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CRITICAL REVIEW ON MUSICAL INTERVENTION WITH SPECIAL REFERENCE TO DAILY ACTIVITY AND COMMUNICATION SKILL OF AUTISM CHILDREN

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Abstract:

There are numerous varieties of music therapy. Interactive musical activities are used in music therapy for autistic individuals to enhance their social and communicative abilities. People of any age or ability can benefit from music therapy. The application of music therapy enhances social and communicative abilities. Children with autism can benefit from music therapy as a means of improving their speech and social skills. In this article, critical review on musical intervention with special reference to daily activity and communication skill of autism children has been discussed.

Keywords: Musical, Intervention, Autism, Children

INTRODUCTION:

In the early to mid-1900s, music therapy was initially applied in the United States to children who had special needs. In the United Kingdom, its use expanded during the 1950s and 1960s. People who find it difficult to communicate may find that they can interact and communicate through music therapy. People can utilize a variety of musical activities, such as singing, playing instruments, improvising, writing songs, and listening to music, to communicate

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instead of using words. Engaging in these activities fosters social and communication skills such as sharing attention, taking turns, and maintaining eye contact. According to research, music therapy can assist kids in acquiring or enhancing social skills like play, communication, and shared attention. Those with autism and intellectual difficulties may benefit from it more than those with typical development. Music therapy is practiced by registered music therapists. A person who is registered with the Australian Music Therapy Association and has successfully completed an approved training program is known as a registered music therapist. Music therapists are employed by a variety of establishments, such as mental health clinics, early intervention centres, nursing homes, and specialized schools. They have a private practice as well. Moreover, therapists might impart new skills through musical exercises. New abilities are paired with their own musical cues to achieve this. Children no longer require the cues once they have mastered the abilities. Until the skills happen naturally, the cues are gradually reduced. Lyrics emphasizing particular behaviours, such as taking turns, may also be written by a music therapist for a child with autism. The child is given a song that the therapist is singing the lyrics to. The theory is that a child may be more adept at focusing on information that is sung than on information that is spoken.

RELATED REVIEW OF LITERATURE:

According to David Cohen et al. (2021), there have been conflicting findings in a number of studies about the advantages of music therapies for children and adolescents with neurodevelopmental disorders (NDDs), which include autism spectrum disorder (ASD). We followed the PRISMA standards when conducting a systematic review. From January 1970 to September 2020, we searched the Cochrane, PubMed, and Medline databases to review all empirical research on the impact of music therapy on youth with ASD, ID, communication disorders, developmental coordination disorders, specific learning disorders, and attention/deficit hyperactivity disorder (ADHD), with the exception of case reports. This analysis comprised thirty-nine trials (N = 1,774 participants) (ASD: n = 22, ID: n = 7, CD and dyslexia: n = 5, DCD: n = 0; ADHD: n = 5 studies). There was a lot of use of both improvisational and instructive music therapy. Most controlled research (6/7) found that educational music therapy improved patients with ASD, especially in terms of speech production. Most controlled research (6/8) found that improvisational music therapy had a favorable impact, especially on social functioning. The response rate was greater in the subset

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of patients who had both ID and ASD. While there is a dearth of information on children with other NDDs, early research suggests that educational music therapy may benefit dyslexic kids. It seems that improvisational music therapy is applicable to people with ASD and ID as well as youngsters with NDDs. Although preliminary statistics are encouraging, more study should be encouraged to investigate if oral and written language abilities may improve after educational music therapy.

Lisboa, T. et al. (2021) explored that certain children with autism exhibit an innate ability to mimic and modify the musical cues they come across in their surroundings. Additionally, music provides a secure environment for the growth of social skills, and musical treatments are widely recognized as a successful means of encouraging interpersonal interaction. However, there aren't many musical interventions for parents and caregivers of autistic children that have been scientifically studied. In this study, eleven families with children diagnosed with autism integrated music creation into their daily routines with the help of researcher-practitioners and materials that outlined musical activities based on the Early Years Framework's Sounds of Intent. Analyzing the video footage and interview transcripts showed that the new tools were adaptable enough to fit the needs of any child and gave parents the confidence to interact musically with their kids. It was shown that kids were more engaged in cooperative play and showed a greater interest in music, which had a good effect on their social and musical development. The parents' interpersonal music spaces enhanced linguistic development, emotional control, and social engagement by giving opportunities for expressiveness and interactive behavior to be unlocked. These results underscore the potentially critical role that parents play as mentors in their child's musical development and have implications for arts-and-health research. The study also shows that parent-child participation in music-making at home can be developed without specialized musical training.

Bharathi, G. et al. (2019) stated that when compared to a placebo treatment, the Cochrane Collection evaluations of randomized clinical trials (RCT) demonstrated that music therapy (MT) had a positive impact on people with autism spectrum disorder (ASD). The main goals of this study are to determine whether MT can help autistic children develop their social skills and to see whether these benefits continue over time. The purpose of this study was to follow up with the autistic children and conduct a pre- and post-test. 54 autistic children ranging in

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severity from mild to severe were chosen, and they were split into two groups: active and passive. For three months, the children received MT, and for three months, the groups underwent follow-up. The groups were compared using analysis of covariance, and the data were examined using the t test in IBM-SPSS-21 software. The subscales measuring understanding and perspective-taking, initiating interactions, responding to initiation, and maintaining contacts with others were where the majority of the MT intervention's effects were shown. The results of the post-test covariance analysis indicated a substantial rise ($p < 0.05$) in the social skills scores. Additionally, the paired-sample t test findings showed that MT's efficacy has persisted throughout the follow-up phase. The study showed that MT is a useful intervention that has consistent benefits for helping autistic youngsters with their social skills. With the assistance of MT, these kids were able to establish a means of communication, which enhanced their capacity to comprehend, react, and sustain social interactions.

Rodgers (2018) claims that real classical music and music therapy assist youngsters with ADHD in gaining better sleep and language skills. Children with ADHD may benefit from music theory's amazing effects on their brains to help with impulse control and language development. According to rigorous testing, listening to classical music helps youngsters with ADHD focus and concentrate well. Children with ADHD can benefit from music therapy as an alternative treatment that helps them focus better and relax. Children with disorders including depression, anxiety, tension, or post-traumatic stress disorder were treated with music therapy. Previous studies have also demonstrated the increased utility of music therapy in the treatment of ADHD in youngsters.

Alrazain, Zubala, and Karkou (2018) explored that children with ADHD also have a tendency to produce less dopamine than other children. Since music seems to raise dopamine levels, music therapy is a scientifically supported treatment for ADHD in children. Music is beneficial for children with ADHD because it increases dopamine, a feel-good neurotransmitter. Experts with training in music therapy can use music to improve a child with ADHD's overall wellness. Playing an instrument, writing songs, composing, listening to music, or following along with recorded tunes were all examples of music therapy. Children can benefit from music therapy by making their daily lives more enjoyable and simple. Previous

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research indicates numerous excellent reasons to incorporate music into the therapy program for children with ADHD in order to enhance brain function and enhance coping mechanisms.

Porter et al. (2017) state that music can be a relaxing and stress-relieving activity for certain youngsters who have impairments or borderline mental retardation. Music therapists engaged children in conversation about song writing and lyrics in order to facilitate open communication about their opinions, feelings, and thoughts. When children with borderline mental retardation receive music therapy, their degree of independence increases, and their sense of worth, confidence, and self-esteem rise. Children with borderline mental retardation can benefit from music therapy by participating in engaging and enjoyable music sessions that help them realize their full potential.

Eren (2017), a number of studies have indicated a direct correlation between music and better spoken language, which can raise exam scores for students. Previous studies found that patients' mental health and capacity for learning can be easily enhanced by music therapists. In order to meet their children's educational needs, parents nowadays desire that their children's preschools and schools provide Individual Educational Plans (IEPs). The inclusion of music therapy in the IEP program helped the children with dyslexia improve their physical coordination, which in turn helped them noticeably improve their communication abilities. For this reason, some previous research advises parents and educators to favor the IEP program that incorporates music into the dyslexic child's daily routine in order to enhance their communication and early learning capacities.

Bieleninik et al. (2017) stated that a therapist using music therapy may identify the specific needs of each autistic child and provide therapy to enhance the child's social relationships and communication. Preferred music can be employed by a therapist for a range of social behaviors, like sitting in a chair and remaining in a child's circle. An autistic youngster may benefit from music therapy by being encouraged to interact with others through games like passing the ball. Encouragement of eye contact through games, such as simulated clapping, can aid in focus in children with autism.

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Perez et al. (2017) explored that a music therapist focuses on music-related programs and activities that help autistic children's language development. Early research has shown that children with autism can react emotionally to music. While some autistic children may have excellent pitch, others may be interested in playing their respective musical instruments. Due to their high level of reactivity, music therapists typically view autistic children's interests as offering music theory. To help children engage and learn new skills, music therapists may also use pronominal reversal, delayed echolalia, and echolalia (parrot speaking).

Mössler et al. (2017) provided additional evidence in favor of this theory, stating that music has improved autistic children's ability to interact with their parents and other kids during the day. Additionally, music can provide kids with ASD with beneficial multisensory experiences that support brain growth. Children with ASD can also greatly benefit from music therapy in order to enhance their verbal communication skills and gain the confidence to express themselves in public. Children with autism can benefit from music therapy by having more opportunities to express themselves and interact with others. For kids with autism, music therapy can offer novel ways to unwind that make it easier for them to let go of tension, stress, and anxiety. Additionally, a music therapist can help autistic children express themselves in the world by helping them discover their completely new side and build inner strength through music education programs or specialized music therapy.

Broder-Fingert, Feinberg, and Silverstein (2017), music therapy is a type of evidence-based, research-driven music therapy that is frequently used to treat ASD in children as well as other disorders. While modern music therapy is connected to social science conceptions of well-being, traditional music therapy focuses exclusively on neurological processes in the brain. Children with ASD are being treated with a variety of music therapies, including Nordoff Robbins Music Therapy (NRMP) and DIR Floortime Neurologic Music Therapy (NMT). According to neuroscience research, non-musical treatment, or NMT, is a type of music therapy that helps autistic children perform better at non-musical cognitive tasks by using music and a set of strategies. Additionally, the NRMT is predicated on the therapist-client relationship; music therapists assist autistic children in realizing the entire range of advantages associated with engaging with music. When conducting playtime with autistic children, music therapists adopt the DIR (Developmental Individual-Difference Relationship-Based Approach), which

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involves getting down to their level. When treating children with ASD of any age, the DIR technique can be used in conjunction with music therapy interventions.

Pandey's (2016) conducted a research, music therapy has positive effects on mentally challenged children and is a universal language that speaks to all aspects of human existence. Furthermore, using music as a therapeutic intervention has been beneficial for kids with ASDs, BMR, and other disabilities. Additionally, music therapy has been used with a range of age groups of kids with various types of problems, from pre-schoolers to adults. Modern science and medicine are now discovering the benefits of music therapy as a means of treating disabilities. Although it is not a frequently employed medical technique, music therapy has shown promise in the treatment of disabled individuals. Children with ASDs, borderline mental retardation, and other disabilities can benefit greatly from music therapy in a variety of ways, including language development, enhanced reading or communication skills, reasoning ability, personal fulfilment, feeling secure, improved self-esteem, motor control, socializing behavior, enjoyable experiences, and physical well-being.

Urpi (2016) conducted the study to assess the role that music therapy plays in the treatment of children who have mental illnesses, intellectual disabilities, or borderline mental retardation. Furthermore, music is the greatest passion of kids with mental disorders, intellectual disabilities, and borderline mental retardation. In the classroom, music is also used to help students with reading disorders and to treat their brain disorders. The study's conclusions showed that children with mental retardation and mental disabilities eventually experienced mental health problems that affected their general capacity to work or function. Children who suffer from borderline mental retardation may experience social isolation and a decline in their self-esteem due to the mental health issues that arise. The results of the study demonstrate the different ways in which music therapy has helped the conditions of kids with intellectual disabilities and borderline mental retardation who are also experiencing mental health issues. It is also said that when using music therapy to treat borderline mental retardation, each child's unique needs are taken into account.

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Katsarou (2016) carried out the study to look into how music therapy affects the language skills of children who have dyslexia. According to the study's findings, music therapy assists dyslexic kids in improving their mental skills but may not have any positive effects on their written-phonemic awareness. All things considered, it was discovered that the foundation of music therapy is intervention programs that help children with dyslexia enhance their language skills. Children with dyslexia benefit from music therapy in terms of their ability to distinguish between graphs, synthesize sounds, and use language associated with sound discrimination.

Furthermore, **Habib et al. (2016)** reported that children's reading and dyslexia-related impairments were improved by using musical training techniques. This study evaluates the brain alterations in children with dyslexia that underlie the noted improvement in those who get music instruction. The author of a recent publication defended the therapeutic use of music education by educators and therapists in the treatment of dyslexic youngsters. The study also found that one of the most thorough and sensible approaches to treating dyslexic children is through music instruction. According to this study, children with dyslexia who received music therapy showed increases in their auditory attention, reading comprehension, phonological awareness (syllable fusion), and pseudo-word repetition skills.

Hsu, Flowerdew, Parker, Fachner, and Odell-Miller (2015) stated that children with mental health issues and borderline mental retardation have responded well to music therapy. Music therapists use a variety of musical mediums to achieve each child's therapeutic goals. Dance routines, musical instrument playing, music listening, and movement analysis can all help one become more intentional, controlled, and flowing. Effective music therapy methods can help children achieve a variety of emotional, physical, and social goals according to their unique needs, interests, and capabilities. Furthermore, music therapy has been used to develop and preserve joint and muscle function, strengthen muscles, improve respiratory and cardiopulmonary function, improve gross motor coordination and control, enhance oral-motor skills, increase range of motion, promote relaxation, allow for controlled movement or emotional self-expression, enhance communication skills, and create opportunities for social interaction.

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Ashoori, Eagleman and Jankovic (2015) state that in order to address each child's unique treatment needs and objectives, therapists or teachers use a variety of musical media during music therapy sessions. Through the use of computer-assisted recording or five background music tracks and electronic musical instruments, music therapists enable children with severe physical disabilities and borderline mental retardation to reach their full creative potential. Children with physical disabilities and those with borderline mental retardation can benefit from music therapy by learning to sing, which improves oral and pulmonary motor skills. Additional benefits of singing for kids include improved language, pronunciation, respiratory control, and speech rate. Music therapists can assist youngsters with their range of motion, nonverbal self-expression, and hand grasp strength through music-making activities. Additionally, music therapists typically choose instruments that are appropriate for each child's general physical capabilities.

Bringas et al. (2015) stated that many therapies have been developed to help children with severe neurological diseases regain their function through rehabilitation. According to a comprehensive evaluation of several rehabilitation techniques for kids with brain injuries and borderline mental retardation, music therapy may help kids recover their function more fully. This study explores the idea that children with mental retardation and other disorders can benefit from music therapy, which involves simply exposing them to music through singing, playing an instrument, or other forms of engagement that alter brain processes by piqueing their interest and enhancing brain functions.

According to Rolka & Silverman (2015), music is a universal language that can assist dyslexic kids in overcoming their cognitive handicap and comprehending linguistic rhythms. Numerous studies have shown that teaching music to kids is a pretty simple process. Furthermore, music aids dyslexic kids in appropriately focusing on their language, auditory, and motor timing abilities. This study demonstrated that music is included in dyslexic children's learning, even if it did not find a connection between music and dyslexia. Youngsters with dyslexia who struggle with language and learning difficulties can greatly benefit from music therapy. There is a good explanation of how music improves motor timing abilities and linguistic comprehension in dyslexic kids.

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According to Career (2015), a number of earlier studies have found that music therapy is now the most widely accepted treatment for ADHD in children. The study's recommendations for parents of children with ADHD include encouraging their children to play an instrument, supporting them in listening to upbeat music, reading books about music, signing them up for group music lessons, encouraging them to dance to the music, and beginning private music lessons. According to the results, the kids with ADHD were able to think more clearly and perform better in planning and decision-making, memory, attention span, and schoolwork when listening to music.

The study by **Geretsegger, Elefant, Mössler, and Gold (2014)** looked into the immediate and long-term effects of music therapy interventions for kids with autism. Existing research on clinical practice shows that music therapy can benefit autistic children in the short term by enhancing their social interaction skills, linguistic communication ability, socio-emotional reciprocity, and behavior management. The study's findings also demonstrated how music therapy improved the nonverbal communication abilities of kids with ASD. Additionally, music therapy may have a long-term positive impact on parent-child interactions and improve social skills in children with autism. According to an additional study, applying music therapy to children with ASD requires specialized clinical and academic training in order to have long-term benefits.

According to **Bhat & Srinivasan (2013),** a group of kids with mild mental retardation who engaged in singing, dancing to music, listening to mechanical and natural sounds, and free-flowing rhythms experienced significant behavioural changes and enhanced communication. The purpose of this paper is to urge therapists to use embodied music-based approaches to support multisystem development. Furthermore, music-related learning activities were employed in around 45% of the various treatment options for disorders that students received in schools. The image below illustrates how music-based activities impact various aspects of development in children with ASDs, borderline mental retardation, various developmental disorders, and typically developing children. These include oral or verbal communication, social or emotional behavior, and efferent growth. Additionally, this study showed that music therapy is a clinical treatment strategy for children with ASDs, BMR, and other developmental abnormalities.

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According to **Heikkila & Knight's (2012)** prediction, dyslexic students may feel more at ease engaging in competitive activities when they listen to music. Children with dyslexia can benefit from music training by developing their language or literacy skills and their temporal processing abilities by mixing notation with movement, listening, auditing, and phonating. The best ways to teach music to dyslexic pupils are methodical, step-by-step, and cumulative. The teaching of music is a novel approach that centres on reading and writing abilities for dyslexic kids, relieving them of the frustration that comes with trying to learn new things. With musical exercises, dyslexic students can take charge of the session and develop their confidence, inventiveness, and engagement. Musical activities are cozy, enjoyable, and aid in the development of useful abilities that boost the social and self-confidence of dyslexic kids.

According to **Johnson et al. (2011),** youngsters can benefit from assistance in learning to appreciate music. For children with impairments and challenges with movement, cognition, vision, hearing, speaking, and responding, music therapy is invaluable. Youngsters who create music can feel secure and joyful, even though they face significant challenges when it comes to communicating and forming close bonds with adults and other children. Children can adjust to music more easily than adults can, and it uses many different brain regions. Additionally, music therapy has a significant role in the development, maintenance, and rehabilitation of children's physical and mental functioning. Moreover, music therapy improves reading comprehension, language development, communication skills, impressions and responses, reasoning ability, personal fulfilment, positive attitudes toward society, physical well-being, and enjoyable experiences in the classroom and in a group for children with borderline mental retardation and other disorders.

One of the biggest benefits of music therapy, according to **Orenstein (2011),** is that kids don't need to be musically gifted or possess any particular abilities to benefit from it. Children with ADHD benefit from music therapy by discovering their hidden musical potential and developing their creativity. Previous research has indicated that while there is no optimal musical genre, listening to classical music may improve children with ADHD's IQ and sense of calm. Previous research has indicated that children with ADHD benefit from music-making in terms of increased motor control, academic performance, and focus. According to the

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researchers, music therapy improved the kids' motor control, focus, social behavior, language or communication processing, and social behavior.

CONCLUSION:

Numerous studies suggest that music therapy can effectively address a wide range of mental health concerns and improve the emotional and behavioural competencies of children with special needs. Special-needs children's emotional and behavioural issues are being brought to the attention of music therapists. Joke Bradt and her group looked into 184 patients by reviewing seven studies. Four studies examined the effects of music on mental health using individuals who had suffered strokes and brain injuries. Although this evaluation notes that suggestions about specific neurological damage cannot be made, the majority of the reviewed research successfully uses rhythm-based techniques to improve motor results. The philosophy of the activity-centred therapy (ACT) programming paradigm is made up of many different theoretical frameworks. This has led some studies to say that ACT is like a therapeutic melting pot. These consist of social recreation (the activities), cognitive-behavioural principles (peer models and reward systems), psychotherapy (group discussions on life topics, worker as observer and interpreter), and psycho-education (skill development).

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