

Music and mental health

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Abstract

Music is widely used to promote a sense of well-being and to distract patients from pain and other unpleasant symptoms, thought and feelings. The psychological effects of music can be profound, and it can be used as a tool for improving mood, reducing stress, and coping with anxiety and depression. Music therapy, a formalized approach to utilizing music for therapeutic purposes,

has been found to be beneficial in treating conditions such as autism, dementia, and schizophrenia. Numerous studies have investigated the potential benefits of music engagement on mental well-being and emotional competence, providing support for the notion that music can have positive effects on mental health outcomes. However, there is a need for further research to understand how these benefits can be effectively incorporated into therapeutic interventions.

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INTRODUCTION

The word music is derived from the Greek "muisike" or "mousa," meaning 'muse' or goddess. In Arabic, it is termed as "sama" or musiqa. Music is considered a branch of the arts and a science that combines vocal sounds. It includes instruments, human voices, and natural sounds, bringing serenity to listeners. Music and mental health are closely interconnected. Music also has the power to evoke emotions, memories, and experiences, and can serve as a coping mechanism for many people who are dealing with mental health issues. In recent years, the use of music in therapy has gained more recognition and acceptance in the mental health field, with growing research and evidence supporting its effectiveness.¹

HISTORY OF MUSIC IN DIFFERENT RELIGIONS

Music in Hinduism :

Music in Hinduism has ancient roots in the Vedic period, where hymns and chants were sung during religious rituals. It is considered a divine art and a means of expressing devotion. The development of classical music led to the Hindustani and Carnatic styles. Hindu music has diversified to include folk, devotional, and Bollywood genres. Today,

music continues to hold a significant place in Hindu culture, enriching spiritual experiences and serving as a medium for devotion and celebration.²

History of music in Buddhism

Music in Buddhist practices dates back to the time of the Buddha. It is used in meditation and spiritual rituals. It has evolved across different regions, with Tibetan, Japanese, and Thai traditions. Tibetan Buddhist music features intricate arrangements, Japanese Zen music promotes focus and calm, and Thai Buddhism incorporates traditional instruments. Music enhances the spiritual experience and expresses devotion to the Buddha and bodhisattvas.³

History of music in Christianity

The history of music in Christianity dates back to the early days of the church. The New testament contains references to singing hymns and psalms, and early Christian communities often used music in their worship services and other religious practices. During the medieval period, Christian music flourished, with the development of various music forms such as Gregorian chant, which is still used in Catholic services today. This period also saw the rise of polyphonic music, which featured multiple vocal parts and complex harmonies.⁴

History of music in Islamism

Islamic music has its origins in the time of Prophet Muhammad. It evolved to include genres like Sufi music for mystical practices. There have been differing views among scholars regarding the permissibility of music. Despite debates, music remains significant in Muslim culture, with various forms enjoyed worldwide.^{5,6}

MUSIC THERAPY

The earliest reference to music therapy can be found in many religious texts across all religions. Whether such religious description in regards to when and how music was conceived as a therapeutic modality when such texts were written are historically accurate or not carry a big question.⁷

Brief history of music therapy:

Music therapy in Hinduism:

Music therapy has a long history in Hinduism, based on the concept of Naad Yoga, the yoga of sound. Ancient scriptures mention music being used for healing. Chanting mantras, singing bhajans, and playing instruments like sitar and tabla are common practices. Ragas, specific melodic structures, are used for therapeutic purposes, associated with different moods and emotions. Music therapy is used to treat anxiety, depression, and insomnia. It continues to be significant in Hinduism and is gaining recognition in Western medicine for its healing effects.^{8,9}

Music therapy in Buddhism:

Music has played an important role in Buddhism for centuries, with chanting and singing being used for meditation and spiritual practice. In Buddhism, music therapy is based on the belief that sound and vibration have a powerful effect on the body and mind, promoting healing, balance, and relaxation. Tibetan singing bowls are well-known in music therapy, producing calming and healing sounds. Chanting is another form of music therapy, used to focus the mind and create a sense of calm. Traditional Tibetan medicine also utilizes music therapy to treat physical and mental conditions. Overall, music therapy remains an integral part of Buddhist practice, supporting healing relaxation, and spiritual growth.¹⁰

Music therapy in Christianity:

Music and music therapy have been recognized as powerful tools for healing, emotional expression, and spiritual connection in Christianity. Combining the therapeutic benefits of music with the spiritual insights of the Christian tradition, music therapy provides unique support for those seeking healing and wholeness. Christian music therapy focuses on using music to help individuals deepen their spiritual journey and connect with their faith. This can include listening to Christian music, singing hymns, or creating music that reflects their personal relationship with God. Many Christian communities and organizations have integrated music therapy into their healing ministries, using

it to support individuals facing mental, emotional, or physical health challenges.¹¹

Music Therapy in Islam:

Music has been an integral part of Islamic culture and tradition for centuries. In Islam, music therapy utilizes sound and music to promote healing and well-being. The Quran acknowledges the healing power of sound and music in verses like Surah Yunus. Islamic music therapy involves the use of various musical forms, including Quranic recitation, traditional Islamic music, and contemporary music with Islamic themes. The aim is to induce relaxation, reduce stress, and facilitate emotional expression. Physical exercises like breathing techniques may complement the therapeutic effects. It is important to follow guidelines and restrictions, ensuring music is not used for entertainment or sinful behavior, and lyrics are appropriate and aligned with Islamic teachings.¹²

The Rise of the Music Therapy Profession and the Pioneers Who Made It Happen:

Goodman describes three phases that clarify the healing ability of music: magical, religious, and scientific healing. The magical healing phase refers to the primitive belief that certain sounds in nature were the medium through which man could communicate with supernatural spirits. In the religious healing phase, music and musical instruments were believed to be gifts from God, and were used in ritual purification treatments. The scientific phase began with Greek philosophers like Socrates, Aristotle, and Plato, who recognized the cathartic power of music and identified specific harmonic rhythms and modes for different emotions. The renaissance gave a new lease on life to music therapy in terms of psychology and physiology.¹³

Eva Augusta Vescelius founded the National Society of Musical Therapeutics in 1903, marking an important milestone in the early development of music therapy. In 1926, Isa Maud Ilsen established the National Association for Music in Hospitals, further advancing the field. Harriet Ayer Seymour founded the National Foundation of Music Therapy in 1941, contributing to the growth and recognition of music therapy as a profession. Although these organizations were not successful in mobilizing a sustainable organization, they did contribute to some of the first journals, books, and educational courses on music as a therapeutic intervention.¹⁴

Thayer Gaston, known as the "father of music therapy," made vital contributions to the profession through organi-

zational and educational efforts. Dr. Paul Nordoff, a composer, and Dr. Clive Robbins, a special education teacher, collaborated to develop innovative approaches for enhancing cognitive processes in children. These pioneers collectively discovered that intentional use of music increased engagement, unlocked hidden potential, and fostered the development of new strengths.¹⁵

The post-World War II era marked a significant turning point for modern music therapy. Musicians started visiting hospitals throughout the United States to play music for individuals coping with physical and emotional war-related traumas. Witnessing the positive impact of music on patients' well-being, clinicians began hiring musicians to work in clinics. Since then, the field of music therapy has experienced remarkable advancements worldwide.^{16,17}

Principles of music therapy:

Music therapy is an evidence-based clinical practice that uses music interventions to address physical, emotional, cognitive, and social needs of individuals of all ages. It is based on the principle that music can affect a person's mood, behavior, and physiology in a measurable way and if used appropriately can help to address therapeutic goal to improve or maintain the health and to enhance the quality of life and promote the well-being of individuals through the use of music.¹⁸⁻²⁰

The principles of music therapy include:

Nonverbal communication: Music is a universal language that can be understood and communicated without the use of words. Music therapy uses this unique characteristic of music to facilitate communication between the therapist and the client.²¹

Active music-making: In music therapy, the client is encouraged to actively engage in music-making through playing, singing, and moving to music. This active participation helps to promote emotional expression, creativity, and social interaction.²²

Individualized treatment: Music therapy is tailored to the specific needs and goals of each individual client. The music therapist will work with the client to identify areas of need, and develop a treatment plan that is appropriate for their unique needs.²¹

Therapeutic relationship: The music therapist builds a therapeutic relationship with the client based on trust, empathy, and respect. This relationship is essential for creating a safe and supportive environment for the client to explore their emotions and experiences through music.¹⁷

Evidence-based practice: Music therapy is based on rigorous research and evidence-based practices. The music therapist uses standardized assessments and treatment protocols to ensure that the interventions are effective and appropriate for the client.¹⁶

Multidisciplinary approach: Music therapy often works in conjunction with other health care professionals, such as physicians, psychologists, and occupational therapists, to provide comprehensive care for the client.²¹
Trained Professional: Music therapy must be delivered by a trained professional who uses different music therapy techniques.^{19,20}

Types and Methods of Music Therapy

Music-based interventions can be categorized into two main groups, namely music therapy and music medicine. As per the American Music Therapy Association (AMTA), music therapy refers to the evidence-based and clinical use of music interventions to achieve individualized goals within a therapeutic relationship, carried out by a qualified professional who has successfully completed an approved music therapy program.²¹

Music-therapy is based on two fundamental methods – the 'receptive' listening based method, and the 'active' method based on playing musical instruments. Active music therapy involves playing musical instruments, singing, improvisation, and adapting lyrics, while receptive music therapy involves music-assisted relaxation, music and imagery.²²
 The Dalcroze Eurhythmics is a method which focuses on rhythm, structure, and expression of movement in the learning process is used to teach music to students, which can also be used as a form of therapy. Because this method is apt for improving physical awareness, it helps those patients who have motor difficulties immensely.^{15,17}

Guided imagery and music: This was developed by Helen Lindquist Bonny. The approach involves guided imagery with music. With music added, the patient focuses on an image which is used as a starting point to think about and discuss any related problems, lyrics analysis, and similar techniques, where participants mainly listen to music or engage in activities such as drawing while listening to music.²³

Neurologic Music Therapy: It was developed considering the perception and production of music and its influence on the function of the brain and behaviors. It uses the variation within the brain both with and without music and

manipulates this in order to evoke brain changes which affect the patient. It has been claimed that this type of music therapy changes and develops the brain by engaging with music. This has implications for training motor responses, such as tapping the foot to music. This can also be used to develop motor skills.^{24,25}

THE PSYCHOLOGICAL EFFECTS OF MUSIC

Advantages of Music Therapy:

The Impact of Music on Mood and Emotions:

Music profoundly affects mood and emotions. It increases blood flow to brain regions responsible for emotions and memory, eliciting a response in the limbic system. Different music types evoke various emotions, and the same song can have different effects on individuals. Upbeat and fast-paced music often evokes feelings of happiness and excitement, while slow and melancholic music can evoke a sense of sadness or grief. Music triggers memories and associated emotions, shaping mood. The emotional response to music can be intense and can have a lasting impact on an individual's overall mood.²⁶⁻⁹

The Role of Music in Stress Reduction and Relaxation:

Music can also be a powerful tool for reducing stress and inducing relaxation. It lowers cortisol level, regulates heart rate and blood pressure, leading to overall reduction of stress level. Additionally, music offers a soothing effect, providing a sense of calm and tranquility and distracting individual from their worries.³⁰

The use of Music as a Tool for Coping with Anxiety and Depression:

Music is an effective tool for managing anxiety and depression. It allows for emotional expression and processing, offering comfort and validation. Engaging in music-making activities boosts self-esteem and provides a sense of accomplishment, benefiting those with depression.³¹

Motivation

Music has a motivating effect on individuals. It increases attention span, improves mood, and enhances skill acquisition. Adding music to tasks can boost motivation, especially in children, making them more enthusiastic about learning, communication, movement, and social interaction. Music therapy harnesses this motivational power to facilitate positive experiences and engagement.²⁸

Promotion of Growth

Music has a profound impact on the brain, accessing various areas and promoting behavioral changes that contribute to a positive mental state. It can regulate emotions by influencing specific brain regions. Additionally, music has been found to reduce the need for opiate drugs in postoperative pain and other medical treatments.³² In autism therapy, music improves social interactions, communication, and emotional reciprocity. It encourages self-expression and healthy stress management. Overall, music therapy is a powerful tool for enhancing well-being and facilitating positive changes in individuals.¹⁶

Music for the Heart

Listening to music has been proven to have positive effects on blood pressure and heart rate. It can help lower blood pressure levels and regulate heart rates, making it beneficial for individuals with cardiovascular issues or those at risk of developing them. The soothing and relaxing effects of music contribute to its ability to promote cardiovascular health and well-being.²⁹

• Enhancement of Fetal Development

Music has been found to have positive effects on newborns and infants. It can help improve their responsiveness, regulate heart rate, enhance feeding rates, support healthy weight gain, and promote deeper sleep. Music has a positive influence on neonatal behavior, creating a nurturing and soothing environment for infants. Overall, the psychological effects of music can be profound, and it can be used as a tool for improving mood, reducing stress, and coping with anxiety and depression.³³

Disadvantages of Music Therapy:

While music therapy generally has many benefits, there are a few potential issues that can arise:

- **Overstimulation** - Various factors in music, such as volume and instrument types, can profoundly impact the sound experience. Overstimulation can occur when the sensory input from music becomes overwhelming or exceeds an individual's tolerance level. This can manifest as discomfort, agitation, and neurological stress, especially in babies in the NICU. Creating a soothing and gentle auditory environment is important to support their well-being and development.³⁴

Memory Triggering

Music has a strong ability to evoke memories, which can be beneficial for patients with dementia but potentially harm-

ful for those with PTSD who wish to avoid certain memories. It ranks second to smell in its ability to trigger unwanted memories.³⁵

Anxiety

Music's impact on anxiety disorders can vary, as it can both ease anxiety in some cases and cause or increase anxiety in others. Alzheimer's patients can experience distress and heightened anxiety when exposed to inappropriate music. Certain lyrics can reinforce negative mindsets and contribute to increased sadness over time. This is especially concerning for patients with depression, as hearing specific songs, artists, or genres can trigger negative physical and psychological responses.³⁴

MUSIC AND THE BRAIN

Music engages various regions of the brain, including sensory, cognitive, and emotional processing and reward processing. Sound waves are transformed into neural signals and transmitted to the auditory cortex for processing. Additional brain regions, such as the prefrontal cortex and cerebellum, are recruited as music becomes more complex. Music also activates regions involved in emotion and reward processing, evoking strong emotional responses and releasing dopamine. Music also engages multiple brain regions simultaneously, enhancing memory performance and facilitating memory retrieval in various conditions. Music has a significant impact on brain plasticity and cognitive function. Playing an instrument leads to structural changes in the brain and enhances auditory processing, working memory, and executive function. Listening to music increases brain connectivity, activates neural networks involved in emotion regulation and memory, and improves cognitive function and mood. Engaging with music has significant benefits for brain health and cognitive function.³⁶⁻⁸

Neurochemistry:

Listening to enjoyable music has been found to increase levels of natural serotonin and dopamine, while reducing stress-related hormones. These effects suggest that music can positively impact mood and stress levels. Music's emotional perception and physical effects, such as vasodilation, skin warming, and blood pressure reduction, may be attributed to the release of endorphins, endocannabinoids, and nitric oxide. Additionally, music may modulate neurotrophins, such as BDNF and NGF, which require further research.³⁹

MUSIC AND SOCIAL CONNECTION

Music has played a significant role in building communities and social bonds throughout human history. Whether it's through shared experiences at concerts or simply singing together, music has the power to bring people together and create a sense of belonging. Music can also create social bonds through participation. Playing an instrument or singing in a choir, for example, requires collaboration and teamwork. This can lead to feelings of camaraderie and shared accomplishment among participants. It also serves as a tool for cultural exchange and understanding. Many music genres and styles have their roots in specific cultures and traditions, and learning about and appreciating these different musical expressions can help people connect across cultural divides. Music has the ability to build community and social bonds by creating shared experiences, facilitating collaboration and teamwork, promoting cultural exchange and understanding, and providing a platform for social commentary and activism.

Music has the power to influence our emotions and behavior, and it can also have an impact on our interpersonal relationships. Shared musical experiences create strong bonds and helps to cope with difficult emotions or situations, express feelings and fosters understanding. Music has been used in therapeutic settings for centuries, and it can be a powerful tool in group therapy settings. Music in group therapy creates a positive atmosphere, builds connections, and aids emotional expression. It can be used for icebreakers, setting the tone, self-expression, group participation, relaxation, and facilitating discussion. Music enhances emotional healing and fosters a sense of community.³⁹⁻⁴¹

CONCLUSION

Music is widely used to promote a sense of well-being and to distract patients from pain and other unpleasant symptoms, thought and feelings, while being convenient and readily available. Recent research has shown that music has the potential to induce structural changes in the brain and alter neurochemicals and neurohormone secretions. Although there is sufficient evidence to support the use of music for its therapeutic benefits, further scientific advancements and rigorous research are needed to establish it as a fully quantified therapy. The future of music in mental health care holds great potential for research and application. Areas for further exploration include integrating technology, individualizing music therapy, studying music and neuroscience, examining music's impact on trauma and addiction, and developing music-based interventions for aging populations. By continuing to investigate the therapeutic benefits of music, we can enhance mental health treatment and improve the well-being of individuals.

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