

How Music Interventions Affect the Social and Communication Skills of Autistic Children: The Role of Special Education Teachers in East Jerusalem

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Abstract

This study explores how music interventions influence children's social and communication skills on the autism spectrum. It considers how Arab Palestinian autistic children in East Jerusalem respond to these interventions from their teachers' perspectives. The participants included 33 teachers working at special education centers in East Jerusalem. The findings demonstrate that music interventions significantly improve the social and communication skills of autistic children. No notable differences were observed based on the teachers' gender, years of experience, or academic qualifications. This

suggests that a teacher's background does not impact the effectiveness of music interventions for children on the autism spectrum. Accordingly, the study recommends making music interventions a central component of therapy and educational programs for autistic children attending specialized centers and schools. It also advocates for developing curricula that systematically integrate music activities into the children's individual plans, ensuring consistent participation throughout the school day.

Keywords: music interventions, autism, children, social interactions, communication, East Jerusalem.

How Music Interventions Affect the Social and Communication Skills of Autistic Children: The Role of Special Education Teachers in East Jerusalem

Autism spectrum disorder (ASD) is a neurodevelopmental condition that affects individuals from early childhood and is characterized by challenges in social interactions, verbal and non-verbal communication, along with repetitive and stereotyped behaviors. People diagnosed with ASD face significant difficulties in forming social relationships and interpreting non-verbal cues, which negatively impacts their quality of life and that of their families (Hussein et al., 2019). As awareness of this condition increases, it has become essential to develop effective strategies to support individuals on the autism spectrum and improve their quality of life (Zerwali, 2022).

Social and communication skills are among the most noticeable areas affected in people with autism, hindering their ability to participate in daily activities and engage effectively in social situations. Children on the autism spectrum often find it challenging to build relationships, understand social cues, and communicate effectively with others (Hussein et al., 2019). These

challenges can later interfere with social integration and restrict their ability to live independently (Ibn Arabiya & Sawahi, 2020). New therapeutic methods have been developed to improve these social and communication skills in response to these issues. One such approach includes music interventions, which are increasingly recognized as highly effective for promoting emotional and social development in individuals diagnosed with autism spectrum disorder (ASD) (Nasser, 2020).

Music is a universal language that transcends verbal barriers and is a powerful tool for communication and connection. Music interventions involve using music or guided musical activities as therapeutic methods to improve various aspects of development, behavior, or social interaction, especially in individuals with autism spectrum disorder. Techniques include playing instruments, singing, and guided music listening (Hamdi & Mohamed, 2022, p. 674). These techniques enhance attention, foster social interaction, and support the development of language and expressive skills in children and adults with various developmental disorders, including ASD (Ali, 2017). Indeed, research shows that music interventions are essential in

stimulating the brain to form neural networks that strengthen social and communicative skills. As a result, music has become an integral part of comprehensive therapeutic programs aimed at improving the quality of life for autistic individuals (Al-Saifi, 2019).

Although many therapeutic programs and interventions have been created for individuals on the autism spectrum, their effectiveness and suitability for addressing personal needs vary. In this context, music interventions have shown considerable promise as an innovative therapeutic tool that can enhance the social and communication skills of individuals diagnosed with ASD. As an interactive method, music can break down verbal barriers and promote social integration, making it a valuable area for further research and exploration (Hosseini & Sijilmassi, 2022). Therefore, this study investigates the impact of music interventions on the social and communication skills of autistic children in East Jerusalem and how they respond to these interventions, as reported by their teachers.

*** The Effect of Music Interventions on Autistic Children's Communication Skills**

Music interventions have been shown to significantly enhance communication skills in autistic children. The communication skills referred to here include a person's ability to express their thoughts and feelings and to understand others through verbal and nonverbal cues, such as gestures, facial expressions, and tone of voice (Hosseini & Sijilmassi, 2022). For example, music therapy-based programs have been demonstrated to improve both receptive and expressive language abilities in children on the autism spectrum, illustrating how music can be a powerful tool for behavioral change because it appeals to these children (Al-Zayyat, 2023). Such interventions have also been shown to boost language function in autistic children (Hamdi & Mohamed, 2022) and to support the development of their rhetorical abilities (Hosseini & Sijilmassi, 2022). Furthermore, research indicates that music interventions not only improve verbal communication in autistic children but also strengthen their non-verbal communication skills (Jaber et al., 2016; Ahmed, 2018; Al-Shirawi, 2021; Hosseini & Sijilmassi, 2022).

A study by Hosseini and Sijlmassi (2022) explores the therapeutic effects of musical sounds on working memory to improve communication and rhetorical skills in children on the autism spectrum. The study's experimental approach used a non-traditional therapy method that combines musical sounds with other engaging elements in a digital environment designed to stimulate working memory and enhance communication responses. This method was applied to a group of 40 autistic children in Djelfa to assess its impact on their verbal and nonverbal interaction and to improve their speech and expressive skills. The results showed that this technique significantly enhanced their verbal and non-verbal communication and knowledge skills.

Similarly, Al-Shirawi's (2021) study examines the relationship between playing musical instruments and nonverbal communication in children on the autism spectrum. Al-Shirawi (2021) found that facial expressions and vocal intonation significantly improved among autistic children who played musical instruments for extended periods. Additionally, the piano was the most appealing instrument to these children, followed by the drum, the

marxophone, and the tambourine. Indeed, playing instruments has significantly enhanced autistic children's verbal and non-verbal communication skills, ultimately boosting their social skills. For example, Al-Attar's (2019) study found that autistic children who were trained to play the piano significantly improved their auditory and visual perception, further increasing their visual attention. These children also demonstrated notable improvements in expressing emotions and enjoying playing, helping them participate in group play and enhancing their social interaction.

*** The Effect of Music Interventions on Autistic Children's Social Skills**

Music enhances the verbal and nonverbal communication skills of autistic children, ultimately helping their social integration. These social skills include interacting appropriately and effectively with others, forming friendships, cooperating, and respecting social rules (Ibn Arabiya & Sawahi, 2020, p. 109). As the language skills of autistic children improve, so do their social skills. In fact, music interventions have been shown to significantly benefit autistic children's language functions, behavior, sensory perception, independence, and social

communication (Ali, 2017; Shi et al., 2024). A study by Wang and Zhang (2023) in China involved 50 autistic children divided into a music therapy group and a music education group. Both groups experienced notable improvements in social skills, but the progress was more evident in children who received music therapy. This illustrates that music interventions should go beyond basic music education and be guided by psychological and therapeutic methods.

Music interventions combined with dancing also have a significant impact on the social and communication skills of autistic children. For example, a study by Stamou et al. (2022) shows how music and dance act as positive cues for young students to remember and perform tasks, thereby enhancing their engagement with and inclusion in the group. This is because such activities provide opportunities for interaction and promote cooperation and social inclusion among autistic children. All these studies demonstrate that music therapy interventions positively influence social and communication skills in children on the autism spectrum, and they recommend incorporating musical activities into school curricula.

*** The Current Study**

The current study examines how music interventions impact the social and communication skills of autistic children. However, it highlights the perspective of teachers working with autistic children to gain a deeper understanding of early childhood autism specialists. Few studies have explored how teachers themselves influence the effectiveness of interventions for early childhood autism, and those that have shown that, while teachers recognize the main challenges faced by autistic children, they still have limited knowledge of autism overall and how to teach an autistic child in the classroom specifically. Despite the proven excellent results of music interventions, these early childhood teachers often find occupational and speech-language therapy to be the most popular approaches when working with children on the autism spectrum (see Mela & Kossyvaki, 2025).

The current study aims to answer the following questions: -

- 1- How do music interventions impact children's social and communication skills on the autism spectrum?
- 2- How do teachers impact the effectiveness of such interventions? Do factors such as their gender,

academic qualifications, and years of experience affect the way autistic children respond to music interventions?

* **Methodology**

The current study used a descriptive, analytical, and quantitative approach, gathering data from the sample and analyzing it to understand how music interventions affect the social and communication skills of children on the autism spectrum. Participants included 33 teachers from autism centers across East Jerusalem schools, representing diverse experiences and backgrounds—30.3% identified as male, while 69.7% identified as female. Additionally, 63.6% held a bachelor's degree, and 36.4% held a master's degree. Moreover, 30.3% of participants had less than 1 year of experience, 45.5% had 1 to 5 years, and 24.2% had 6 to 10 years. Informed consent for participation was obtained from all subjects involved in the study.

All participants completed a questionnaire, which served as the primary data source. The data were then analyzed statistically using SPSS software and univariate analysis (ANOVA) with T-tests, calculating means and standard deviations. The questionnaire included several sections, addressing

the Impact of Music Interventions on Social Interaction (Zaid, 2018) and the Impact of Music Interventions on Verbal and Nonverbal Communication (Salameh, 2016). The questionnaire statements were based on previous studies to ensure comprehensive coverage of the topic, and the sections were developed using a five-point Likert scale (strongly agree, agree, neutral, disagree, strongly disagree). Internal consistency validity was confirmed by calculating the Pearson correlation coefficient between each questionnaire statement and its total score. The study tool's reliability and consistency were further verified using Cronbach's Alpha (see Tables 1, 2, and 3).

(Table 1 here)

(Table 2 here)

(Table 3 here)

Table 1 shows that all correlation coefficients are statistically significant at the 0.01 level. Table 2 shows that all correlation coefficients are statistically significant at the 0.01 level. Additionally, Table 3 demonstrates that Cronbach's alpha coefficient is high across all questionnaire sections, indicating strong reliability and consistency.

* Results

To understand how music interventions affect the social and communication skills of children on the autism spectrum, we first examined the questionnaire's first section statements, "the effect of music interventions on the verbal social skills of autistic children," by calculating the mean, standard deviation, and relative importance (see Table 4).

(Table 4 here)

Table 4 shows that, according to the teachers, music interventions significantly affect the social verbal skills of autistic children (mean = 3.799, relative importance = 75.98%). Most teachers found that music interventions motivate autistic children to welcome the teacher with kind words (relative importance = 76.96%). However, teachers perceive that music interventions do not significantly impact the children's ability to describe the things and people they see (relative importance = 75.16%).

To examine the questionnaire's second section statements, "the effect of music interventions on the nonverbal social skills of autistic children", we calculated the mean, standard deviation, and relative importance (see Table 5).

(Table 5 here)

Table 5 indicates that, according to the teachers, music interventions significantly affect autistic children's nonverbal social skills (mean = 3.765; relative importance = 75.30%). Most teachers perceive that music interventions encourage autistic children to mirror their friends' movements (relative importance = 78.18%). However, teachers do not find that music interventions improve children's ability to express affection (relative importance = 71.52%).

To investigate the questionnaire's third section statements, "the effect of music interventions on the verbal communication skills of autistic children", we calculated the mean, standard deviation, and relative importance (see Table 6).

(Table 6 here)

Table 6 shows that music interventions significantly affect the verbal communication skills of autistic children (mean = 3.731, relative importance = 74.62%). Most teachers perceive that music interventions motivate autistic children to appropriately respond to questions such as "What is your name?" (relative importance = 75.76%). Conversely, most teachers found that music interventions do not

significantly improve autistic children's ability to appropriately use words such as "thank you" or "excuse me" (relative importance = 72.12%).

To examine the questionnaire's fourth section statements, "the effect of music interventions on the non-verbal communication skills of autistic children", we calculated the mean, standard deviation, and relative importance (see Table 7).

(Table 7 here)

Table 7 indicates that music interventions significantly affect the non-verbal communication skills of autistic children (mean = 3.731, relative importance = 74.62%). Most teachers agree that music interventions encourage autistic children to use hand-wave gestures in response to others using the same gestures (relative importance = 76.96%). However, the teachers found that music interventions do not help autistic children exchange smiles when being smiled at (relative importance = 70.90%).

Moreover, a t-test was used to examine whether the teachers' gender plays a role in determining the effects of music interventions on the social and communication skills of autistic children (see Table 8).

(Table 8 here)

Table 8 shows that the t-value is 1.611, and the significance level is 0.117. This indicates no statistically significant effect of the teachers' gender on how well music interventions affect the social and communication skills of autistic children (significance level $\alpha \leq 0.05$).

A t-test was also used to examine whether the teachers' academic qualifications determine the effectiveness of music interventions on the social and communication skills of autistic children (see Table 9)

(Table 9 here)

Table 9 demonstrates that the t-value is 1.721, and the significance level is 0.098. This means that there is no statistically significant effect of teachers' academic qualifications on the effectiveness of music interventions on the social and communication skills of autistic children (significance level $\alpha \leq 0.05$).

Additionally, a one-way ANOVA test was used to determine whether the teachers' years of experience influence the effectiveness of music interventions on the social and communication skills of autistic children (see Table 10).

(Table 10 here)

Table 10 shows that the calculated F value is 0.242, and the

significance level is 0.787. This indicates that teachers' years of experience do not have a statistically significant effect on how well music interventions improve the social and communication skills of autistic children (significance level $\alpha \leq 0.05$).

* Discussion

The results of this study demonstrate that music interventions significantly and positively enhance social and communication skills in people with autism spectrum disorder, as the average scores across all questionnaire sections were high and exceeded the accepted threshold. Music is an engaging and effective tool for breaking down behavioral barriers that hinder communication and social interaction in children with autism. Rhythm and melody motivate children to imitate and interact, positively influencing their verbal and non-verbal skills and improving social and language abilities.

Furthermore, the findings show no statistically significant effect of teachers' gender, academic qualifications, or years of experience on how well music interventions enhance the social and communication skills of autistic children. From my perspective as a field researcher, this is due to the nature of the music training programs used at the centers. They are

standardized and carried out according to fixed therapeutic protocols that do not rely heavily on individual differences among teachers. Additionally, the positive effects of music interaction with autistic children are often independent of the teacher's gender and are more closely associated with the quality and frequency of musical activities. This conflicts with studies like Ahmed (2018) and Ali (2017), which found that a teacher's gender influences the impact of music interventions on autistic children.

Additionally, whether the teacher has a bachelor's or a master's degree does not affect the effectiveness of music interventions on autistic children. This can be explained by the fact that the music programs used in the study might have been detailed and structured enough that all teachers, regardless of their educational level, could use them effectively—especially with a consistent application manual or training on the program. This aligns with the findings of Hosseini and Sijilmassi (2022), who found no differences in teachers' academic qualifications.

However, the findings contradict studies such as Al-Zayyat (2023) and Jaber et al. (2016), which demonstrate that teachers with higher

academic qualifications are more effective in using music intervention activities because of a deeper understanding of special education. Therefore, the link between academic qualifications and the success of music interventions may be influenced by several intermediate factors, such as the type of training program, professional supervision, and teachers' level of commitment.

Last but not least, the results show that teachers' years of experience do not determine the effectiveness of music interventions on autistic children. From my perspective as a researcher, this may be because the nature of the music programs used was straightforward to implement, allowing all teachers, regardless of experience, to apply them consistently. It may also be due to participants' training, which helps reduce gaps related to experience differences. This aligns with studies such as Al-Shirawi (2021). However, it contradicts studies by Hamdi and Mohamed (2022) and Al-Attar (2019), which found that greater years of teacher experience are associated with better application of music interventions.

*** Conclusion**

This study investigates how music interventions enhance children's social and communication

skills on the autism spectrum. It also assesses whether teachers' gender, academic background, and years of experience influence the effectiveness of these interventions for autistic children. The results confirm that music interventions are a valuable tool for improving social and communication skills in autistic children, demonstrating their role as a supportive approach in special education settings. Furthermore, the study found no statistically significant differences based on teachers' gender, academic credentials, or experience concerning the effectiveness of music interventions for children on the autism spectrum.

This study adds to the academic literature on this topic. It highlights how music interventions enhance autistic children's social and communication skills, further increasing their ability to adapt to life situations as they grow older. It also provides an in-depth understanding of music's potential as an innovative therapeutic tool, contributing to new theories about its role in fostering social and communicative development. Additionally, this research fills a gap by examining the link between music and autism within a Palestinian and Arab context. Overall, the findings of this study

help improve the design of music interventions, support practitioners and specialists with practical tools, and raise community awareness about the importance of music as a practical therapeutic approach for individuals on the autism spectrum.

This study is limited in time because it was conducted during the first semester of the 2024/2025 academic year. It is also geographically limited to special education schools in East Jerusalem, and the study sample included only 33 Arab teachers working in those schools. Nevertheless, several policy and practical recommendations can be provided based on the study results. For instance, making music interventions a vital component of therapeutic and educational programs for children on the autism spectrum in special education centers and schools, and designing educational curricula that systematically incorporate music activities into individualized plans for autistic children, with regular time allocated during the school day. Additionally, implementing a general training policy regarding the use of music interventions for all teachers in special education centers and schools. Finally, encouraging the consistent use of music interventions across all educational centers without

designating them to any specific group of teachers.

* All Tables

Table 1 Correlation Coefficient For Each Questionnaire Statement

First Section: The Effect of Music Interventions on the Verbal/Social Skills of Autistic Children			
Statement No.	Statement	Correlation Coefficient	Significance Level
1	Music interventions motivate autistic children to apologize when they make a mistake	0.584**	0.000
2	Music interventions help autistic children express their feelings towards others easily	0.828**	0.000
3	Music interventions encourage autistic children to ask their friends to participate in the games they love	0.774**	0.000
4	Music interventions motivate autistic children to welcome the teacher with kind words	0.680**	0.000
5	Music interventions impact autistic children's ability to describe the things and people they see	0.730**	0.000
6	Music interventions encourage autistic children to raise a finger when wanting to answer a question	0.765**	0.000
7	Music interventions encourage autistic children to speak out loud when they want to express themselves	0.632**	0.000
8	Music interventions motivate autistic children to reconcile with their friends in case of disagreement	0.722**	0.000
Second Section: The Effect of Music Interventions on the Non-Verbal Social Skills of Autistic Children			
Statement No.	Statement	Correlation Coefficient	Significance Level
1	Music interventions motivate autistic children's ability to smile at their friends	0.869**	0.000
2	Music interventions encourage autistic children to follow the teacher when the latter is distracted	0.814**	0.000
3	Music interventions improve autistic children's ability to express affection	0.616**	0.000
4	Music interventions encourage autistic children to make eye contact with their teacher	0.849**	0.000
5	Music interventions encourage autistic children to hold their friends' hands while playing	0.570**	0.001
6	Music interventions encourage autistic children to mirror their friends' movements	0.506**	0.003
7	Music interventions motivate autistic children to help those who need help	0.756**	0.000
8	Music interventions motivate autistic children to take an interest in seeing their friends happy	0.731**	0.000

Third Section: The Effect of Music Interventions on the Verbal Communication Skills of Autistic Children			
Statement No.	Statement	Correlation Coefficient	Significance Level
1	Music interventions encourage autistic children to use "yes" and "no" answers correctly as they interact with them	0.717**	0.000
2	Music interventions help autistic children express their feelings towards others using words	0.884**	0.000
3	Music interventions encourage autistic children to use the pronoun (I) correctly	0.838**	0.000
4	Music interventions encourage autistic children to appropriately respond to questions such as "What is your name?"	0.838**	0.000
5	Music interventions improve autistic children's ability to appropriately use words such as "thank you" or "excuse me"	0.844**	0.000
6	Music interventions motivate autistic children to use words to express their needs to their family members	0.868**	0.000
7	Music interventions help autistic children express their daily experiences using simple phrases or words	0.900**	0.000
8	Music interventions improve autistic children's ability to use conversational skills such as starting and ending a conversation	0.867**	0.000

Fourth Section: The Effect of Music Intervention on the Non-Verbal Communication Skills of Autistic Children			
Statement No.	Statement	Correlation Coefficient	Significance Level
1	Music interventions encourage autistic children to point with their index finger to the thing they want	0.590**	0.000
2	Music interventions motivate autistic children to embrace the people they love	0.585**	0.000
3	Music interventions encourage autistic children to reach out and shake other people's hands	0.622**	0.000
4	Music interventions motivate autistic children to exchange smiles when being smiled at	0.881**	0.000
5	Music interventions help autistic children understand social cues such as agreement and rejection gestures	0.799**	0.000
6	Music interventions increase autistic children's ability to understand other people's emotions from their facial expressions	0.651**	0.000

Table 2 Correlation Coefficient For Each Questionnaire Section

Section No.	Questionnaire Section	Correlation Coefficient	Significance Level
1	First Section: The Effect of Music Interventions on the Verbal Social Skills of Autistic Children	0.833**	0.000
2	Second Section: The Effect of Music Interventions on the Non-Verbal Social Skills of Autistic Children	0.890**	0.000
3	Third Section: The Effect of Music Interventions on the Verbal Communication Skills of Autistic Children	0.891**	0.000
4	Fourth Section: The Effect of Music Interventions on the Non-Verbal Communication Skills of Autistic Children	0.902**	0.000

Table 3 Cronbach's Alpha Coefficient to Test Reliability and Consistency

Section No.	Questionnaire Section	Number of Statements	Alpha Coefficient
1	First Section: The Effect of Music Interventions on the Verbal Social Skills of Autistic Children	8	0.863
2	Second Section: The Effect of Music Interventions on the Non-Verbal Social Skills of Autistic Children	8	0.856
3	Third Section: The Effect of Music Interventions on the Verbal Communication Skills of Autistic Children	8	0.941
4	Fourth Section: The Effect of Music Interventions on the Non-Verbal Communication Skills of Autistic Children	8	0.859
Overall reliability and consistency score		32	0.957

Table 4 Mean, Standard Deviation, and Relative Importance of the Effect of Music Interventions on the Verbal Social Skills of Autistic Children

Statement No.	Statement	Mean	Standard Deviation	Relative Importance	Order
1	Music interventions motivate autistic children to apologize when they make a mistake	3.818	0.635	76.36%	4
2	Music interventions help autistic children express their feelings towards others easily	3.818	0.527	76.36%	3
3	Music interventions encourage autistic children to ask their friends to participate in the games they love	3.818	0.527	76.36%	2
4	Music interventions motivate autistic children to welcome the teacher with kind words	3.840	0.507	76.80%	1
5	Music interventions impact autistic children's ability to describe the things and people they see	3.758	0.613	75.16%	8
6	Music interventions encourage autistic children to raise a finger when wanting to answer a questions	3.788	0.649	75.76%	6
7	Music interventions encourage autistic children to speak out loud when they want to express themselves	3.758	0.613	75.16%	7
8	Music interventions motivate autistic children to reconcile with their friends in case of disagreement	3.788	0.545	75.76%	5
Overall Score		3.799	0.414	75.98%	--

Table 5 Mean, Standard Deviation, and Relative Importance of the Effect of Music Interventions on the Non-Verbal Social Skills of Autistic Children

Statement No.	Statement	Mean	Standard Deviation	Relative Importance	Order
1	Music interventions motivate autistic children's ability to smile at their friends	3.818	0.635	76.36%	2
2	Music interventions encourage autistic children to follow the teacher when the latter is distracted	3.727	0.574	74.54%	7
3	Music interventions improve autistic children's ability to express affection	3.576	0.867	71.52%	8
4	Music interventions encourage autistic children to make eye contact with their teacher	3.758	0.662	75.16%	6
5	Music interventions encourage autistic children to hold their friends' hands while playing	3.788	0.599	75.76%	4
6	Music interventions encourage autistic children to mirror their friends' movements	3.909	0.458	78.18%	1
7	Music interventions motivate autistic children to help those who need help	3.788	0.545	75.76%	3
8	Music interventions motivate autistic children to take an interest in seeing their friends happy	3.758	0.613	75.16%	5
Overall Score		3.765	0.443	75.30%	--

Table 6 Mean, Standard Deviation, and Relative Importance of the Effect of Music Interventions on the Verbal Communication Skills of Autistic Children

Statement No.	Statement	Mean	Standard Deviation	Relative Importance	Order
1	Music interventions encourage autistic children to use "yes" and "no" answers correctly as they intend them	3.727	0.626	74.54%	5
2	Music interventions help autistic children express their feelings towards others using words	3.758	0.662	75.16%	4
3	Music interventions encourage autistic children to use the pronoun (I) correctly	3.758	0.613	75.16%	3
4	Music interventions encourage autistic children to appropriately respond to questions such as "What is your name?"	3.788	0.649	75.76%	1
5	Music interventions improve autistic children's ability to appropriately use words such as "thank you" or "excuse me"	3.606	0.747	72.12%	8
6	Music interventions motivate autistic children to use words to express their needs to their family members	3.727	0.674	74.54%	7
7	Music interventions help autistic children express their daily experiences using simple phrases or words	3.727	0.626	74.54%	6
8	Music interventions improve autistic children's ability to use conversational skills such as starting and ending a conversation	3.758	0.560	75.16%	2
Overall Score		3.758	0.560	75.16%	--

Table 7 Mean, Standard Deviation, and Relative Importance of the Effect of Music Interventions on the Non-Verbal Communication Skills of Autistic Children

Statement No.	Statement	Mean	Standard Deviation	Relative Importance	Order
1	Music interventions encourage autistic children to point with their index finger to the thing they want	3.788	0.649	75.76%	3
2	Music interventions motivate autistic children to embrace the people they love	3.727	0.516	74.54%	4
3	Music interventions encourage autistic children to reach out and shake other people's hands	3.727	0.626	74.54%	5
4	Music interventions motivate autistic children to exchange smiles when being smiled at	3.545	0.869	70.90%	8
5	Music interventions help autistic children understand social cues such as agreement and rejection gestures	3.788	0.599	75.76%	2
6	Music interventions increase autistic children's ability to understand other people's emotions from their facial expressions	3.697	0.529	73.94%	7
7	Music interventions help autistic children use facial expressions to express their emotions	3.727	0.626	74.54%	6
8	Music interventions encourage autistic children to use hand-wave gestures in response to others using the same gestures	3.848	0.565	76.90%	1
Overall Score		3.731	0.447	74.62%	--

Table 8 The Relationship Between Teachers' Gender and the Effect of Music Interventions on the Social and Communication Skills of Autistic Children

Gender	No.	Mean	Standard Deviation	T-Test Value	Significance Level
Men	10	3.588	0.490	1.611	0.117
Women	23	3.830	0.352		

Table 9 The Relationship Between Teachers' Academic Qualifications and the Effect of Music Interventions on the Social and Communication Skills of Autistic Children

Academic Qualification	No.	Mean	Standard Deviation	T-Test Value	Significance Level
Bachelor's degree	21	3.686	0.493	1.721	0.098
Master's degree	12	3.880	0.116		

Table 10 The Relationship Between Teachers' Years of Experience and the Effect of Music Interventions on the Social and Communication Skills of Autistic Children

Academic Qualification	Total Squares	Degree of Freedom	Rate of Squares	F-Test Value	Significance Level
Between groups	0.084	2	0.042	0.242	0.787
Outside groups	5.226	30	0.174		
Total	5.310	32			

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