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OPINION ARTICLE

How to identify a Talented Musician in Children with Autism

Juang Sheng CHUA 

Merlion Paediatric Therapy Clinic, Singapore
Associate Educational Therapist & Arts Therapist

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Corresponding author's email: juangshengchua@yahoo.com.sg

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1. INTRODUCTION

Many parents whom I have met in my course of work often ask me this question: “*Can my child with autism become a talented musician?*” There is no direct answer to that question (also see Howlin et al., 2009). To the best of my knowledge, autistic musicians often possess unique and extraordinary talents, often excelling in areas such as perfect pitch, composing, or creating innovative musical styles (Pring, 2005). Just like the autistic savant artists (Camulli & Goh, 2018), autistic savant musicians also do possess extraordinary systemizing ability, but in the creative domain of music (Treffert, 2010). Their attention to detail and ability to focus intensely on their craft can result in exceptional music. One good example is Jacob Collier, who is a Grammy-winning multi-instrumentalist, composer, and arranger. is open about being autistic. Similarly, in another example, Tony DeBlois, a blind and autistic musician, plays over 20 instruments and has performed worldwide.

One thing for sure is that musically talented autistic children often exhibit unique traits and strengths related to their musical ability (Happé & Frith, 2009). This is particularly so when these children with autism display strong systemizing tendencies in their musical inclination (van der Zee & Derksen, 2021; Treffert, 2010). Their musical traits can be subtle or pronounced, depending on the child, but let me share some of the common characteristics that parents as well as teachers can look out for.

2. KEY CHARACTERISTICS OF MUSICAL TALENT IN CHILDREN WITH AUTISM

Table 1 below shows the nine features, especially perfect or absolute pitch (Heaton, Hermelin, & Pring, 1998), of musical talent to look out for in a child with autism spectrum disorder (ASD).

Table 1. The Nine Key Characteristics of Musical Talent in Autism Spectrum Disorder

No.	Characteristics	Musical Talent
1.	Exceptional auditory memory	❖ Ability to recall and replicate melodies or rhythms after hearing them once or only a few times.

		❖ May also easily memorize lyrics, song structures, or instrumental arrangements.
2.	Perfect or absolute pitch	❖ The ability to identify or reproduce a musical note without any reference tone. ❖ This is more common in autistic individuals compared to the general population.,
3.	Sensitivity to sound patterns	❖ A heightened sensitivity to pitch, rhythm, tempo, or timbre. ❖ May notice subtle nuances in music that others might miss out completely.
4.	Preference for Repetition	❖ Enjoyment of repeating certain songs, rhythms, or musical patterns. ❖ Repetition helps them explore and understand music deeply, often leading to mastery.
5.	Focus on systemizing musical structures	❖ Interest in understanding musical scales, chord progressions, or rhythmic patterns. ❖ May create their own systems or rules for composing or playing music.
6.	Early attraction to music	❖ Shows a strong, often obsessive interest in musical instruments, sounds, or specific genres at a young age. ❖ May gravitate toward playing or exploring instruments without formal instruction.
7.	Improvisation and creativity	❖ While some children excel at reproducing music, others might display an innate ability to create original compositions or improvise within a structured framework.
8.	Hyperfocus during musical activities	❖ Demonstrates intense focus and engagement when involved in musical activities, sometimes to the exclusion of other interests.
9.	Comfort in non-verbal expression	❖ Uses music as a form of self-expression, especially if verbal communication is challenging. May express emotions or ideas through playing, singing, or composing.

3. TRAIT INDICATORS OF MUSICAL SYSTEMIZING ABILITY

Talented children with autism spectrum disorder (ASD) do manifest musical systemizing ability (Chung & Son, 2023; Treffert, 2010). The term 'systemizing ability,' in the context of musical talent, refers to the capacity to understand, analyze, and organize musical systems, structures, or patterns (Hughes et al., 2018; Treffert, 2010; van der Zee & Derksen, 2021). It involves the ability to break down complex musical ideas into their components and understand how those components fit together to create a cohesive whole (also see Young & Nettelbeck, 1995, for a case of an autistic savant musician).

There are nine trait indicators of musical systemizing ability as shown in Table 2.

Table 2. The Nine Trait Indicators of Musical Systemizing Ability.

No.	Traits	Abilities
1.	Analytical approach to music	A fascination with understanding how music works technically, e.g., reading music notation, understanding time signatures, or analyzing song structures.
2.	Pattern recognition	Easily identifies and replicates patterns in music, such as repeating sequences or rhythms.
3.	Self-taught learning	Learns to play instruments or sing by observing, experimenting, or listening rather than through formal lessons.
4.	Preference for consistency	Prefers precise, structured music and may struggle with unpredictable or improvisational styles, unless they have mastered the underlying structure.
5.	Mathematical thinking in music	May approach music with a mathematical mindset, appreciating symmetry, balance, and proportionality in compositions.
6.	Behavioral signs to observe	Intense interest in specific musical genres or instruments:

7.	Strong specific preference	Develop strong preferences for certain types of music or instruments and focuses solely on them for extended periods.
8.	Focus on small details	Notices minor flaws or intricacies in performances, recordings, or musical arrangements.
9.	Frequent Experimentation	Tinkers with different instruments, sounds, or software to create new musical expressions.

Recognizing these traits early can help you provide the autistic child with opportunities for growth in music, such as lessons, access to instruments, or exposure to different genres. Supportive and patient guidance can help further nurture their talent and passion.

3.1 Examples of Talented Musicians with Autism

Many autistic individuals have excelled in music, showcasing exceptional creativity and skill. Let me share with you some of them here. The first one is Derek Paravicini, a blind, autistic savant pianist. He is known for his extraordinary ability to play complex pieces of music after hearing them just once. He has performed worldwide and is celebrated for his talent despite significant developmental challenges.

Another one is Tito Mukhopadhyay. He is an autistic nonverbal musician and writer, who uses alternative methods of communication. He expresses his inner world and emotions through poetry and music, highlighting his deep creativity.

Then there is third talented autistic savant in music: Tony DeBlois, whom I have mentioned at the beginning. He is a blind autistic savant musician who can play more than 20 instruments. His skills include perfect pitch, and his repertoire spans thousands of songs.

A fourth autistic savant musician is Matt Savage. He is a jazz prodigy, who was diagnosed with autism at a young age. Matt began teaching himself piano at age six. He has since released numerous albums, performed internationally, and studied at prestigious music schools.

There is also one known Japanese autistic savant composer. He is Hikari Oe. Born with severe disabilities, including autism, Hikari channels his emotions into creating classical compositions. His work has received critical acclaim both in Japan and abroad.

Finally, a sixth autistic savant singer is James Durbin. Despite being diagnosed with both autism and Tourette syndrome, James gained fame on American Idol. He uses his platform to raise awareness about autism and inspire others with his powerful voice.

These six musicians as listed here demonstrate how their condition of autism spectrum disorder (ASD) can be linked to unique strengths, especially in areas requiring focus, memory, and creativity. They have more to offer to us in how we as educational therapists can help to advocate for them, their rights to be treated with respect, and maximize the potential of their musical ability so that the general public understand and accept them in today's inclusive world.

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9. ETHICS APPROVAL

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