects have a slight edge over audio. The study concluded that violent music videos have more repercussions on a child's mental state than violent music. According to the report findings, 20% of the male children and 60% of female children who were addicted to heavy metal or hard rock deliberately attempted suicide in the last 6 months in comparison with the 8% of male and 14% of female children who are fans of pop music.

Gold et al., (2004, July 19) did a report that investigated the effectiveness of therapy by music in children and teens with psychopathology. The authors were interested in analysing the magnitude of music therapy's impact depending on the type of pathology, the time of life of the client, the music therapy methodology, and the type of consequence. The meta-analysis included 11 studies with a total of 185 respondents. Music therapy was tested with no or just after music intervention in children and young adults with psychopathology. The authors of the study's clinical applications included that music therapy is the optimal mediator in the relationship factor for children with psychopathology. The findings of the researchers indicated that when concepts from several music psychotherapeutic approaches were blended, the result was particularly valuable to these children.

Kent (2006) considered that music has the ability to influence, induce and act on anyone and everyone who excites it and those who listen to it in different unique ways. To make this claim, the researcher conducted a 100-person poll of Liberty University students. Among them, there were music, science, healthcare, and psychology students. The author himself formatted and designed the survey which contained 9 MCQs and one fill in the blank. It was a word document: the duration of the study was one week. The author considered, children who were listening to music while studying for the debate. However, due to the limited size of the sample, the study may be regarded inconclusive. Also, the sample was from one campus only and one section that is Christians were polled.

Rickard et al., (2005, December) tried to assess neurobiological substantiation from human and correlative animal studies, determining that musical stimuli alter autonomic and neurological activity indexes, as well as synaptic plasticity. Understanding the effect of music on animal behaviour is vital in enhancing cognitive performance in humans. The study concludes that animal experiments can assist researchers in effectively grasping the cognitive and biological impacts of musical stimulation. When fowl were exposed to music, their sympathetic neural system activity increased. A key finding is that neurodegenerative pathologies like Alzheimer's are less likely to be influenced by music appreciation. However, a lot of ground has yet to be broken in connection to this. There is no solid proof that music can help humans function better cognitively. The difference between humans and animals is so compelling that the effects of music therapy of multi-layered complex humans have a long haul and are to be studied individually.

Crncec et al., (2006, August 20) investigated whether musical exposure and training can improve non-musical intellectual functioning skills in children across three disciplines of experimental research. The study looked at the relationship between engaged music listening and subsequent task execution (Mozart effect); music education; music

listening in the background. The minor effect in spatiotemporal comprehension is the key discovery. In addition, soothing music in the background appeared to be efficient in focusing youngsters and lowering arousal in special educational settings. This article covers a wide range of issues. The integration of music in education programs is a big question mark. The development of the physiological, psychological, cognitive, and affective processes should be emphasized. Studies on the Mozart influence in children are ambiguous. Music in the background can help youngsters with specific educational challenges relax and learn more effectively. More research is needed in this area. They recommended that by focusing solely on cognitive and academic progress, the intrinsic importance of music and its instruction should not be overlooked.

Nicholson et al., (2008, March 1) studied the interactions between the growing years of a child with their primary caregivers to their healthy development. Positive parental interactional skills such as responsiveness, tenderness, and empathy, as well as the lack of aggressive, unpleasant parenting impacts, are critical for a child's development. The authors considered parents and children who participated in 37 Sing and Group sessions held in the latter half of 2005. Participants' data were taken during pre and post sessions, as well as by health professionals during the first two and last two sittings. Some fundamental demographic data was requested from the parents. A questionnaire was sent to parents who attended the first and last sessions, as well as a post-survey to those who were unable to attend the last session.

This study is significant as it is the first to use validated measuring techniques to assess the short-term benefits of a music therapy parenting program, and it is also the second to use a repetitive measures strategy. Parental attitudes, child adjustment, and mental wellbeing all improved before and after the intervention, according to the authors. The findings revealed that music could be used therapeutically to improve a child's behaviour, interpersonal, and verbal ability, as well as encourage healthy parenting. However, further research is needed to pinpoint the exact mechanism at work.

Bhatara et al., (2008, April 3) conducted a study to explore if musical accompaniment had a distinct influence on social skills in children with autism spectrum disorder compared to normally developing groups. Responses were obtained from 33 youngsters with ASD, 25 of whom came from the Montreal Children's Hospital's special autism centre and 8 from private pupils with physical and mental challenges aged 10 to 19. There were no substantial disparities between the groups when a t-test was used to compare biological age and performance IQ. Years of acoustic effects revealed no change in the individual sample. On the Music Matching evaluations, the authors used a two-way test-retest method ANOVA with diagnostic as an on within factor. The animation styles had significant variances in Music Matching rankings. Bonferroni-adjusted correlation coefficients across animation styles portrayed that the subjects preferred to rank music snippets as best suited with the Theory of Mental animations compared with the Objective animations. Children with ASD offered better scores to animations with wider sociable complications after hearing the music and seeing the sensory images. The participants were found to be successful in combining musical cues with optical cues from animations. However, the researchers discovered that the influence of music differs between sub-groups on the spectrum of autism.

Groß et al., (2010) stated that music therapy has helped in speech development in children and can also be used in the treatment of developmentally delayed children. The authors intended to investigate the impact of music therapy on children's metalinguistic thinking skills. A set of 18 children with delayed speech and language growth, ranging in age from 3.5 to 6, took part in the study. The researchers adopted an ABAB reversal methodology where alternate chunks of music intervention and no therapy, with 8 weeks between sessions. Therapy assessment scales and a speech advancement exam in nonverbal cognition were utilised to evaluate. The study group had a positive response, according to the authors. SETK mean scores pronounced phonological memory for non-words and understanding sentences, distinct upward trends during the music therapy. The findings confirm that music intervention has a significant impact on a child's verbal and language performance.

Hallam (2010, August 23) has considered the facts regarding the impact of active participation with music on children's and youth's intellect, psychosocial, and personality growth. It also tends to depend upon the children's sentimental ties to music. According to the study, it was noted that the left cranial temporal region of the brain, in adult musicians was enlarged. The participants with musical backgrounds could remind 17% more verbal information. Schlaug et al tried to compare 9–11-year-old musicians with at least four years of practice and control group in a cross-sectional study. On the Wechsler intelligence III's musical understanding and inner perception, it was observed that the left-hand pointer finger tapping speed of the instrumental group surpassed the comparison sample substantially. The author concluded that engaging with music can improve self-perception if it gives pleasant learning encounters.

Miranda (2011) has emphasized the positive effect of music, the “developmental resources” or the “killer app” which need recognition in the developmental psychology in adolescence. Music begins at a very early stage from a mother's

lullaby to various music technologically developed sites like the multi-tasking computers. The method used here is meta-analysis. As a result, music has an impact on artistry appeal, self, peer interaction, affect stability and coping, charisma and drive, gender norms, and good youthful growth among adolescents. Adolescents benefit from music as a tool for prophylaxis and early therapy. By this they benefit as the youth culture with music gets recognition.

Lim (2010) investigated the impact of progressive speech and communication coaching in children with ASD using music and vocal production. A total of 50 children with ASD within the ranges of 3 and 5 years were involved in the study. The influence of training behaviour, degree of functionality, and echolalia was evaluated using a 3x2x2 assessment of covariance (ANCOVA) (the involuntary parrotlike repetition). Subjects who had higher levels of functioning boosted their speech productivity more than those who had a lower rate of functionality. As a result, it was discovered that both musical and speaking therapy is useful in improving phonological awareness in children with ASD, including meanings, phonetic, psycholinguistics, and intonation. Music, like speech, allows these toddlers to comprehend and express language patterns. This study supports the earlier conclusion that the perceptual structure and framework of music perspective are comparable to those of speech information.

Hogenes et al., (2014) summed up the empirical information of the effects of musical training, music exercises, and experience to music on interpersonal, neurocognitive competence in children between the ages 3 to 18. The following findings were backed up by research reported in peer-reviewed publications between 1995 and 2011. They looked at 20 papers that each centred on a different facet of functioning. A child's cognitive functioning and the impact of music instruction on social and emotional ability were the topics of 18 out of the 21-research chosen. Two of the studies looked at the impact of music instruction on children's sensorimotor capability. Music, whether through access or in-school music programs, was found to have a good impact on general child development.

Papinczak et al., (2015, February) validated a descriptive framework of records from target groups with 11 individuals between 15 to 25 years old. It was discovered that music listening is connected to well-being in four forms: social strengthening, emotion modification, cognition modification, and emotive engagement. These linking variables were evaluated on a new sample of 107 young people and were operationalized using questionnaire scores. The study formed part of a project through the Young and Well Cooperative. It is a study where the young were interested in music as well as technology. So, a phone application was developed. The sample was recruited from word of mouth, social media and university students who were in the largest group of age range 15 to 25 years. It included a pharmacist, a logistics worker, a secondary school student and 8 University students. The university students belonged to a diverse range of degrees like medicine, engineering, sciences and humanities. Younger folks utilize music to improve their psychological wellness, according to the study. Youngsters were clear in the ways music could enhance their well-being. They knew which music to be played, when to be played and how to use it.

Joyanta Sarkar and Utpal Biswas (2015) studied how supportive relationships, secure and consistent surroundings, and primary encounters with music aids a child's developing intellect. In a few studies done, it was noticed that starting music preparation early is directly connected to more permanent development in specific territories of the cerebrum. When the pre-schooler had early music learning, it was noted that there was a 46% percent support in their spatial IQ, which is vital for higher mind capacities, for example, complex arithmetic and Science. A study undertaken by Martin F. Gardiner and his associates observed that music preparing the Kodaly strategy, decidedly influenced the first and second graders math abilities. Despite the circumstance that they had started later, they thrived at maths. It was noted that the children exposed to music in a family far surpassed the kids devoid of this. Music has the capacity to influence a baby in the womb and it is a continuous process Thus enhancing his dialect capacity expressiveness, perceiving composition, scientific and other scholarly aptitudes in addition to his capacity to recollect and remember.

Zhi-Min Shi et al. (2016) had their goal to analyse the impact of music on autism's emotions, speech, conduct, and social skills. The authors used a Chinese database to conduct their research. Each article was evaluated for quality. A meta-analysis was conducted using RevMan 5.1. The combined analysis was conducted using a fixed-effect model. It was discovered that music therapies could help autistic children to enhance their moods, language, subjective experience, conduct, and interpersonal capabilities. Six RCT-related study publications were examined. The research included 300 patients. The meta-analysis found that musical intervention boosted mood and behaviour patterns in children with ASD. However, the articles in consideration were from Chinese publications and only of the last 10 years which might be incomplete. Better designed multi-centre, large sample RCTs were needed for the confirmation of music therapy intervention in children with autism through a systematic, comprehensive, extensive analysis.

Rose et al., (2017) investigated how musical tools impacted the advancement of intellectual, behavioural, and communication competence in 38, 7-year-old children. The study looked at variations in the neuronal organization in the brain as a result of mastery training. The Primary Measure of Musical Audition (PMMA: Gordon, 1986) was used as a measure to see if there were any pre-existing distinctions in musicality and if acoustic ability was linked to modifications in intellect. The study revealed a sequence of tests to assess the cognition, behavioural, and social-emotional growth of young during their initial year of studying instruments. In the EMT sample, it was noticed a rise in intelligence, particularly fluid IQ. Nevertheless, no benefits during the first year of music training were detected in interpersonal behaviours, motor abilities, cognition, or visual-motor synchronization. The authors drew the conclusion that personalized music classes in the first year of training provide the benefit to information processing in aspects of fluid reasoning, proprioception, exteroception, and also towards interoception.

Dumont et al., (2017) provided a comprehensive review of the previous evidence on the effects of music treatments on pre-school children's physical, speech, psychosocial, cognition, and scholastic capabilities. Participants in the study were in age group from 4 to 13. The two research revealed that musical intervention had a favourable effect on particular motor functions. The study also discovered minor and no impact on the relational competence and self, correspondingly.

Georgieva (2017) has tried to find questions to the answer already well known to our ancient philosophers- the influence of music on the physical, emotional and mental development of children. As music is everywhere, it is a two-sided sword: it is a potent instrument as a rhythm and harmony are one with the soul; the music that distorts is detrimental, destroys the very psyche, morality, soul, mind and emotions. Music has two separate effects on the body: it literally affects the cells and systems, and it implicitly affects emotional capacities, language aptitude, and sentimental intelligence.

Kasuya-Ueba et al., (2020, July 24) investigated the music intervention effects on children's cognitive functioning, so that future clinical research on children with cognitive impairment may become easier. Music is a potent sensory input with physiological, psychological, and interpersonal consequences. The main characteristic of cognitive functioning is attention. As a result, if attention development is hampered, cognition suffers. Using a standardised attention test battery, the current study investigated the impact of musical therapeutic intervention on young children's attentiveness. Task Time Teach Score (s1, s2, s3) repetitive ANOVA was used by the researchers. The findings revealed that both musical and internet playing therapies resulted in noteworthy improvements; however, when the impacts were adjusted for the subjects' IQ assessments, the benefits diminished. As a result, the attentional ability is impacted by IQ trials. The effects of music therapies on children's attention management were found to be transient.

Dr Suthar (2020) considered that all music activities include tapping, clapping, boxing and dancing and hence involve good motor skills. Music is vital in a child's initial establishment of solid motor function for a variety of reasons: convenient and straightforward tunes, as well as back-and-forth activity, help improve body and brain harmony. It builds familiarity- a lullaby is found to have a soothing effect on a child. The pitches, timbre, and words establish a feeling of safety and care in the listener. Aids communication and imagination- the baby babble starts the development of neural pathways necessary for listening and speaking. Children are quick in imitation which helps them to connect to the world around them. Social-emotional effect- live music is a delight to the babies; in a sense create a cocoon of happiness around them. Different types of music teach them to distinguish different sounds, which leads them to learn to speak early. A child will automatically listen more to the sound of music: thus, it helps in muscle development, power and equilibrium. Finally, research has noted that the rapport between parents and children get strengthened when they enjoy music together.

Dr Foti (2020, February) took up the endeavour to compile the data on the contribution of music, the enhancement of creativity in a child's personality. Whether music is the beginning point for an intervention program assuming all children can develop musical abilities was the point of research. The instructional interventionist programme occurred in an Athens preschool, wherein children were subjected to music training by reciting 'Aesop's stories'. The author arrived at a number of particular conclusions, including academic activities that involve singing, rhythms, and musical activities. From birth to the initial periods of a child's growth, exposure to music aided their psychosocial, affective, and intellectual development. Music has been demonstrated to improve vocal memories, which is regulated by the left half of the brain, as well as cognition, reasoning, and interaction, which is moderated by the right side of the brain. As a result, music has a favourable impact on both the upper cerebellum and human executive skills. It was also shown that music helps children improve architectural roadmap, movement, and memory at a young age.

Blasco-Magraner et al., (2021, April 1) broke ground in their search for the study of emotion in connection to music. The youngsters in the study ranged in age from 3 to 12 years old. It took two decades to complete their work. A

systematic review was carried out following preferred reporting. A total of 26 scientific articles were analysed. The outcome was separated into two segments: dependent factors, which described the social and emotional perks of music, and independent variables, which described various sorts of musical experiences and their consequences. The authors found that music had a favourable impact on children's emotional wellbeing. They had a better ability to acknowledge and convey their feelings. Music can help the child to boost abilities like sympathy, empathy and other prosocial skills, also it can reduce anxiety, depression and defiant attitudes.

3. CONCLUSION

For centuries, music has been believed to exert a positive impact on mental health. Plato, an early thinker, praised the music and utilised it to relieve tension. Sporting events use music to encourage enthusiasm. School children use music to study and memorize ABC's, rhymes and stories. Modern study backs up the old cliché that music improves one's spirit and optimism.

We acquire various musical personal opinions as a result of our own differences and distinctive experiences. However, there are common traits in this diversity. Regardless of the mothers' musical talents, maternal singing is shooting. Certain types of music, such as heavy rock or really blaring music, make individuals feel uncomfortable, even if individuals claim it is delightful. It can even increase one's anger, sadness, tension and fatigue. Students who listened to pop, nostalgic, and orchestral music (Mozart) felt brighter, more enthusiastic, sociable, and peaceful. Children who have difficulty in communicating may find the lyrics to help find the right words to express their emotions.

The favourite leisure " activities of the young - e-games, media addiction, inactivity, no reading, long hours of listening to a certain type of music has contributed to the death of brain cells and filling the capacity of psychiatric wards. The lost interest of the young in calming music and increased juvenile delinquency worldwide are parts of the one and the same chain. This encapsulates the issues that today's youth face. Music therapy is one solution that can be used experimentally as music enhances the brain and stimulates it. From the different research reviews, I have strived to focus on the various benefits of music for all children. As previously stated, music promotes dopamine production in the brain, a mood-enhancing neurotransmitter, and lowers stress rates, rendering it an effective depression cure. "If music were a medicine, it could be commercialised," says Dr. Catherine Meads. " Music is a non-invasive, ethical, and inexpensive solution that anyone facing surgery ought to have access to." Anyone who, today is dealing with some state of tension, anxiety, or despair and so on. According to the reviews chosen the main focus is on the repetitive pattern of music that can be used in homes and schools so that every child's body's internal rhythm synchronises with external rhythms or beats.

Though the benefits are highlighted, research done on the mental health benefits of music therapy is way too small and limited. The sample size used was small and has methodology limitations such as only one particular group has been taken into consideration. Furthermore, it is clear that there is a dearth of empirical studies on the impact of music therapy on children. Many aspects of common psychiatric diseases are shared by all of them. During musical psychotherapy, these comorbidities must be brought into interpretation. There is an urgency to expand the studies to include bigger samples, random sampling and active control groups that compare and utilise modern trends along with traditional therapies.

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