

# The application of family parent-child music activities in family education for children with autism

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**Abstract:** The paper focuses on the application of family parent-child music activities in family education for children with autism. Firstly, the significance of family parent-child music activities in family education for children with autism was explored, and the role and participation of parents in family parent-child music activities were analyzed, including the required training, interactive methods, and sustained implementation of the activities. Finally, a series of application methods for family parent-child music activities were proposed, including multimodal perception stimulation, personalized music selection, emotional regulation, rhythm training, balance between structured and free exploration, and integration with daily life. In order to provide a practical, effective, and innovative framework for family music activities to meet the unique needs of family education for children with autism.

**Keywords:** Family parent-child music activities; Children with autism; family education

## 1. Introduction

In the fields of modern medicine and psychology, music therapy is widely used in various contexts, especially for intervention in children with autism. Recent research found a high prevalence of autism in China, at around 1%<sup>[1]</sup>. Autism spectrum disorder is a lifelong neurodevelopmental disability characterized by persistent and pervasive impairments in social understanding and communication, poor adaptive functioning, and the presence of restricted or repetitive behaviors and interests<sup>[2]</sup>. Children with autism often face challenges in cognitive, emotional, and social skills, and the structure, harmony, and emotional resonance of music provide them with an effective intervention tool. As the primary environment for children's growth, the family plays an indispensable role in their early intervention. Family parent-child music activities provide a structured and loving learning space for children with autism by jointly participating in singing, dancing, percussion instruments, or other music-related activities, combined with the warm environment of the family and the therapeutic potential of music. This study aims to explore this field in depth, analyze the application of family parent-child music activities in family education for children with autism, and systematically elaborate on their potential value, significance, and application methods.

## 2. The significance of family parent-child music activities in family education for children with autism

### 2.1. Impact on cognitive and emotional development of children with autism

ASD is considered one of the most serious disorders that can affect a child, in terms of both the affective and cognitive dimensions<sup>[3]</sup>. In the home education environment of children with autism, music is considered a powerful tool that profoundly impacts their cognitive and emotional development. From a cognitive perspective, music involves complex structures such as melody, rhythm, and harmony, which can stimulate areas of the brain related to attention, memory, and thinking. When children with autism participate in family parent-child music activities, these complex musical elements challenge their brains, promote neural plasticity, and thereby enhance their cognitive abilities and improve certain cognitive disorders. From an emotional perspective, music can touch people's inner emotions and provide a nonverbal emotional expression pathway for children with autism. This is particularly important for children with autism who encounter difficulties in traditional communication methods. By participating in family parent-child music activities, they can experience the free expression of emotions, thereby

promoting their emotional development. More noteworthy is that when parents participate in shared music activities with children with autism, this interaction further strengthens their emotional connection, providing them with a sense of security and belonging. Therefore, from a comprehensive perspective, music in family education for children with autism helps improve their cognitive abilities and plays a crucial role in emotional regulation and establishing parent-child relationships.

### ***2.2. Beneficial for the development of social skills in children with autism***

92% of children with autism exhibit psychiatric comorbidities, including attention-deficit/hyperactivity disorder, oppositional defiant disorder, and anxiety disorder [4]. These children have a very specific way of thinking and functioning that is characterized by difficulty in understanding and responding appropriately to the environment, selecting and processing information, and responding to other sensory stimuli. [5]. Children with autism often exhibit difficulties in social interaction, but music, as a universal language that transcends language and culture, provides new solutions to this problem. From a theoretical perspective, music is a comprehensive experience involving multiple senses, and elements such as melody, rhythm, and harmony can trigger activity in multiple brain regions, especially those closely related to emotions, social interaction, and communication. When children with autism participate in music activities, these brain regions are stimulated and activated, which helps to enhance their social skills. From a practical perspective, by participating in singing, dancing, and percussion with family members, children can gradually establish connections with others in a relatively safe and supportive environment. Participating in music activities provides a safe and supportive environment for children with autism, allowing them to interact with others without pressure. For example, music activities such as choirs, bands, or percussion bands that involve family team collaboration can teach children skills in collaboration, sharing, and listening, while also cultivating their empathy and understanding. In these interactions, children learn social norms and habits such as rotation, sharing, compromise, and respect for others. At the same time, the rhythm and melody of music can mobilize people's emotions, making it easier for children to feel emotional resonance with others. This emotional communication, without the need for complex language expression, provides them with a brand new way of socializing. Family parent-child music activities also provide a common communication platform for parents and children. The participation of parents in their children's music activities not only deepens their parent-child relationship with their children but also provides direct opportunities for social imitation for their children. By observing and imitating parents' social behavior, children with autism can learn how to interact with others in a broader social environment.

### ***2.3. The emotional regulation effect on children with autism***

The composition of melody, rhythm, and harmony in music can stimulate multiple regions of the brain, especially those related to emotions, memory, and attention. When children with autism are immersed in music, they can experience a transition from anxiety to relaxation, and from tension to tranquility. In this process, music provides them with an emotional haven where they can find peace and comfort. Children with autism often suffer from excessive stimuli from the environment in their daily lives, which may lead to abnormal emotional responses, such as excessive excitement or difficulty in calming anxiety. Family parent-child music activities, as a special form of art, provide a channel for self-expression and communication, providing them with an emotional outlet, and helping them better face and handle emotional challenges in daily life. By participating in family parent-child music activities, such as singing or playing musical instruments, children with autism can not only express their emotions in front of their families, but also release their inner pressure, anxiety, and fear through music.

### ***2.4. Promoting emotional connections between parents and children, and provide innovative ways of interaction***

Children with autism may have difficulties in daily social interaction, which may also challenge the emotional connection between parents and children. However, the intuitive nature of music provides a way for both parties to communicate without relying on traditional language. Through family parent-child music activities, children can collaborate to complete music tasks, such as singing a song together or playing instruments together. Through silent interaction, children and parents can deepen their mutual understanding and connection. This deep emotional communication helps to shape stable parent-child relationships and provide emotional stability support for children with autism. In addition, the significance of family parent-child music activities for parents cannot be ignored. It not only provides parents with new ways to interact with children with autism but also provides them with a series of new

ways to interact, enabling them to better support and guide children in daily life. For example, through family parent-child music activities, parents can learn how to use music to stimulate the emotional reactions of children with autism, or how to use music to help alleviate anxiety and stress in children with autism. These methods have high practicality in daily life, which means that parents can more confidently face the special needs of children and create a more beneficial growth environment for children with autism. Family parent-child music activities, as a unique form of emotional communication, create an ideal platform for parents and children with autism to participate together. By utilizing the power of music in this way, children and parents can overcome traditional communication barriers and achieve true emotional connection.

### **3. The Role and Participation of Parents in Parent-child Music Activities for Children with Autism**

#### ***3.1. Training and education that parents need to receive***

In order to ensure that music activities can effectively achieve the expected goals, parents need to provide specific training and education in advance. Firstly, parents need to understand the basic knowledge of autism, including its definition, characteristics, and possible manifestations. In addition, parents should have a deep understanding of the application of music therapy in the field of autism, in order to better understand the theoretical and practical principles behind it. Secondly, specifically for family parent-child music activities, parents need to be trained on how to choose music materials that are suitable for their children, how to organize and conduct activities, and how to observe and analyze their children's reactions during the activities. In addition, in order to cope with potential challenges and difficulties, parents also need to learn some basic methods and techniques to ensure the smooth progress of the activity. Finally, communication and cooperation with professionals are also an important part of parent training, which not only provides continuous support and guidance for parents but also ensures coherence and consistency between family parent-child music activities and other treatment and education methods. In summary, parents play a central role in the family music activities of children with autism, therefore providing them with systematic and comprehensive training and education is crucial to ensuring the effectiveness of the activities.

#### ***3.2. Interaction and participation methods***

Parents' active participation in the diagnostic and therapeutic process of children with developmental disorders is considered by experts to be an important factor in the long-term struggle to educate people with autism<sup>[6]</sup>. The interaction in family parent-child music activities must be bidirectional, positive, and able to encourage children to participate and express themselves. For example, when parents and children sing or dance together, not only should the child follow the parents, but parents should also encourage their children to guide, such as selecting their favorite songs or creating their own dance movements. This two-way interactive approach can enhance children's autonomy, increase their participation, and enhance their sense of self-efficacy. Furthermore, it is worth noting that each child with autism is unique, and their reactions and needs are also different. Therefore, the interaction method should have sufficient flexibility and be able to adjust according to the specific situation of each child. For example, some children may develop overly sensitive reactions to certain music or activities, and parents should adjust their interaction methods in a timely manner to ensure that children can participate in activities in a comfortable and safe environment.

As for the way of participation, the first and foremost thing is to ensure that family parent-child music activities are the children's interests. This means that the selection of activities should not only consider the goals of education and treatment but also consider the children's preferences and interests. When children become interested in activities, they are more likely to engage and benefit from them. In addition, parents should also encourage their children to participate in activities in various ways, such as listening to music, playing simple instruments, singing and dancing, etc. This not only enriches the content of the activity but also enhances their children's sense of participation.

#### ***3.3. Activity planning and ongoing implementation***

The development of activity plans should take into account the daily habits and rhythms of children with autism. This means that the time, location, and frequency of music activities should be coordinated with the child's other activities and daily routines. For example, for children who are more energetic in the morning, we can choose to engage in music activities in the morning; For children who are more

likely to concentrate in the afternoon or evening, we can choose to engage in activities in the afternoon or evening. In addition, the location of the activity should also be chosen in a familiar and quiet environment for children to ensure that they can relax and fully participate in the activity.

The effectiveness of music activities is not something that can be achieved in a short period of time. It requires long-term practice and adaptation to truly unleash its potential. Therefore, parents and educators should develop a long-term plan for the event and ensure that enthusiasm and attention are maintained throughout the implementation process. At the same time, they should also regularly evaluate and adjust activities to ensure that they always match the needs and development of the child. In addition, to ensure the continuous implementation of activities, parents and educators also need to cultivate a spirit of cooperation and joint participation. This means that they not only need to participate in the design and implementation of the event together but also need to regularly communicate and provide feedback, sharing their observations and experiences during the event. This cooperation and joint participation can not only enhance the effectiveness of activities but also provide children with a loving and supportive environment, thereby helping them better adapt and develop.

#### **4. The application of family parent-child music activities in family education for children with autism**

##### ***4.1. Multimodal perception stimulation***

Children with autism often exhibit high sensitivity or low responsiveness to specific sensory stimuli, leading to difficulties in communication and interaction in their daily lives. Music, as a cross-modal stimulus, has the potential to combine with various sensory elements such as hearing, touch, vision, and motion. When music is combined with other sensory elements, it can promote the comprehensive perception ability of children with autism, thereby improving their cognition and understanding of the external world. For example, the rhythm of rhythm can be combined with body movements to help children perceive and understand the interaction between the body and the environment. The integration of melody, color, and graphics can enhance children's ability to recognize the characteristics of things. In addition, musical elements such as rhythm, melody, and harmony, when combined with action, image, and tactile stimuli, can form a comprehensive and cross-modal learning environment, creating a richer and deeper learning experience for children with autism. Therefore, through carefully designed family parent-child music activities, we can not only guide children with autism to integrate multimodal perception more effectively but also provide them with a positive and comprehensive learning and interaction environment.

##### ***4.2. Personalized music selection and customized music activity content***

Individualized music selection tailored to the unique characteristics of children with autism is key to ensuring activity effectiveness and engagement.

The autism spectrum is a spectrum composed of a series of disorders of varying degrees, and the performance of individuals with autism varies, indicating significant differences in behavior, interests, and preferences among these children. Therefore, any 'one size fits all' approach may overlook the specific needs of certain children, making them feel excluded or uninterested in activities. So understanding the music preferences of every autistic child is crucial. Some children may prefer music with strong and fast rhythms, which can stimulate their sensory system and help them focus better; Other children may prefer soft and melodious melodies, which help them relax and regulate their emotions. For children with autism who have music preferences, a targeted selection of music that matches their preferences can not only increase their participation but also deepen their perception and understanding of music. In addition, in addition to the style and type of music, the content of music activities should also be adjusted according to children's personalities. For example, for a child who is passionate about animals, can choose to include animal sounds or music stories related to animals to attract their attention. This method not only enhances the attractiveness of music activities but also provides children with a learning environment that is connected to real life. Parents play an indispensable role in this process. As the closest person to a child, parents have a deep understanding of their preferences and needs. Parents can provide activity planners with information about children's music preferences, reactions, and other related information, thereby helping them make more accurate music choices. However, it is worth noting that even the most carefully selected music may not be suitable for certain children. Therefore, when implementing family parent-child music activities, it is necessary to continuously observe, adjust, and

provide feedback to ensure that the content of the activities truly meets the needs of children.

#### ***4.3. Emotional regulation and music resonance***

Through family parent-child music activities, children with autism can recognize, express, and manage their emotions, which undoubtedly brings substantial assistance to their daily lives. The music itself carries a strong emotional color. Every song and every note may correspond to a specific emotion or emotion. Therefore, by listening to music and interacting with parents, children with autism can better perceive and understand their emotions. For example, a gentle melody may help them experience calmness and relaxation, while fast-paced music may trigger their excitement and activity. Music activities provide an opportunity for children with autism to learn how to manage and regulate their emotions. For example, when they feel anxious or nervous, listening to some soothing music can help them calm down. On the contrary, when their emotions are low and lack vitality, fast-paced and cheerful music may stimulate their vitality and make them feel more happy.

The concept of musical resonance also plays a crucial role here. The resonance between children with autism and music enables them to develop a deep connection with the external world in a silent state. Through music, they can feel understood and accepted, and this emotional resonance further strengthens their social skills and emotional stability.

#### ***4.4. Rhythm and body coordination training***

Through rhythm and body coordination training accompanied by music, children with autism can improve their physical coordination and rhythm in a pleasant atmosphere, laying a solid foundation for their social interaction and daily life skills. The music itself has an inherent rhythm, and its rhythmic performance triggers the physical reactions of the audience. Children with autism, often face difficulties in sensory integration, which challenges their coordination and balance in daily life. However, the repeatability and predictability of musical rhythms provide them with an ideal platform, through which children can more confidently explore and respond to their body movements. The physical activities accompanied by music, such as simple dance or hand movements, not only strengthen the training of body coordination but also establish neural connections between music and movements in the brain. This neural integration helps improve children's ability to adapt to external environments and enhance their self-regulation ability. For example, through rhythmic hand tapping or jumping, children can not only exercise their bodies but also learn how to combine music with specific movements, thereby improving their motor control and spatial positioning abilities. During this process, parents can intuitively understand their children's physical reactions, providing them with more appropriate guidance and support. Participating in the rhythm of music together promotes the emotional connection between parents and children and deepens trust and understanding between parents and children. However, it should be emphasized that in order to ensure the expected results of family parent-child music activities, the content and difficulty of the activities must be adjusted according to the specific situation of the child. Some complex dance steps or difficult rhythm patterns may not be suitable for all children, therefore, when selecting and designing activities, it is necessary to fully consider children's physical abilities and sensory sensitivity.

#### ***4.5. Structured and free exploration balance***

Family parent-child music activities, as an important component of family education for children with autism, must find a delicate balance between structured and free exploration. The core idea of this balance is to provide children with freedom within a clearly defined framework, allowing them to benefit from structured teaching while also developing the ability to explore independently. Considering that children with autism often prefer consistency and structure, and may feel confused or anxious about unknown or uncertain things, this balance is particularly important. The structured environment of music activities provides a clear and predictable learning background for children with autism, helping to reduce their anxiety and increase participation. This can be achieved through regular activities, fixed schedules, specific activity sequences, and other means. For example, each music activity can start with simple songs and gestures, then gradually introduce more complex rhythms and melodies, and finally end with a stage of meditation or relaxation. However, simply providing a structured environment is not enough. Providing free exploration space for children with autism is equally important. The logic behind this approach is that although children with autism may prefer structure and consistency, they also have creativity and curiosity, requiring opportunities to explore, try new things, and express themselves.

Therefore, some open links should be integrated into music activities, such as improvisation, free dance, and optional instruments. These activities not only encourage children to unleash their creativity but also help them build confidence and autonomy. To achieve this balance, educators and parents need to adopt a flexible attitude. This means that they should adjust the content and format of music activities in a timely manner based on the specific needs and reactions of each child. If a child appears particularly anxious or uncooperative in structured activities, it may be necessary to provide them with more opportunities for free exploration; For children who feel uneasy in an open environment, clearer guidance and support may be needed.

#### ***4.6. Integration of parent-child music activities with daily life scenes***

In the family education of children with autism, music is not only an artistic form, but also a tool to promote learning, emotional expression, and social interaction. In order to ensure the practicality and sustainability of music education, combining music activities with daily family life scenes has become a crucial method. This integration not only helps to increase the interest and participation of children with autism in music but also provides them with a specific and practical learning environment, enabling them to apply what they have learned in real-life situations. The integration of music and daily life can make music education more tailored to the actual needs and experiences of children with autism. Considering that this group often has fixed interests and preferences, choosing music and songs related to their daily lives, such as songs about family, friends, toys, or food, can enhance their sense of participation and belonging. In addition, combining music activities with daily household chores, diet, sleep, and other family life scenarios can also help improve the practicality of music and make it a part of daily family life. This integration approach helps children with autism integrate music learning with practical behavior, promoting their functional learning. For example, by participating in music activities with parents, children can learn how to complete household tasks such as sweeping the floor, washing dishes, or cooking at a rhythm; Or learn how to express one's emotions, such as happiness, sadness, or anger, in music to better interact with family and friends. At the same time, it also provides an important platform for parents to participate, making them partners in children's learning. Parents can choose appropriate music and activities based on their children's interests and needs, and create a supportive and encouraging learning environment. At the same time, parents can also observe and understand children's progress, needs, and difficulties through music activities, in order to provide them with more targeted support and guidance.

### **5. Conclusions**

This study delves into the multiple application modes and potential benefits of family parent-child music activities in family education for children with autism. Family parent-child music activities have not only been proven to be an important component of family education for children with autism but also have a significant positive impact on their cognitive and emotional development. The universality of music and its potential in cultivating social skills make it an ideal intervention tool. At the same time, the role of parents is crucial. Through specialized training and education, parents can more effectively participate in parent-child music activities and establish deeper connections with their children. In addition, the design and implementation of family parent-child music activities must be flexible and varied, while ensuring a balance between structured activities and free exploration. Through multimodal perceptual stimulation, emotional regulation, and musical resonance, as well as music activities combined with daily life scenarios, we can provide a learning environment for children with autism that is both structured and encourages free exploration. In summary, through innovative and personalized music activities, family parent-child music activities have demonstrated their unique and irreplaceable value in the family education of children with autism, providing solid support for the comprehensive development of children with autism.

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