

THE EFFECTIVENESS OF MUSIC EDUCATION IN IMPROVING SOCIAL COMMUNICATION FOR AUTISM SPECTRUM DISORDER (ASD) STUDENTS

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SUMMARY. Students with Autism Spectrum Disorder (ASD) may benefit from music education as a potentially effective methodology for improving their verbal and social communication abilities. Therefore, the objective of this research is to evaluate how well music education aids students in their growth of social communication. The focus of the study area is the necessity of integrating music education into all classroom learning activities. This study's methodology involves reviewing a few earlier research projects on the value of music instruction for individuals with autism spectrum disorders. The reviewed studies will be critically analyzed to draw valid conclusions about the effectiveness of music education in improving social communication for autism spectrum disorder students. The study's findings indicate that ASD students have improved their attitudes toward using different music-based teaching techniques. Teachers also reported that students easily grasp the learning process's fundamentals, and that learning becomes more enjoyable. In conclusion, it can be seen that music education in the learning process of ASD students greatly affects the process of social communication.

Keywords: music education, social communication, autism spectrum disorder, ASD

Introduction

Music education has a varied history, and the story of music education is inextricably linked to man's cultural history. The first mention of music

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education is in the Egyptian hieroglyphics, which date back to around 3100 BC². Written symbols used to represent music and singing were discovered on a set of stone blocks from the time of Pharaoh Tutankhamun³. The early Greeks believed that music was the soul of life, and that all life was dependent on it. The Greeks created the concept of music theory and started the first musical education system⁴. They developed a system of musical notation that is still used today. In medieval Europe, music for the soul became the main objective of music⁵. Music was passed down orally from generation to generation. It was not until the Middle Ages that music began to be taught as a formal subject in schools. In the modern education system, music is an important subject for students to learn as it teaches them discipline and responsibility as they are expected to follow directions given by their teacher. It also helps them develop their motor skills and encourages them to be active participants during classes rather than sitting passively waiting for instructions from the teacher. According to Hallam et al., there is a substantial association between music and academic performance, with students who have developed a passion for music outperforming other students who have not studied music⁶.

Numerous researches have been performed to better understand the impact of music in education, particularly on children. In most countries, music teaching methods such as Orff, Suzuki, and Yamaha demonstrate that preschool children's musical levels can be translated into skills in speech and language music. Music in education is something that is no stranger to children's education and through music, children can interpret what they hear. Musical elements can be applied in many subjects by the teacher during the induction set to introduce a topic or can be used in the idea structuring phase to help students remember the concepts learned, and also in the closing part of the teaching session to conclude the content learned in the learning session. Music can be used to not only entertain and delight students but also to spark ideas and soothe their minds and souls. School plays a huge role in teaching students about music theory and its importance in building their social skills and interacting with others, and how it relates to

² Khalil, Radwa, et al. "How knowledge of Ancient Egyptian women can influence today's gender role: Does history matter in gender psychology?" *Frontiers in psychology* 7, 2017, 2053. pp. 3-4.

³ Christensen, Wendy. *Empire of Ancient Egypt*. Infobase Publishing, 2009.

⁴ Mathiesen, Thomas J. *Apollo's Lyre : Greek Music and Music Theory in Antiquity and the Middle Ages*. Lincoln, Neb., University Of Nebraska Press, 1999.

⁵ Horden, Peregrine, ed. *Music as medicine: The history of music therapy since antiquity*. Routledge, 2017.

⁶ Hallam, Susan, Andrea Creech, and Hilary McQueen. "Pupils' perceptions of informal learning in school music lessons." *Music Education Research* 20.2, 2018, pp. 213-230.

their everyday lives. Previous studies have also indicated that music may be beneficial to aid self-esteem⁷, building essential skills⁸, academic achievement⁹, and enhancing memory¹⁰.

Music plays its own role in universal human life, one of which is communication. Music is an interactive, participatory medium that seems to be part of a communicative system, similar to language¹¹. The two basic forms of communication are verbal and non-verbal specifically, using words, gestures, pictures, etc. These two communication channels are built into the music. In addition to this, music may also be used to convey to an audience the mood or feelings associated with a certain idea or theme¹². It is well acknowledged that music has a global language and can be employed to communicate in a variety of contexts including music therapy, writing, and explanation. Music is a universal human method of communication in which the ability to communicate with others through music transcends language, and physical, mental, and cognitive limitations¹³. Salomon-Gimmon & Elefant pointed out that musical discourse is a naturally developing result of the urges for exchanging communicative expressions typical of young children in a regularly growing state¹⁴. Music has been proven to improve social communication in children with ASD, according to neuroimaging studies in healthy controls¹⁵, which also show that listening to music stimulates circuits important for processing emotions and memories¹⁶.

⁷ Clements-Cortés, Amy, and Shulammitte Chow. "Enhancing self-esteem in the music classroom." *The Canadian Music Educator* 59.2, 2018, pp. 23-26.

⁸ Boyce-Tillman, June. "An ecology of eudaimonia and its implications for music education." *Eudaimonia*. Routledge, 2020, pp. 71-89.

⁹ Janurik, Márta, and Krisztián Józsa. "Long-term impacts of early musical abilities on academic achievement: A longitudinal study." *Journal of Intelligence* 10,3, 2022. pp. 36.

¹⁰ Sihvonen, Aleks J., et al. "Vocal music enhances memory and language recovery after stroke: pooled results from two RCTs." *Annals of Clinical and Translational Neurology* 7.11, 2020, 2272-2287, pp. 3-7.

¹¹ Schiavio, Andrea, et al. "Instrumental technique, expressivity, and communication. A qualitative study on learning music in individual and collective settings." *Frontiers in psychology* 10, 2019, pp.737.

¹² Váradi, Judit. "A Review of the Literature on the Relationship of Music Education to the Development of Socio-Emotional Learning." *SAGE Open*, vol. 12, no. 1, Jan. 2022, pp. 1-3.

¹³ Molino, Angelo. *Music Therapy: A Look into The World of Healing Sound*. Dorrance Publishing, 2023.

¹⁴ Salomon-Gimmon, Maayan, and Cochavit Elefant. "Development of vocal communication in children with autism spectrum disorder during improvisational music therapy." *Nordic Journal of Music Therapy* 28.3 (2019): pp:174-192.

¹⁵ Janzen, T. B., & Thaut, M. H. (2018). Rethinking the role of music in the neurodevelopment of autism spectrum disorder. *Music & Science*, 1, 2059204318769639. pp:2-6

¹⁶ Quintin, Eve-Marie. "Music-evoked reward and emotion: Relative strengths and response to intervention of people with ASD." *Frontiers in neural circuits* 13, 2019, pp.49.

In the context of music education and social communication for autistic students, it is seen as an important element that can drive the development of these special students. An effective educational instrument for supporting autistic students' learning processes, music education is directly tied to sound and creativity¹⁷. However, it's challenging to provide precise recommendations for how music should be taught to autistic kids in order to maximize its effectiveness as a learning tool. Therefore, more study is required to develop recommendations for the music education of autistic students. When it comes to ASD students, music and sound are crucial to the body's growth. Speranza et al., stated that listening to music can improve a variety of skills like language and communication, problem-solving, and learning ability while also promoting brain and physical development¹⁸. There are undoubtedly some connections between sound and the brain development of autistic students because autism is a neurological illness that predominantly affects the brain and central nervous system. According to studies by Zhang¹⁹, autistic students have more trouble than neurotypical children absorbing and reacting to auditory stimuli. Additionally, it has been demonstrated that these issues can be improved with the use of suitable music therapy²⁰.

A Brief Review of Music in Education

Music education is a research field of study related to the teaching and learning of music. Among the early historical records about music in education was noted by Grange in a book titled "A Primer in Theatre History: From the Greeks to the Spanish Golden Age"²¹. It stated that in the Golden Age of Greek, around the Beginning 500 BC, music education was included in the general fine arts education to develop citizens capable of actively participating in Greek society. Plato (427 - 347 BC) who is an ancient Greek philosopher born in Athens stated that music influenced students' values and behavior and should instill in them a sense of community and responsibility.

¹⁷ Shahrudin, Fatin Amira, et al. "Music and Sound-Based Intervention in Autism Spectrum Disorder: A Scoping Review." *Psychiatry Investigation* 19.8, 2022, pp.626-636.

¹⁸ Speranza, Luisa, Pulcrano, Salvatore, Perrone-Capano, Carla, di Porzio, Umberto and Volpicelli, Floriana. "Music affects functional brain connectivity and is effective in the treatment of neurological disorders" *Reviews in the Neurosciences*, vol. 33, no. 7, 2022, pp. 789-801.

¹⁹ Zhang, Tiying. "Review of Randomised Controlled Trials on the Effect of Music Therapy on Autism". *Journal of Education, Humanities and Social Sciences*, vol. 8, Feb. 2023, pp. 2520-4

²⁰ Sivathasan, Shalini., Dahary, Hadas.,Burack, Jacob. A., and Quintin, Eve. Marie. "Basic emotion recognition of children on the autism spectrum is enhanced in music and typical for faces and voices". *Plos one*, 18(1), e0279002. pp. 2-11

²¹ Grange, William. *A Primer in Theatre History: From the Greeks to the Spanish Golden Age*. University Press of America, 2012.

He has also highlighted that integrating music into education would help students internalize their beliefs²². Meanwhile, Plato's student, Aristotle (384-322 B.C), another Greek philosopher of the time, theorized that the requirements of the individual, as well as the community, should be reflected in the educational curriculum. Therefore, he claimed that studying music would help students develop their musical taste²³. Around 400 B.C., the Schola Cantorum, the first music school in Rome, was founded to teach boys how to chant, sing, play an instrument, create harmony, and compose music for churches and other organizations.²⁴.

Around the 16th century, a German theologian, Martin Luther (1483-1546), known for his religious work as one of the main catalysts for the Protestant Reformation, stated that it was a necessity for students to study and enjoy music, and for teachers to be musicians. Luther, who had a significant impact on education during his lifetime, believes that singing beautiful music improves a person's sense of reason and manners. Previous research has also shown that humanism had a strong influence on Luther's philosophy of music education, particularly in its emphasis on human agency and personal experience²⁵. Until musical notation was created, singing lessons were the only form of music instruction during the Middle Ages²⁶. Meanwhile, in the 18th century, Lowell Mason (1792-1872) who is also known as "the father of public-school music teaching", established a music school known as the Boston Academy of Music in the USA together with his friend George James Webb²⁷. The school aimed to incorporate music into the school curriculum and provided vocal classes for private schools, adults, and children.

The field of music education nowadays is quite diversified. It exists outside of formal educational frameworks but can also be found in places like universities and conservatories. Due to the variety of locations, music teachers must be knowledgeable about a wide range of musical genres and instructional strategies. In the modern world, music education often includes

²² Christopher, Theophil, and Adam Matiko Charles. "Plato's Theory of Education: It's Applicability in Teaching Methodology in Tanzania Secondary Schools." *International Journal of Arts, Humanities and Social Studies* 4.3,2022, pp.01-08.

²³ Stamou, Lelouda. "Plato and Aristotle on music and music education: Lessons from ancient Greece." *International Journal of Music Education* 1. 2002, pp. 3-16.

²⁴ Kallen, Stuart A. *The history of classical music*. Greenhaven Publishing LLC, 2013.

²⁵ George Baker, Daniel. Martin Luther and music education: the impact of Luther's philosophy on Lutheran music education today. [PhD Dissertation]. University of Florida, 2020, Accessed 12 December 2023.

²⁶ Weiss, Susan Forscher, Russell E. Murray Jr, and Cynthia J. Cyrus. *Music education in the Middle Ages and the Renaissance*. Indiana University Press, 2010.

²⁷ Tilson, Lowell Mason. "The Father of Public School Music in America." *Contemporary Education* 9 (1938): pp.1-4.

vocal and instrumental instruction²⁸. Students can learn to play a wide range of instruments, including the piano, guitar, trumpet, flute, clarinet, saxophone, and many more. These instruments all have different timbres and are suited to playing different musical styles. For example, while a guitar can be used to write a wide variety of musical genres, a piano is more appropriate for classical music. Vocal training usually involves learning proper breathing techniques and developing good singing technique²⁹. Instruction in any of these areas can be of great benefit to a student of music, as it can provide a deeper understanding of the music and the traditions in which it originated. For school-age children, there are a variety of different academic programs in which the study of music may be integrated. These programs offer a unique opportunity for students to learn about music as an academic subject, while also exploring the skills and techniques needed to become a successful musician.

Music education is rapidly evolving and is now required in some schools. International high school level exams such as IB (International Baccalaureate) and IGCSE (International General Certificate of Secondary Education) have offered the subject of music in the list of subjects offered to students. In addition, many music schools have been developed to positively impact the community's social well-being and to help alleviate social disruptions in the surrounding area by fostering social cohesion and feelings of community belonging and identity³⁰. The ultimate goal of music education is to furnish students with the skills, knowledge, and understanding they need to create and perform at the highest level possible based on the student's ambition³¹. According to De Bruin & Merrick, music education is critical for developing 21st-century skills such as creativity, critical thinking, and communication³². Additionally, music education has been linked to improved academic performance across various disciplines and the development of cultural understanding³³. This corresponds to the

²⁸ Savage, Jonathan. "The policy and practice of music education in England, 2010–2020." *British Educational Research Journal* 47.2 (2021): pp.469-483.

²⁹ Toshtemirovich, Shamsiev Jamshid. "Methodology of correct breathing and its correct use in the academic singing class" at the children's music and art school." *Eurasian Journal of Academic Research*, vol. 03, no. 02, 1 Feb. 2023, pp. 104–108.

³⁰ Lorenzo de Reizabal, Margarita. "Music education models in the 21st century: the music mediation model for social engagement." *Revista Educación* 46.2 (2022): pp.666-686.

³¹ Georgii-Hemming, Eva, and Maria Westvall. "Music education—a personal matter? Examining the current discourses of music education in Sweden." *British journal of music education* 27.1 (2010): pp.21-33.

³² de Bruin, Leon, and Bradley Merrick. "Creative Pedagogies with Technology: Future proofing teaching training in Music." *Creative Provocations: Speculations on the Future of Creativity, Technology & Learning*. Cham: Springer International Publishing, 2023. 143-157.

³³ Campbell, Patricia Shehan. "Musica exotica, multiculturalism, and school music." *Visions of Research in Music Education* 16.5, 2021, pp.20.

Orff Approach, which was developed by a German composer, Carl Orff. The Orff method is a developmental approach to music instruction that incorporates speech, movement, theatre, and music into classes that are like a child's playtime³⁴.

Music, ASD Students, and Social Communication: A Literature Review

Through social communication, people can connect or communicate with one another in a social situation. Social contact, social cognition, pragmatics, and language processing are all components of social communication³⁵. As opposed to establishing a single set of universal social standards, social communication considers guidelines that are relevant to a specific individual in their communication contexts.³⁶ Social communication in ASD students is characterized by difficulties with language acquisition and understanding what others are expressing to them. This is consistent with the American Psychiatric Association's assertion that social communication is one of the distinctive characteristics of autism³⁷. Many of the characteristics of people with autism are shared by those who have this disorder, including difficulties expressing emotions, using gestures, staying on the subject, and developing and maintaining friendships. By its very nature, communication is a two-way process, and helping ASD students gain social communication skills with social communication issues can be done by adjusting our own communication to value and appreciate differences. However, common communication methods are seen as cliché because all humans communicate. Thus, music can also be used as a medium of communication too.

Previous academics have done a thorough analysis of how well music instruction aids ASD students' learning. Sharda et al. conducted a study on the effects of music instruction on social interaction and auditory-motor

³⁴ Zhou, Mingyue. "An Analysis of the Applicability of Kodaly and Orff Music Pedagogies in Preschool Children's Music Teaching." *2022 5th International Conference on Humanities Education and Social Sciences (ICHESS 2022)*. Atlantis Press, 2022.

³⁵ De Felice S, de C Hamilton A F, Ponari M, Vigliocco G. "Learning from others is good, with others is better: the role of social interaction in human acquisition of new knowledge." *Philosophical Transactions of the Royal Society B* 378.1870, 2023, 20210357.

³⁶ Sohlberg, McKay Moore., MacDonald, Sheila., Byom, Lindsey., Iwashita, Heidi., Lemoncello, Rik., Meulenbroek, Peter., Ness, Bryan., and O'Neil-Pirozzi, Therese M. "Social communication following traumatic brain injury part I: State-of-the-art review of assessment tools." *International journal of speech-language pathology* vol. 21,2, 2019, pp. 115-127.

³⁷ American Psychiatric Association. "Diagnostic and statistical manual of mental disorders (dsm-5-tr)." *psychiatry.org*, american psychiatric association, 2013, Accessed 18 Dec. 2023.

connection in ASD children³⁸. The findings of a study on 51 autistic students, aged 6 to 12, have supported further research into neurobiologically motivated models of music therapies in autism by demonstrating that individual intervention through music can improve social interaction and cognitive neurological connectivity. Another study on the relationship between music and social communication for ASD students was also conducted by Bharathi et al., who focused on music therapy in developing a form of communication. The ability of ASD students to comprehend, react, and maintain interactions with their peers improved as a result of the music therapy used in this study, which was a success³⁹. A study on the role of music in education that focused on 94 preschool teachers working in Greek public schools found that ASD students may benefit from the social and emotional development that music may nurture in the classroom as an important instructional tool⁴⁰.

A study on the use of Technology-Based Interactive Music such as Garageband on the social communication of ASD students was also carried out late by Yoon in 2021 which aimed to see whether an interactive music-making intervention was applicable to improve the social communication skills of school-age ASD students⁴¹. The findings of this study suggest that interactive music-making activities using GarageBand can be an effective method in clinical practice to improve social communication skills. Kossyvaki and Curran did another study on the efficacy of technology-mediated music-making in improving the social communication abilities of students with autism. The impact of a music-making intervention mediated by technology on student engagement and identity at school is being studied. For educational researchers and school staff, there are certain observed positive results that are particularly beneficial in terms of social communication abilities. In this study, five students with ID and autism were videotaped while they participated in a technology-mediated music-making intervention over

³⁸ Sharda, Megha., Tuerk, Carola., Chowdhury, Rakhe., Jamey, Kevin., Foster, Nicholas., Custo-Blanch, Melanie., Tan, Melissa., Nadig, Aparna., and Hyde, Krista., "Music improves social communication and auditory-motor connectivity in children with autism." *Translational psychiatry* vol. 8,1 231. 23 Oct. 2018, pp. 2-7

³⁹ Bharathi, Geetha, Anila Venugopal, and Balachandar Vellingiri. "Music therapy as a therapeutic tool in improving the social skills of autistic children." *The Egyptian Journal of Neurology, Psychiatry and Neurosurgery* 55, 2019, pp.1-6.

⁴⁰ Archontopoulou, Anna, And Potheini Vaiouli. "Music and social skills for young children with autism: A survey of early childhood educators." *International Journal of Educational Research Review* 5.3, 2020, pp.190-207.

⁴¹ Yoon, Sol. "A Music Technology-Based Interactive Music-Making for Improving the Social Communication Skills of Children with Autism Spectrum Disorder." *Journal of Music and Human Behavior* 18.2, 2021, pp.19-43.

the course of five weeks. The findings indicate that social communication and participation among students with ASD are improving as they learn new things⁴².

A project to see the relationship between mental immersion in the social communication of ASD students was done by Selvi et al., which involved a tool known as Mental Immersion in Virtual Reality Avatar (MIVRA). In contemplation to assist ASD students to communicate better socially, the MIVRA act proposes that mental immersion in virtual reality avatars be used in interactions that involve visual object detection, speaking, speech gestures, and audio responses to the avatar. The study's findings indicate that ASD students' psychological states that link to music in the virtual world improve their social world communication. Aware of the main problems of ASD students involving pragmatic techniques such as hearing, talking, feeling, thinking, and social interaction⁴³. Prabakar et al., have also carried out an approach known as Multi-Sensory Storytelling (MSST). This method has been used to improve social communication skills in students with autism and other special needs. The results showed that among the children, 20% of whom were girls and 80% of whom were boys, there was a steady improvement (27%) in their social communication using advanced technology-supported multi-sensory storytelling methods.⁴⁴ Furthermore, the study discovered that MSST was believed to lead to curriculum access, evaluation, learning, and socializing of students with a variety of special educational needs.

In Taiwan, Lee et al. investigated the impact of music education on the academic behavior of Preschool ASD children. This study focuses on the Holistic Music Educational Approach for Young Children (HMEAYC), a set of music curriculum models created for preschool children, as well as Figure notes' music teaching methodologies⁴⁵. A total of 6 children with autism and 6 children without autism were involved in this 12-week study. The findings of

⁴² Kossyvaki, Lila, and Sara Curran. "The role of technology-mediated music-making in enhancing engagement and social communication in children with autism and intellectual disabilities." *Journal of Intellectual Disabilities* 24.1, 2020, pp.118-138.

⁴³ Selvi, T., Sri, S.N., Devi, B., Thomas, M., Rajkumar, Ramdoss, S.P. Mental Immersion in Virtual Reality Avatar (MIVRA)—Social Communication Rehabilitation Assistive Tool for Autism Children. In: Garg, L., Sharma, H., Goyal, S.B., Singh, A. (eds) Proceedings of International Conference on Innovations in Information and Communication Technologies. ICI2CT 2020. Algorithms for Intelligent Systems. Springer, Singapore. 2021.

⁴⁴ Prabakar, S., Porkumaran, K., Ramanan, S.V., & Cheranmadevi, K. "Virtual Reality a Pragmatic Technique for Multi-Sensory Story Telling Improve the Social Communication of Children with Special Needs." *ICTACT J. Soft Comput.* 11.2 (2021): pp.3-6

⁴⁵ Lee, Liza, Hsiao-Fang Lin, and Han-Ju Ho, "The influence of music technology on the academic behavior of preschool children with autism spectrum disorder". *Eurasia Journal of Mathematics, Science and Technology Education*, vol. 19, no. 6, 2023, em2273.

this study demonstrate that the HMEAYC teaching approach, while used as an intervention, may enhance academic conduct in both children with and without autism spectrum disorders. However, it has greater positive effects on learning habits in ASD children. Meanwhile, Shahab et al. performed a study on the acceptance of social virtual reality robots (V2R) for music education by children with high-functioning autism. This study involves a baseline session, a pre-test, training sessions, a post-test, and a follow-up test where 5 ASD children aged from 6 to 8 years have followed music education sessions for 20 weeks. Each session that takes place involves teaching contrasting pieces of music and notes based on the children's compliance, accuracy, and skill level at utilizing virtual reality robots and virtual musical instruments. The encouraging findings of this preliminary study indicate that the use of virtual reality in music education will be beneficial for the rehabilitation of ASD children⁴⁶.

The improvement of social communication for ASD children and its relationship in music education was also studied by Pater et al., who involved 40 ASD children to find out how music therapy used in education can help the social communication process of these children. The researcher employed the Papageno Music Therapy Program (PMTP) in this study, which was designed to treat children and young people on the autism spectrum through music therapy in the home (<https://www.papageno.nl/en/>). The purpose of this study is to get a realistic image of daily PMTP practice where the parent may also watch the behavior on a daily basis. The study's findings also indicate that social contact during music therapy improved significantly for the majority of children, suggesting that the benefits extend outside of the therapeutic environment⁴⁷. PMTP is a foundation that was established by Jaap van Zweden and his wife, Aaltje van Buuren in 1997 in the Netherlands after their son was diagnosed with autism. PMTP aims to focus on the development and development of children and young people with autism⁴⁸. According to a statement released by King Baudouin Foundation United States, The American Friends of Stichting Papageno made a grant of \$90,000 for music applications and music therapy workshops suitable for ASD children⁴⁹.

⁴⁶ Shahab, Mojtaba, et al. "Utilizing social virtual reality robot (V2R) for music education to children with high-functioning autism." *Education and Information Technologies*, 2022, pp.1-25.

⁴⁷ Pater, Mathieu, Marinus Spreen, and Tom van Yperen. "Music therapy for children on the autism spectrum: Improved social interaction observed by multiple informants across different social contexts." *Nordic Journal of Music Therapy*, 2022, pp. 1-19.

⁴⁸ New York Philharmonic. "Magazine Names Aaltje van Zweden One of 80 Strong Women for Her Autism Advocacy | What's New: Latest News and Stories about the New York Philharmonic." *Nyphil.org*, 2018. <https://nyphil.org/whats-new/2018/november/aaltje-van-zweden-margriet-strong-women-autism-advocacy>. Accessed 18 May 2023

⁴⁹ King Baudouin Foundation United States. *Music Therapy to Treat Children with Autism – KBFUS*. 2019, <https://kbfus.org/music-therapy-to-treat-children-with-autism/> Accessed 21 Jan. 2023.

Conclusion

Music has long been recognized as a powerful tool for social communication and interaction. In fact, many autistic children find relief and joy in music. Their musical ability helps them overcome obstacles and to express themselves socially. In a recent study, researchers explored the impact of music education on social interaction and communication skills in children with autism spectrum disorder (ASD)⁵⁰. The results showed a significant improvement in social communication skills among children who received music therapy compared to those who received standard care. This is encouraging news for parents of children with autism. As both speech and music are learned skills, these results could pave the way for the development of effective strategies for improving communication skills in children with ASD. The researcher suggest that this could be because music education may provide a more intuitive and enjoyable learning environment for these children, allowing them to engage in activities that are both stimulating and rewarding Further research is needed to confirm these findings, but if music education is found to be effective in improving social and communication skills among children with ASD, it could open up new avenues of treatment for families dealing with this condition.

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⁵⁰ Hyoungjik, Kim. Music Education of Korean American Students with Autism Spectrum Disorder (ASD) Living in Los Angeles County and Orange County. 2023, digitalcommons.liberty.edu/cgi/viewcontent.cgi?article=5168&context=doctoral. Accessed 4 Nov. 2023.

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