

**THE USE OF MUSIC AS THERAPY FOR DEVELOPMENTAL
IMPROVEMENT IN CHILDREN WITH LANGUAGE DISORDER**

Robinson, Great Uyoatah

Department of Special Education University of Ibadan

godlovesmealone@yahoo.com

08036396814

&

Ologundudu, Rotimi Peters, PhD

Department of Music Technology the Polytechnic Ibadan

dudurobez@yahoo.com

08036400955

Abstract

Language plays a very important role in the socialization and integration of people in society. Therefore, when language of any sort is absent, it becomes very impossible to contribute meaningfully to society. Hence, this paper examines the role of music in the development of language in children with language impairment. Also, to awaken the consciousness of special educators, regular educators, and other professionals to the fact that music is an effective medium for addressing the needs of Special Needs Persons (SNP). The paper will generally summarize the three-year research carried out while at the Autistic Research and Management (FARM) Alba Home School, Ibadan. The process of using music hinges on the type of design used or to be used. The paper, therefore, discusses extensively the type of design to be used while applying music as a vehicle. The samples used for the research were children with autism. It is imperative to state that they had language problems apart from the problem of imagination and socialization. The paper will therefore discuss the crux of language development in children from the very start. The paper concludes that music has a very strong impact on the learning and building of language in children, regardless of impairment.

Keywords: Music, School, Language, Management, Children

Introduction

Humanity continues to confront numerous challenges, yet in many African contexts, these issues are not addressed at their foundation. The failure to tackle problems at their root presents significant risks to societal progress. Preserving mankind from such vulnerabilities

requires deliberate intervention from the earliest stages of life. In this paper, the concept of preservation is framed as protection against disruptive forces—specifically, communication disorders. Critically examined, the theme may be interpreted as safeguarding humanity from communication impairments through early intervention. One promising avenue for achieving this is the systematic use of music during the formative years of childhood.

Meaning of the term communication and communication disorder

Communication has been defined as the process of creating and sharing meaning through verbal and nonverbal messages between participants (Lumen Learning, 2024). It requires at least three essential components: a sender, a message, and an intended recipient. Importantly, the recipient does not need to be physically present or immediately aware of the sender's intent, as communication can occur across time and space (Lumen Learning, 2024). This highlights the broad scope of communication, extending beyond face-to-face interaction to include mediated and asynchronous exchanges.

Scholars such as Shannon and Weaver (1949) conceptualized communication as a transmission model, focusing on the linear flow of information from sender to receiver. Later models, including the interaction and transactional perspectives, emphasized feedback, shared meaning, and the co-construction of understanding (Craig, 1999; Littlejohn & Foss, 2011). These frameworks illustrate that communication is not merely the delivery of information but a complex social process that shapes relationships and identity.

In the context of child development, the inability to communicate effectively has profound consequences. Children who struggle with communication disorders often face difficulties in forming social bonds, participating in educational activities, and expressing their needs (Owens, 2016, and Schramm, 1954). As Hybels and Weaver (2015) note, communication is foundational to human connection, and its absence creates barriers to integration and growth. Thus, when a child cannot communicate, the result is not only linguistic delay but also a broader developmental setback that affects emotional, cognitive, and social domains (Barnlund, 2008).

Communication disorders are broadly defined as impairments in speech, language, or related oral-motor functions that interfere with the ability to convey or comprehend information (American Speech-Language-Hearing Association [ASHA], 2023). These disorders can range from relatively minor issues, such as sound substitutions, to severe difficulties involving the inability to understand or use language

effectively. Since communication is central to human interaction, any disruption in this process can significantly affect social, educational, and emotional development (Owens, 2016).

Examples of communication disorders in children include autism spectrum disorder, which affects the ability to interpret emotional and social cues and is classified as a pervasive developmental disorder (Lord et al., 2020). Other disorders include expressive language disorder (ELD), mixed receptive-expressive language disorder (MRELD), phonological disorder, and fluency disorders such as stuttering (Paul & Norbury, 2012). Additional impairments encompass aphasia, which involves the loss of language comprehension or production (Brookshire, 2015), dysnomia (difficulty retrieving words), semantic-pragmatic disorder (challenges with meaning and social use of language), and specific learning disabilities such as dyslexia and dyscalculia (Snowling & Hulme, 2012).

Speech disorders may manifest as articulation difficulties, cluttering, dysarthria, or voice quality problems, while language disorders often involve reduced vocabulary, improper grammar, or difficulty expressing ideas (Owens, 2016). These conditions may be associated with neurological disorders, hearing loss, brain injury, congenital anomalies such as cleft palate, or environmental factors, though in many cases the cause remains unknown (ASHA, 2023b). Importantly, communication disorders are not limited to speech and language alone but may also involve sensory impairments such as visual or hearing deficits, which further complicate the acquisition and use of language (Kuhl, 2010). A child's communication is considered delayed when their acquisition of speech and/or language skills lags noticeably behind that of their peers. In some cases, children may demonstrate stronger receptive abilities, understanding spoken language, than expressive abilities, which involve producing speech. However, this pattern is not universal, and delays can manifest in multiple ways (Owens, 2016).

Speech Disorders

Speech disorders are characterized by difficulties in producing sounds or maintaining appropriate voice quality. These may include disruptions in the rhythm or flow of speech, such as stuttering, which is classified as a fluency disorder (Bloodstein & Bernstein Ratner, 2008). Other forms of speech impairment involve articulation or phonological disorders, where sounds are incorrectly formed, substituted, or omitted. Voice disorders, on the other hand, affect pitch, volume, or resonance, leading to atypical vocal quality (ASHA, 2023b).

Children with speech disorders often struggle to produce certain sounds, which can result in mispronunciations that hinder intelligibility. For example, a child may say "see" instead of "ski," or have difficulty articulating sounds such as /l/ or /r/. These errors can make it challenging for listeners to understand the intended message, thereby impeding effective communication (Paul & Norbury, 2012). In cases of voice disorders, the problem lies not in articulation but in how the voice itself sounds, which may further complicate social interaction and self-expression. They may also have trouble getting others to understand what they are trying to communicate (Rinehart & Winston, 1960).

The Place of Music

Neuroscientific research has demonstrated that the human brain contains over 100 billion neurons, each capable of forming trillions of synaptic connections (Kandel et al., 2013). These connections are strengthened through use and may weaken or die when left dormant, underscoring the importance of early experiences in shaping neural development. Childhood, therefore, represents a critical period during which environmental stimuli—including music—play a decisive role in determining the trajectory of brain growth and function (Shonkoff & Phillips, 2000). Studies indicate that the brain is predisposed to process musical input, with evidence showing that fetuses can respond to auditory stimuli in utero (Partanen et al., 2013). Infants as young as three months have been observed to form associations between musical experiences and specific events, suggesting that music contributes to early memory formation (Trainor & Corrigan, 2010). Musical engagement activates multiple brain systems simultaneously, including auditory, visual, motor, and cognitive networks, with the right hemisphere playing a particularly significant role in processing musical elements (Zatorre et al., 2007). It is therefore very important that pregnant parents expose their unborn babies to music once they discover they are pregnant. It is very important to state here that music should be differentiated. Exposure to music during early childhood has been linked to the stimulation of synaptic growth and dendritic branching, processes essential for higher-order cognitive functioning (Schlaug et al., 2005). Music training enhances complex reasoning skills and spatial awareness, as the neural pathways involved in spatial reasoning overlap with those activated by musical perception (Rauscher & Zupan, 2000). Consequently, music not only enriches sensory and emotional experiences but also fosters intellectual development by priming the brain for advanced cognitive tasks. As children grow, they enjoy being sung to. Older babies will be ready for livelier music such as “Row, Row Your Boat” and “Twinkle, Twinkle Little Star”. Introducing gestures and movement alongside music provides children with a multisensory learning experience that enhances both communication and motor development. For instance, caregivers may gently guide infants by clapping their hands in rhythm or encouraging them to mimic simple gestures that correspond with song lyrics. As children progress into crawling and toddler stages, they often delight in singing along and performing accompanying actions to familiar songs such as ‘Head, Shoulders, Knees and Toes’ or ‘Old MacDonald Had a Farm.’ In Nigeria, some languages have good rhymes in their dialects, such as: Òjò N Rò (It Is Raining), Bàtà Mi a Dún Ko Ko Kà (My Shoes will Make a Sound), and Lábé Igi Òronbó (Under the Orange Tree). Parents must share fun moments in their house through songs, rhymes, and humming. Sing with the child in his or her innocent mistakes or mispronounced words in the song or rhymes. Composing music actually helps the brain learn them more quickly and retain them longer. That is one of the reasons children and adults remember lyrics of songs very easily. The mind works in such a way that even if the song has not been heard for many years, once it is played, a cord resonates in the mind of the person, regardless of the age difference (Azizi, 2008).

Songs in other local languages, particularly those with rich melodic structures, further strengthen cultural identity while supporting language acquisition. Children naturally enjoy imitating environmental sounds—such as animal calls or car noises—and can be encouraged to march, bounce, or perform simple steps in time with music. These playful interactions foster joy and emotional bonding with trusted adults while simultaneously promoting body awareness, coordination, and expressive skills. The integration of singing and movement not only heightens children’s enjoyment of music but also contributes to their overall cognitive and physical development.

Music Therapy

Music therapy is a structured clinical practice that utilizes musical experiences to address the physical, emotional, cognitive, and social needs of individuals and groups. It is defined as the evidence-based application of music interventions within a therapeutic relationship, facilitated by trained professionals who have completed accredited programs in the discipline (American Music Therapy Association, 2005). Beyond its clinical definition, music therapy has been conceptualized more broadly as a means of enhancing quality of life, supporting wellness, and meeting the diverse needs of children and adults with disabilities or illness (Bruscia, 2014). Music therapy is appropriate for people of all ages, whether they are virtuosos or tone deaf, struggling with illnesses or totally healthy (<http://www.takingcharge.csh.umn.edu>). The therapeutic process may involve a wide range of activities, including listening to melodies, singing, playing instruments, drumming, songwriting, and guided imagery. These interventions are adaptable to the abilities and preferences of participants, making music therapy accessible to individuals across the lifespan, regardless of musical background or skill level (Bunt & Stige, 2014). Importantly, music therapy is not limited to those with clinical conditions; it can also benefit healthy individuals by promoting relaxation, self-expression, and resilience. Kearl (2018) sees music therapy as the prescribed use of music and music-related techniques to assist and motivate a person towards specific, non-musical goals. She went further to describe it as the utilization of music and other related music activities to modify ineffective learning patterns. She added that music therapy (MT) works as a creative, flexible, and sometimes spontaneous means of utilizing the appeal of music to help people of all ages and abilities. Music interventions can be designed to;

- (a) Promote wellness,
- (b) Manage stress.
- (c) Alleviate pain.
- (d) Express feelings
- (e) Enhance memory
- (f) Improve communication

(g) Promote physical rehabilitation (American Music Therapy Association, 2005b).

Methodological Considerations in Music-Based Interventions

The application of music as a therapeutic and educational tool requires deliberate methodological planning to ensure that interventions are both effective and developmentally appropriate. The selection of musical material is particularly critical, as inappropriate or poorly structured music may undermine intended outcomes, reduce engagement, or even exacerbate behavioural and communicative challenges among children with autism spectrum disorder (ASD). Contemporary research increasingly emphasizes that structured and intentional music interventions significantly enhance communication, social interaction, and behavioural outcomes in children with ASD (Lee et al., 2024; Wagner, 2024). Within the literature, three principal methodological approaches to music-based intervention design are commonly identified: Adopt Design, Adapt Design, and Specific Design. These approaches provide a structured framework for selecting, modifying, or creating musical content to meet individualized therapeutic or educational goals.

The Adopt Design involves the direct use of pre-existing musical compositions without structural modification. In this approach, songs are selected based on their intrinsic features—such as rhythm, melody, repetition, and lyrical simplicity—which are capable of capturing attention and facilitating learning. Repetition plays a central role, as consistent exposure enhances familiarity and encourages active participation. Evidence from recent meta-analyses indicates that structured exposure to music significantly improves language communication and social responsiveness in children with ASD (Lee et al., 2024). Once engagement is established, specific segments of the music that align with targeted learning outcomes can be emphasized through repetition and vocal reinforcement, thereby supporting phonological awareness and expressive communication (Osisanya & Robinson, 2011).

The Adapt Design refers to the systematic modification of existing songs to suit specific developmental needs. This method involves altering lyrics, tempo, rhythm, or phonetic structure to emphasize particular linguistic or behavioural targets. For instance, songs may be adapted to focus on consonant-vowel combinations such as “*ma*,” “*da*,” “*ta*,” and “*ka*,” thereby supporting early speech production. Research highlights that individualized and flexible intervention strategies, such as adapted music, are particularly effective in addressing the heterogeneous needs of children with ASD (Bernier et al., 2022; Geretsegger et al., 2022), as cited in Creative Arts Therapy Reviews). This adaptability allows practitioners to maintain familiarity while enhancing therapeutic precision.

The Specific Design approach entails the creation of original musical compositions explicitly developed to address clearly defined therapeutic or educational objectives. This method enables practitioners to align musical elements directly with targeted outcomes such as expressive language, emotional regulation, and social interaction. Recent integrative reviews emphasize that collaboration between educators and music therapists in designing tailored

musical interventions leads to improved developmental outcomes and more consistent engagement among children with ASD (Nga & Lee, 2025). Personalized songs (particularly those incorporating the child's name or daily routines) have been shown to enhance self-awareness, memory retention, and communicative intent.

Across these approaches, cultural relevance remains a critical consideration. Given the diversity of musical forms across sociocultural contexts, interventions must be culturally responsive to maximize engagement and emotional connection. Studies on creative arts therapies further suggest that culturally meaningful and contextually appropriate interventions yield greater improvements in social functioning and overall well-being (Bernier et al., 2022; Wagner, 2024).

Empirical observations from practice further illustrate the effectiveness of these methodological approaches. This study was conducted at the Foundation for Autistic Research and Management (FARM)/Alba Home School, Ibadan, where music-based interventions were implemented with children diagnosed with autism. Two cases—Eric and Ayo—are particularly illustrative.

Eric, admitted at the age of thirteen, exhibited limited verbal ability that constrained his capacity for self-expression. Through specifically designed and personalized songs, improvements were observed in his communicative attempts. For instance, repetitive identity-based songs facilitated vocalization and self-recognition, aligning with evidence that structured musical interventions enhance language development in children with ASD (Lee et al., 2024).

Similarly, Ayo, a nonverbal child with autism, presented with profound social withdrawal and anxiety during interpersonal interactions. His inability to communicate effectively often resulted in distress. However, interactive musical engagement-incorporating rhythm, movement, and physical coordination-provided an alternative communication channel. This aligns with findings that music therapy supports emotional regulation, social engagement, and behavioural improvement in children with ASD (Wagner, 2024). These cases highlight the transformative potential of music when applied through structured methodological frameworks. They further reinforce the necessity of intentional design, individualized adaptation, and culturally responsive practice in maximizing the benefits of music-based interventions.

Challenges

One of the major challenges confronting special educators is the lack of recognition accorded to their professional contributions. In many contexts, special educators are marginalized and perceived as occupying a lower professional status, which discourages them from showcasing their expertise. A further obstacle is the pervasive ignorance regarding issues affecting persons with special needs, a problem evident among both the educated and the uneducated. For example, it is not uncommon to encounter situations in which a visually

impaired individual is instructed to retrieve a file or asked to sign a document, despite the obvious impracticality of such requests. These instances highlight the urgent need for greater societal awareness and sensitivity. To address these challenges, special educators must collaborate with other professionals to promote inclusive practices and raise public consciousness about the rights and capabilities of persons with disabilities. This objective can be realized through the organization of structured programs designed to highlight and showcase the talents and capabilities of individuals with special needs. For example, inclusive programs could be developed to highlight the abilities of persons with disabilities. A cooking competition among individuals with visual impairments or a beauty pageant featuring participants with diverse special needs would provide platforms for self-expression and recognition. Similarly, concerts could be organized to identify and celebrate children with musical talents who also experience various forms of impairment. Dance competitions may serve as effective avenues for engaging children with hearing impairments, while structured debates could challenge prevailing misconceptions within society. In this context, the role of the special educator is pivotal: like a candle that illuminates its surroundings, the special educator dedicates themselves to fostering hope and empowerment among individuals with visual, hearing, and speech impairments, among others.

Conclusion

Universities and other relevant higher institutions in Nigeria should expand their academic offerings by establishing additional departments of special education, and in more advanced cases, by creating dedicated faculties of special education. Such initiatives would position them as pace-setters in inclusive education. Furthermore, higher institutions with music departments should ensure that students' creative outputs are not left unused but are transformed into viable resources that can serve as models internationally. Music departments, in particular, should encourage students to compose jingles, rhymes, and songs tailored to the educational sector.

The Faculty of Humanities at the University of Port Harcourt, for example, must continue to advance research and disseminate findings to both the wider public and the university community. Surprisingly, awareness within the university and other relevant higher institutions communities themselves remains limited regarding issues affecting adults and children with special needs. As a matter of necessity, the

University of Port Harcourt's radio, UI Radio, and other higher institutions' radio stations should develop programs that promote societal awareness, beginning with the institution's various communities. Similarly, university, polytechnic, and college radio stations should recognize their role as advocates: serving as the voice of the nonverbal, the eyes of the visually impaired, and the ears of those with hearing impairments.

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