

## Understanding Social-Emotional Development through Music: A Qualitative Approach to Autism Support in China

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### Article Information

#### Article Type: Research Article

#### Dates:


Received: 05 April 2025

Revised: 25 May 2025

Accepted: 05 June 2025

Available online: 15 June 2025

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0009-0002-5836-3878

### ABSTRACT

This study investigated how music therapy supports social-emotional development in children with autism spectrum disorder (ASD) within China's cultural context, addressing three objectives: (1) examining emotional regulation through music, (2) assessing its role in social bonding, and (3) exploring cultural influences on therapeutic adoption. Using an interpretative phenomenological approach (IPA), we conducted in-depth interviews with 20 caregivers and therapists, analyzing data through thematic coding and iterative interpretation. Findings revealed that music bridges communication gaps for nonverbal children, with rhythmic structures enhancing emotional recognition particularly valuable in China's indirect emotional expression norms. While group music activities improved social reciprocity through synchronized engagement (drumming), sensory differences necessitated individualized adaptations. Culturally, music therapy's non-stigmatizing nature increased family acceptance, though Confucian avoidance of disability discourse sometimes limited families to music-based interventions alone. The study concludes that music therapy's effectiveness in China hinges on harmonizing cultural preferences (collective harmony) with neurodiversity-aware personalization. Key implications include: (1) developing culturally adapted music protocols that leverage rhythmic synchrony for social goals, and (2) addressing stigma through community education to prevent therapeutic monocultures. These insights advance global autism research by demonstrating how cultural values mediate evidence-based interventions' implementation and efficacy.

**Keywords:** Music Therapy, Social-Emotional Development, Cultural Sensitivity, Non-Verbal Communication, Emotional Regulation, Social Bonding

## 1. INTRODUCTION

Autism Spectrum Disorder (ASD) is a neurodevelopmental condition characterized by challenges in social communication, restricted interests, and repetitive behaviors, which can significantly impact emotional regulation and interpersonal relationships (Zhu, 2021). In recent years, global awareness of ASD has increased, leading to greater research and clinical efforts to develop effective interventions that support social-emotional development in affected individuals (Wang et al., 2024). In China, the reported prevalence of ASD has risen, mirroring trends observed worldwide, including in countries like Canada (He et al., 2024). However, families and professionals in China face distinct cultural and social factors that influence intervention choices, necessitating approaches that align with local values and practices (Feng et al., 2024). Music therapy has emerged as a promising intervention due to its emphasis on nonverbal communication, which may be particularly suitable for children with ASD (Luo et al., 2022). In China, where cultural

traditions place strong importance on collective harmony and expressive arts, music therapy offers a culturally congruent way to support social-emotional development. This study explores how music therapy enhances social-emotional skills in Chinese children with autism and examines how cultural factors shape its adoption and implementation.

Music holds deep cultural significance across societies, serving as a powerful medium for emotional expression and social connection (Sularso et al., 2024). In China, traditional music reflects collective values, harmony, and emotional storytelling elements that resonate with autistic children who struggle with verbal communication (Jietao, 2022). For these children, music therapy offers a culturally familiar and non-stigmatizing way to express emotions, as rhythmic patterns, melodic phrasing, and interactive activities (percussion) align with Chinese cultural preferences for structured, harmonious engagement (Liang et al., 2024). Studies show that such musical interventions improve emotional understanding, self-regulation, and peer interaction, as children feel safer expressing themselves through music than through speech (Xin et al., 2023; Lian et al., 2024). Importantly, the cultural acceptance of music in China enhances its therapeutic adoption, with families viewing it as a natural and dignified support rather than a clinical imposition (Jietao, 2022). This cultural alignment not only promotes accessibility but also ensures that therapy complements societal values, fostering greater engagement and long-term benefits (Tan & Perren, 2023).

Music therapy provides a socially acceptable way to deal with problems in Chinese autistic children but has the challenges associated with negative societal perceptions on autism. Autism, being a problematic issue within the Chinese cultural context that strongly values social harmony and respect for each other, is often seen as causing families to ask for discreet and indirect therapies (Wu, 2023). Due to its gentle style, the music therapy caters well within the cultural values in China hence making it a more socially preferred option as opposed to frontal behavioral interventions (Khoso et al., 2024). This inclination toward less aggressive therapies could limit children's access to a broad range of services because music therapy may not achieve all of their typical developmental needs (Sularso et al., 2024). The dynamics of cultural expectation and therapeutic effectuality make it essential to discuss how music therapy should be paired with other scientifically delivered methods while respecting Chinese culture and bringing maximum results to autistic children (Applewhite et al, 2022).

This study offers a novel contribution by examining how cultural factors shape the use and perception of music therapy for autism in China an area with limited research. While Western studies have established music therapy's efficacy for ASD (Han et al., 2021), China's distinct cultural context influences its implementation. For instance, Western behavioral therapies often emphasize individual progress and overt skill-building, whereas Chinese families may prioritize harmony, subtlety, and social conformity (Tan & Perren, 2023). These differences affect treatment acceptability: direct interventions may be viewed as disruptive, while music therapy's nonverbal, collective nature aligns with local values (Khoso et al., 2025). By investigating these cultural dynamics, this research highlights how adapting music therapy to China's sociocultural norms can enhance its effectiveness in fostering social-emotional development.

Research has suggested that non-directive therapeutic placements work well in addressing autistics' emotional and sensory wants (Feng et al., 2024; Luo et al., 2022), but the precise effects of culturally adapted musical encounters have yet to be explored. Although, Luo et al. (2022) have pointed out the benefits of non-directive therapy, cultural aspects of musical experience have been under-explored with

regard to their effects in socio-emotional skills. The intrinsic rhythmic and emotional properties of music have great promise for addressing children's basic problems in the realm of social contact and emotional regulation (Arroyo, 2024), and yet they have not been really explored in the unique cultural surroundings of China. Within the qualitative research of the cultural relevance of music therapy for socio-emotional growth, this paper explores the perspective of how therapists, parents, and educators in China of the autism community see and interact with the therapeutic potential of music in meaningful.

## **2. LITERATURE REVIEW**

### **2.1 Music Therapy as an Intervention for Social-Emotional Development**

Music therapy has become a significant and effective approach to promoting social-emotional development in children with autism spectrum disorder (ASD) (Moo & Ho; 2024). ASD, as defined by the American Psychiatric Association (2013), entails the existence of communication deficits, social functioning deficits, and emotional self-regulation problems which pose challenges that are By blending organization and accommodation, music therapy is enriching children with alternative means of communicating emotions and socializing, hence providing solutions to facilitate overcoming barriers to verbal communication (Voss & Lin, Bamicha and Drigas (2022) have demonstrated that deliberately constructed musical experiences can be effective in building emotional self-awareness, self-regulation, and social interactional skills in ASD children. Because of the soothing pattern and structure in music, music can be a soothing background for children to learn and express themselves, which is especially beneficial for those with anxiety due to emotional dysregulation (Hicks, 20. Studies based on music-based assessments have shown that children with ASD show improved emotional identification and expression which enable them to express emotions that they may find hard to express (Yan et al., 2023; Martí-Vilar et al., 2023).

Music therapy does not promote only emotional self-regulation (it also promotes vital interpersonal abilities). For children with ASD, this can be hard to do because understanding and acting on social cues, maintaining eye contact, and having back and forth interactions are all part of cultivating relationships (Bell-Smith, 2022). The musical activities done during scheduled sessions are a way through which the music therapy can help children with ASD walk through social obstacles. Therapist-guided music-based interventions create predictable routes for social participation (Wong, 2024), thus making social uncertainty that a lot of children with ASD often experience easier. Lici et al. (2024) shows that collaborative music therapy sessions are very effective at establishing social relatedness, collaborative behavior, and fundamental communication skills such as joint attention and taking turns. By providing these musical interactions, children can socially interact with others in their peer group all of which makes engagement outside spoken dialogue possible (Martí-Vilar et al., 2023). These observations are supported by research in Neuroscience, as the nervous system study has discovered the fact that music therapy induces oxytocin secretion, a chemical essential to establishing trust and consolidating social bonds (Martí-Vilar).

### **2.2 Cultural Alignment of Music Therapy in China**

Cultural ins and outs are especially important when looking at music therapy, because such societies as China place a lot of weight on traditional viewpoints which shape how one develops and implements treatments. China's cultural heritage endows music with high connotations, which is traditionally deemed vital for the development of emotional equilibrium and the social domestication (Wang et al., 2024). The congruency between the Chinese cultural traditions and Confucian ideals facilitates the conformity of music

therapy which emphasizes collective harmony and harmonious interpersonal relations (Farrington & Shewfelt, 2020). Compared to other treatments, the Chinese families welcomed music therapy more because it was consistent with cultural values and was a stigma-free form of treatment when compared to more clinical therapies for autism. However, such a preference to music therapy raises a prickly question. Since music therapy confirms to the culture it is received more favorably and with more accessibility, but this cultural benefit may narrow out families from taking other interventions called for to address broader developmental issues (Lloyd 2021). Findings indicate that several Chinese families prefer music therapy to other scientifically validated interventions, therefore, exposing the child to a risk of diminishing the effectiveness of therapy (Khoso et al., 2022). This underlines the need of exploring culturally appropriate approaches where music therapy is blended with other wide dimensional intervention strategies.

Studies that have provided limited evidence for benefits of music therapy in ASD have involved (Ho et al., 2020; Strachan, 2021; Wong, 2024). Limited research has been done to compare music therapy's effectiveness against other interventive methods particularly when viewed against non-Western cultures (Strachan, 2021). Frequent research alike is more commonly based on Western cultures leaving huge gaps in our knowledge about how Asian cultural dynamics may in a unique way shape music therapy and its outcomes (Rajan and Aker, 2024). Although there is an abundance of evidence supporting music therapy benefits, less studies focus on problems or limitations the approach can have, for instance, variability in children's musical responses or the importance of individualized sensory accommodations (Çenberci & Tufan, 2023). This implies that the utilisation of person-centered strategies is vital in music therapy, particularly in cultures that consider conformity more significant than individualization (Eddy et al., 2021).

### **2.3 Gaps and Critical Considerations**

The current literature is mostly focused on the effectiveness of music therapy, but it often fails critically to address underlying methodological issues. Many of the research studies included (Bakan & Gibson, 2023) are plagued by relatively small samples and their limited timeframe applications. Only few studies research Western versus Asian perspectives, and findings indicate that cultural perceptions play a major role in therapeutic involvement (Rajan & Aker, 2024). Even though music therapy contributes to social-emotional development, its relative long-term implications compared to other forms of therapy remain much understudied (Strachan, 2021). Cultural values play a great role in determining the therapeutic strategy used and its efficiency. Autism treatment in the West focuses on behavior modification and direct instruction in communication (Strachan, 2021), Chinese on the other hand Since music therapy is capable of uniting conflicting philosophical principles it is appropriate for bringing diverse cultures to cooperation. Even though music therapy does have potential to work across cultures, the academic literature has not explored the effect of cultures on autism and its treatment modalities on music therapy effectiveness in different settings. This gap presents an urgent need for the research exploring not only the therapeutic potential of music, but also how cultural perspectives affect music therapy as a phenomenon used and shaping the results in regions such as China.

### **3. METHODOLOGY**

With a qualitative outlook, this study scrutinizes the effect of musical activities upon the social-emotional growth of children with autism in the context of China. The use of a qualitative methodology allowed researchers to resonate with the in-depth understanding from caregivers, therapists, and educators within such interventions for qualitative analysis among clear results and subjective experiences. Using qualitative data focus, this research is meant to identify important contextual aspects that inform autism support by music in China, applying views on culture, education, and development.

### **3.1 Research Design**

This choice of using an interpretative phenomenological approach (IPA) for this study was guided by the fact that it was possible to explore the lived experiences and personal meaning-making processes especially in the field of autism support in which the individual view and emotional reactions play a major role (Smith et al., 2014). IPA is an excellent conceptual tool to delve into caregiver and professional perspectives on music's role in cultivating social-emotional skills, such as empathy, expression of emotions and involvement in social interactions with children on the autism spectrum. Using IPA supports the research aim to provide ideas on how people make sense of music and the cultural significance of music among Chinese families and society where the perspective on autism and treatment can be different from the one in Western cultures (Larkin et al., 2019).

In comparison to rigorous quantitative approaches or other qualitative methods, IPA excels in that it is concerned with deep insights, not wide-sweeping sampling to give an in-depth analysis of individual stories (Smith & Osborn, 2015). Instead of surveys or experimental designs that disregard the complexities of context and emotion, IPA provides a powerful tool to examine participants' construction of meaning through their own experiences. Considering the possibility that established theories may ignore the intricacies of distinct cultural settings, this technique provides a very important advantage in cross-cultural studies. Besides, IPA's concurrent focus on participants' experiences and interpretative position of the researcher facilitates a holistic analysis, a major defect of more rigorous methodologies that impose external viewpoints on participants (Brocki & Wearden, 2006). Using IPA, this research is aimed at exposing the role of music as social-emotional support for children with autism and to contribute culturally informed shades of interpretation of autism care in China.

### **3.2 Participants and Sampling**

The study employed purposeful sampling to recruit participants with direct experience implementing music-based interventions for children with autism in China. Participants were identified through multiple channels to ensure diversity, including: (1) referrals from special education schools in Beijing, Shanghai, and Guangzhou; (2) collaborations with autism rehabilitation centers affiliated with public hospitals; and (3) professional networks of music therapy associations via WeChat and dedicated autism support platforms. A total of 8 institutions participated in the study, comprising 4 special education schools, 3 rehabilitation centers, and 1 private therapy clinic. The final sample consisted of 20 participants, including caregivers (n=7), certified music therapists (n=6), and special educators (n=7). To capture varied expertise, participants were selected based on their: Professional involvement: Minimum 2 years of direct experience using music therapy with children with ASD. Interaction frequency: At least weekly engagement in music-based interventions. Role diversity: Balanced representation across therapy providers (clinical settings) and implementers (educational settings). Recruitment continued until thematic saturation was achieved in interview responses. All participants worked with children aged 3–12 years, ensuring relevance to early intervention contexts. Institutional ethics approvals and individual consents were obtained prior to data collection.

### **3.3 Data Collection**

Data were collected through semi-structured, in-depth interviews, conducted in person and via online platforms (Zoom) to accommodate participants' preferences and logistical constraints. This flexible approach ensured accessibility while maintaining the depth of interaction needed to explore participants' perceptions and experiences with music as a developmental tool for children with autism. The semi-structured format allowed participants to express their thoughts openly while enabling the researcher to

probe deeper into key themes, such as emotional expression, social engagement, and music's role as an emotional and communicative outlet. Main research questions of the interview included but were not limited to the following:

- "Can you describe a situation where you observed music influencing a child with autism's emotional or social responses?"
- "How do you perceive the role of music in facilitating communication or emotional regulation for children with autism?"
- "In your experience, are there cultural factors in China that shape how music is used in autism support?"

Interviews were conducted in Mandarin Chinese to ensure natural and fluid responses, lasting between 45 minutes to an hour. All sessions were audio-recorded with consent and later transcribed verbatim to preserve authenticity and facilitate rigorous qualitative analysis.

### **3.4 Data Analysis**

The data were analyzed using interpretative phenomenological analysis (IPA) to ensure methodological coherence with the study's phenomenological framework (Smith et al., 2014). While IPA shares some procedural similarities with thematic analysis, it is distinguished by its explicit focus on understanding how participants interpret their lived experiences and the researcher's active role in making sense of these interpretations (Smith & Osborn, 2015). The analysis followed IPA's characteristic idiographic approach, beginning with an immersive, line-by-line reading of each transcript to develop an intimate understanding of individual accounts. At this point, participants' emotional responses to music and metaphors have been entered in drafts of notes to determine descriptive, lingual, and conceptual features. From these observations, thematic patterns were generated through interpretive analysis such as "music as emotional scaffolding" and "culturally mediated engagement."

The analysis proceeded to seek similarities and differences among these cases, ensuring not to give each player's narrative short shrift. To add weight to the study's credibility, the IPA section was critiqued by another peer who had experience assessing thematic outlines and provided suggestions to protect the relationship between findings and raw data under reflexivity (Yardley 2000). This analytic approach aligns with IPA's epistemological commitments by privileging participants' meaning-making processes while acknowledging the researcher's interpretive role in constructing knowledge. The process thereby moves beyond descriptive thematic analysis to achieve the study's aim of uncovering how caregivers and professionals ascribe meaning to music's role in social-emotional development within autism support, particularly within the Chinese cultural context. By maintaining this consistent phenomenological focus, the analysis offers insights that are both contextually rich and theoretically informed.

### **3.5 Ethical Considerations**

Ethical approval was obtained from the relevant academic and local ethics boards, with careful attention to the sensitivity of working with children with autism. Participants were informed about the study's objectives, assured of confidentiality, and provided with the right to withdraw at any time. Given the vulnerability of the population involved, data privacy was strictly maintained, with pseudonyms used to protect the identities of both participants and children referenced in the study. Informed consent was obtained prior to each interview, and participants were allowed to review their transcripts to verify accuracy and comfort with the shared content.

### 3.6 Trustworthiness and Rigor

To ensure the study's trustworthiness encompassing credibility, dependability, confirmability, and transferability several strategies were systematically implemented throughout the research process. Over three months, while sustaining contact with participants through interviews and discussion, rapport was established, and participants were able to give rich, deep feedback. To evaluate the precision of initial findings, member checking was done subsequently by presenting major interpretations to a small number of participants for this purpose. Themes were changed or findings were restated based on feedback from participants wherever differences arose. Using interview data, as well as observational notes, and previous scholarly works concerning autism and music interventions, the use of methodological triangulation added weight to the study. Throughout the research process a reflexive journal was kept from the start of data collection to when the analysis was completed to monitor preconceptions, methods selection, and changing perspectives. It was conducive to a high degree of transparency and also permitted a researcher to critically judge the effect of personal view on the analysis of data. The independent researcher participated in two episodes of peer debriefing – once, immediately following the completion of the initial coding: the second during the final stages of refining the themes. during stages after first analysis and once themes started to emerge, another researcher's perspective was integrated to enhance the objectivity of the findings. The credibility of the study was established by these approaches that offered a transparent picture of procedures and enriched the findings with contextual detail thus enabling the readers' evaluation of the applicability of the study to new contexts.

## 4. RESULTS AND DISCUSSION

### 4.1 Overview of Themes

The findings from this study reveal four prominent themes regarding the role of music in supporting social-emotional development for children with autism within the Chinese context. The first theme, emotional expression and regulation, highlights how music serves as a bridge for children to identify, express, and regulate emotions, offering a non-verbal outlet for those who face challenges in conventional communication. The second theme, social bonding and interaction, reveals how music fosters shared experiences, enhancing social connections between children, caregivers, and peers, promoting engagement, trust, and mutual understanding. The third theme, cultural perceptions of autism and support, emphasizes how cultural views shape the application of music therapy, as societal values and norms influence expectations and acceptance of autism interventions in Chinese communities. The final theme, personalized and adaptive learning through music, underscores the importance of customizing musical activities to suit individual sensory needs and developmental levels, allowing for a tailored approach that maximizes therapeutic outcomes. Together, these themes underscore music's powerful role in facilitating emotional, social, and cultural dimensions of development for children with autism, highlighting areas where culturally sensitive, adaptive interventions can further enrich therapeutic practices in China.

**Table 1: Identified Themes**

Theme	Description
1- Emotional Expression and Regulation	Music serves as a bridge for children with autism to identify, express, and regulate emotions, providing a non-verbal outlet for those facing communication challenges.

2- Social Bonding and Interaction	Music fosters shared experiences that enhance social connections between children, caregivers, and peers, promoting engagement, trust, and mutual understanding.
3- Cultural Perceptions of Autism and Support	Cultural views shape the application of music therapy, as societal values and norms influence expectations and acceptance of autism interventions in Chinese communities.
4- Personalized and Adaptive Learning through Music	The importance of customizing musical activities to suit individual sensory needs and developmental levels, allowing a tailored approach that maximizes therapeutic outcomes.

#### 4.1.1 Emotional Expression and Regulation

Social communication is an important problem both to children with ASD, because of limitations in recognizing and sharing their own emotions. Interview responses analysis showed that music provides an important channel of communication for emotions in children with few verbal abilities. Participant 5 argues that, “Music would appear to give children a medium for expressing feelings that can’t be articulated in words, hence provide a more open ground to express ideas”. This finding is supported as earlier research has revealed that music therapy provides a distinctive opportunity for children with ASD to express feelings that aligns with components of rhythm and melody (Gaudette-Leblanc et al., 2023). Music therapy appears particularly adept at linking people’s internal feelings to their external expression ( Participant 12). Wherever language fails, music provides these children with another way to express their feelings that is rarely done in words."

Although music is useful in helping people express their emotions, the results also direct its major role in enhancing the ability to perceive emotions and self- regulation. ‘Happy affect’ and ‘relaxed affect’ in fast and slow songs respectively are according to Participant 8 reflective of contemporary neurological findings of how musical structure assists emotional processing (Rizzuto et al., 2024). In the same way, Participant 15 reported examples in which the children felt emotions in song, which seemed to suggest that music involvement could be helpful to cultivate emotional awareness. Scientific research in neuroscience confirms these observations and shows that interaction with music stimulates neural mechanisms associated with relieving stress and orchestrating emotions (Boal-Palheiros & Ilari, 2023). Child participants 3 also reported, saying that children who participated in sessions appeared “more relaxed and at ease after sessions”, showing the modulating effectiveness of music, and participant 10 reported observing music helping children “breathe easier and find calm in stressful situations”.

However, the research revealed significant differences in the way every participant responded to music stimuli. As Participant 17 asserts, the sensory preferences of a child are integral for the therapy outcome: If people enjoy loud rhythms, others appreciate a gentler, quieter one. The need for personalized music therapy strategies, reflected by such diverse reactions, has been validated by Participant 7’s notes on tempo adjustments (Applewhite et al., 2022). The aggregated data show that music therapy is very effective in facilitating emotional expression and regulation in children with ASD, but optimal outcomes require careful individualization to each child’s unique sensory and emotional needs. This research contributes even more to the expanding pool of knowledge of the therapeutic benefits of music and strengthens the importance of individualized strategies in therapy.



**Table 2: Summary of Findings on Emotional Expression and Regulation**

<b>Finding</b>	<b>Description</b>
Alternative Communication Channel	Participants observed that music provides a way for children with autism to express emotions non-verbally, filling a gap left by verbal communication barriers.
Recognition of Emotional Cues	Participants noted that children become more aware of different emotions, interpreting cues within music, which supports their emotional awareness development.
Enhanced Emotional Regulation	Music engagement was associated with improved emotional regulation, helping children manage stress and anxiety, as supported by neurochemical changes.
Varied Sensory Responses	Differences in sensory responses to music were highlighted, showing that some children respond well to certain sounds while others need adjustments.
Need for Tailored Interventions	Participants emphasized the need for individualized music therapy, aligning with research on the importance of adapting interventions to each child's unique profile

#### **4.1.2 Social Bonding and Interaction**

Analyses indicate that music therapy is critical in developing social interactions and reinforcing relations for children with autism spectrum disorder (ASD). It became clear that the well-structured musical tasks provide the stable framework for the social interaction thus reducing anxiety and contributing to the level of greater involvement. According to Participant 2, “Group rhythm activities allow students to make eye contact, smile or acknowledge peers with nods”. There have been claims from research that group music therapy enhances social engagement through group- fueling actions and alternating, as described by Koç and Sungurtekin (2023). Reflecting Edgar et al. (2023) point, the pattern of activities on musical activities may help to unwind the anxiety caused by the uncertainty to the children with ASD. As per Participant 11, “music enables children to gradually shift their attention to peers”, the idea of which resonates with Subramaniam’s (2023) finding: musical contexts can help form social motivation. Neurochemical data support these insights because it shows that music evokes processes in the brain that are of social bonding formation significance. According to Martikainen et al. (2024), studies have demonstrated the conception that musical engagement increases oxytocin, which can account for. The work of Nguyen et al. (2023) shows that music activates neural networks associated with trust and affiliation, thereby providing a biological basis for the recorded behavioral changes.

But the study also revealed glaring differences in how each child socially connected with music therapy. “It’s important for some children to receive individual therapy before transitioning to group sessions,” according to participant 15, which demonstrates the need for individualized interventions. respond These results concur with Rabinowitch and Cirelli’s (2023) claim that intervention plans need to be tailored to suit different social competencies amongst children with ASD. The collective findings of the study suggest that social interactions are enhanced by music therapy; however, its effectiveness depends on identifying and reacting to individual differences in sensory ability and social participation. It goes without saying that flexible yet individualized forms of music therapy in a group of children can help a lot in ASD cases.

**Table 3: Summary of Findings on Social Bonding and Interaction**

<b>Finding</b>	<b>Description</b>
Enhanced Social Engagement	Participants observed that music therapy facilitates eye contact, turn-taking, and joint attention, helping children with autism feel more connected with others.
Increased Prosocial Behaviors	Music sessions encouraged cooperation and empathy, with children often helping each other during musical activities.
Predictable Social Environment	The structured and rhythmic nature of music created a predictable social setting, reducing anxiety and making interactions more approachable.
Biochemical Response to Music	Musical engagement was linked to increases in oxytocin, promoting feelings of trust and fostering social bonding among participants.
Need for Tailored Group Interventions	Participants noted the importance of adapting group sessions to individual needs, as children with autism show varied responses to social and sensory stimuli in group settings.

#### **4.1.3 Cultural Interpretations of Autism Support through Music**

Autism support is strongly influenced by cultural perceptions, as most of the practices involved can be seen as dictated by cultural values in terms of utilizing therapeutic methods. Participant 4 stated, “As in our culture, music is regarded as effective and non-violent approach towards these children without putting pressure on them to behave well”. Similar to this, Shalit et al. (2024) stated that music therapy can be a low interference way to enhance social participation which is closely associated with cultural beliefs of social harmony in China. Music therapy, considered as positive intervention, consistent with Confucian views on harmonization, is one of the music interventions approved for eliciting emotional responsiveness and facilitating social interaction in children with autism (Bakan & Gibson, 2023). Participant 9 said, “Families believed that music is less intrusive and is somehow more relevant with what they perceive as wholesome influence.” This explanation is in line with Rabinowitch & Cirelli, (2023) who discovered that the approach conduces to enhancing family acceptance of autism support through using music-based intercessions due to conventional folklores proclaiming music to be curative.

However, cultural taboos when it comes to autism make complexities in applying music therapy in the support programs. *Participant 7 noted that certain families eschew conventional therapeutic interventions due to societal stigma surrounding developmental disabilities, instead opting for music therapy as an alternative treatment modality.* This is supported by Low et al. (2023) who noted that besides, families believe that music therapy is less stigmatized and more culturally sensitive than other therapies. This acceptance offers an easily understandable way in, but it can also prevent a broad variety of autism support, as families lean on the music therapy too heavily: these approaches might stifle additional methods that are needed (Roslan et al., 2024). Participant 14 said, “Some parents only care about music thinking that will suffice, but they shy away from debating on the underlying factors.” It was a culture that was unwilling to talk about it; arguably that tends to reduce the frequency with which caregivers and therapists are prepared to meet the children’s developmental special needs. Therefore, as culturally relevant,

there is still room in Chinese music therapy for efforts in ratcheting up both cultural relevance and culturally sensitive comprehensive autism models.

**Table 4: Summary of Findings on Cultural Interpretations of Autism Support through Music**

<b>Finding</b>	<b>Description</b>
Cultural Alignment with Music Therapy	Music therapy is culturally accepted in China due to its alignment with values of harmony and gentle influence, making it a preferred approach in autism support.
Perception of Music as Non-Intrusive	Participants noted that families view music therapy as less invasive, allowing for support without imposing behavioral expectations on children.
Improved Family Acceptance	Music-based interventions are often welcomed by families, as traditional beliefs in the therapeutic power of music increase acceptance of autism support.
Stigmatization of Formal Autism Therapies	Cultural stigmas around autism often deter families from seeking formal therapy, with music therapy seen as a more socially acceptable alternative.
Limited Holistic Autism Support	The reliance on music therapy alone can limit comprehensive autism support, as families may avoid discussing the broader needs of children with autism.

## 5. Discussion

This study examined the role of music therapy in supporting the social-emotional development of children with autism spectrum disorder (ASD) within the Chinese cultural context, addressing three key research objectives: (1) understanding how music facilitates emotional expression and regulation, (2) exploring its impact on social bonding, and (3) examining cultural influences on therapeutic acceptance. The findings not only align with existing literature but also extend current knowledge by revealing culturally specific nuances in intervention approaches.

### 5.1 Emotional and Social Benefits

Consistent with prior research (Zhu, 2021; Applewhite et al., 2022), music therapy emerged as an effective medium for emotional communication, particularly for nonverbal children. However, this study advances the discourse by demonstrating that rhythmic and melodic structures serve as cultural bridges in China, where indirect emotional expression is often preferred. While Western studies emphasize music's role in explicit emotional labeling (Brown & Chen, 2020), our participants highlighted its capacity to facilitate subtle, nonverbal emotional exchanges aligning with Confucian values of harmony. Neuroscientific evidence (Liang et al., 2024) further supports these observations, with participants reporting reduced aggression post-session, suggesting that music's regulatory effects may be particularly salient in high-stigma contexts where stress levels are elevated.

### 5.2 Social Interaction and Cultural Adaptation

The study confirms music therapy's efficacy in structured social engagement (Wu, 2023; Luo et al., 2022), but crucially identifies cultural modifiers. Whereas Western implementations often prioritize verbal turn-taking, Chinese participants emphasized synchronized movement (group drumming) as a culturally

congruent pathway to interaction. This challenges the universal applicability of existing social reciprocity models and underscores the need for culturally adapted frameworks. Neuroscientific correlations (Martikainen et al., 2024; Perry, 2024) were substantiated by reports of increased prosocial behaviors, yet participant accounts complicated these narrative individual sensory differences (Quigley & MacDonald, 2022) frequently necessitated modifications to group protocols, suggesting that cultural alignment cannot override neurodiversity considerations.

### **5.3 Cultural Barriers and Therapeutic Adoption**

This study pushes further because it exposes the intricate method of deployment of cultural values: <. Music therapy's lack of confrontation makes it more palatable, as Roslan et al. (2024) describe, but Confucian attitudes that are averse to disability language may thrust it in front of other methodologies. It is because this research expands on the groundwork established by Rabinowitch and Cirelli (2023), which indicates that cultural matchings can unwittingly diminish the generality of care offered. Families were seen to reject alternative evidence-based therapies based on stigma (Nguyen et al., 2023), with the ethical issue explaining to what extent cultural sensitivity and the quest for best practices can exist with each other. In this research, it is revealed that the factors that promote the benefits of music therapy in China are the cultural stress in China in respect to emotional expression and social harmony. Further, this research overturns assumptions in terms of cultural unity by revealing conflicting family views shaped by stigma. In the future, interventions are to incorporate respect for cultural context with customized, various treatment approaches, essentially changing the global landscape of autism care.

## **6. Conclusion**

This study provides on the basis of strong evidence, it is likely to be cultural and clinically appropriate for children with autism in China to use music therapy, as three central findings of the thematic analysis suggest. First, music therapy was an important way to overcome the major barrier of nonverbal emotional expression on which autistic children rely. The study revealed that musical rhythm and melody provided a valuable tool for children with limited verbal ability to express emotions and that children with limited verbal ability were better able to identify and regulate emotions when provided with organized musical experiences. Not only that but this approach was in keeping with the indirect forms of emotional communication valued in Chinese culture and thus a more culturally appropriate choice than the direct emotional labeling strategies used in many Western programs.

Through the aspect of social bonding and interaction, group music activities facilitated a balanced structured yet flexible environment that mitigated social anxiety. Using culturally known music and instruments, social connection was enhanced in this nonverbal way while respecting each participant's personal boundaries. The fact that the approach was quite relevant in this case, because according to China's focus on social harmony, it allowed these autistic children to participate in a group situation without having to engage in heavy verbal conversation. Third, it was possible to identify important cultural factors in implementing the therapeutic program. Music therapy, because it provided a non-confrontational method via which stigma was reduced, was effective in stimulating family participation, but this posed a challenge of the reduction of exposure to a number of treatments in a culturally conservative setting. Desire to harmonize cultural orientation and offering full care revealed a major issue for organizations in China that support autistic individuals. Such insights collectively enhance our understanding of how autism interventions have to be adapted both to individual neurodevelopmental differences and cultural norms.

The research demonstrates that music therapy's effectiveness in China not only comes from its basic neurological support but also from fulfilling the local cultural beliefs that form a bundle of concepts of harmony, indirect communication and teamwork.

## 7. Limitations and Future Research Directions

While this study provides meaningful results related to using music therapy for Chinese children with ASD, some limitations need to be accepted. The qualitative approach used for the present study, which provided profound experiential details, was rather restricted to a relatively small and mostly urban sample of 17 children from Eastern China. This means that there is less chance for results to be generalized to rural children or in other cultures. Second, there is the possibility of observer bias with the adoption of caregiver/therapist reports, the latter of which may mirror differences in participants' professional experiences.

Future research should adopt a multi-pronged approach to address current limitations, beginning with randomized controlled trials comparing music therapy with behavioral interventions (ABA) across key dimensions of emotional regulation (measured by ERC scales), social reciprocity (using SRS-2), and family satisfaction, while controlling for age, verbal ability, and sensory profiles; additionally, cross-cultural neurodevelopmental studies could employ fMRI during musical engagement paired with ethnographic analysis of therapist-caregiver interactions to disentangle universal versus culture-specific therapeutic mechanisms, complemented by longitudinal mixed-methods designs featuring annual ADOS-2 assessments over five years alongside quarterly caregiver interviews and standardized video coding of social interactions to track developmental trajectories; finally, implementation science should focus on developing and validating a Chinese Music Therapy Adherence Scale (CMTAS) with domains for cultural congruence and neurodiversity accommodation to establish evidence-based yet culturally responsive protocols that balance therapeutic fidelity with individual needs.

**Ethical Statement:** The initial proposal of the study was reviewed by the Institutional Review Board of the Department of Music, Suan Sunandha Rajabhat University and approved for the research. The researchers followed all the ethical guidelines while conducting the study and writing the report.

**Consent to Participate:** Before conducting this research study, the researcher has taken permission from the Department of Music, Suan Sunandha Rajabhat University. The researcher explained the objectives of the study before interviewing the respondents. The respondents were assured that the information would only be used for research purposes. The respondents were told that they could withdraw at any stage from the interview if they felt uneasy or did not want to continue the interview.

**Competing Interests:** The author declares that this work has no competing interests.

**Grant/Funding information:** This study does not received any funding.

**Data Availability Statement:** The associated data is available upon request from the corresponding author.

**Declaration Statement of Generative AI:** The authors of this work have not used any AI tool for the preparation of this manuscript.

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