
MUSIC: A PSYCHOTHERAPEUTIC TOOL

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Abstract

Music is commonly known as a veritable tool for entertainment, but there is more to music. This work examines the psychotherapeutic dimension of music. It examines the literature on the healing power of music, as well as the maladaptive effect of music. Elements of therapeutic music were highlighted, such as improvement of an individual's mood; facilitating cognitive process; emotional healing; and spiritual health. The healing power of music is mediated through stress-reduction mechanism. As a person undergoing stress listens to relaxing music, through the unconscious mechanism of the autonomic nervous system, the person is restored to equilibrium. Producing wholesome music and getting young people to learn to appreciate such for their psycho-spiritual well-being is the challenge highlighted by the authors. Since the world is rapidly changing and problems abound, it is important to advance public awareness of the benefits of music therapy and increase access to quality music therapy services that can help manage some life challenges. Encounter groups could be organized for youths on the utility of various music genres in order to make wise choices. Therapists should be aware of the content and messages that are carried along by some genres of music, as to know what type of music is suitable for a particular problem or client.

Keywords: Music, music therapy, stress reduction, positive effect, distraction.

Music is an art. It involves sounds usually produced by voice or instruments. Hence music is arranged – played or sung - to produce an effect. Keke (2011) defined music as sound that is organized into socially accepted patterns which could be viewed as life, as well as aesthetics. Nwadike (2002) defined music as the auditory art that deals with the presentation of sound in a melodious and rhythmic sequence for entertainment and communication. It is an art concerned with combining vocal or instrumental sound expression, usually according to cultural standards of rhythm, melody and harmony. Music has been a means of cultural expression – people from all cultures employ music to express their feelings, creativity, and the like.

Throughout history, music has been an important adjunct to ritual and drama and has been credited with the capacity to reflect and influence human emotion. Music provides entertainment and distractions from problems and serves as a way to relieve tension and boredom. Some studies (e.g., North, Hargreaves, & O'Neil, 2000; Robert & Christensen, 2001) reported that adolescents use music to deal with loneliness and to take control of their emotional status or mood. Plato observed that music affects the emotions and could influence the character of an individual. Aristotle taught that music affects the soul and described music as a force that purifies the emotion. Aulus Cornelius Celsus advocated the sound of cymbals and running water for the treatment of mental disorders (Amazing Discoveries, 2010; Howells, & Osborn, 1984). Music can improve an individual's mood by reducing stress and lowering anxiety levels, which can help counteract or

prevent depression (Howells & Osborn, 1984).

There are wealth of unique forms of music like traditional Nigerian music (such as Ikorodo, Egedege, Ogene, Aku n'eché enyi, Akuku n'egwu etc), Jazz, blues, classical, gospel music, rhythm and blues, rock, hip-hop, country music, Reggae, etc. There are several kinds of music, but the effect is universal in that people respond to good music whenever they perceive it. When one listens to music that touches one's soul, one cannot help but relax and smile, thereby being healed. However, wrong application or use of music can be maladaptive (Fogelson, 2006). Some genres of music can lead to maladaptive behaviors (Cundiff, 2013). This work is aimed at highlighting the healing power of music. The paper discusses music therapy, x-rays the effect of music – both adaptive and maladaptive, and makes recommendation on how to maximize the healing power of music for psycho-spiritual well-being of clients.

Music Therapy

According to Canadian Association for Music Therapy (1994), music therapy is a skillful use of elements of music facilitate physical psychological and spiritual well-being. Music therapy is an allied health profession and one of the expressive therapy consisting of a process in which music therapists use music and all of its facets – physical, emotional, mental, social, aesthetic, and spiritual - to help clients improve their physical and mental health (Forgeard, Winner, Norton, & Schlaug, 2008; Hanser & Thompson, 1994; Logeswaran & Bhattacharya, 2009). Music therapy helps clients improve their health in several domains, such as cognitive functioning (Bowman, 2007), motor skills (Lou, 2001), emotional development (Ferguson & Sheldon, 2013), social skills (Gooding, 2010), and quality of life (Siritunga, Wijewardena, Ekanayaka, & Mudunkotuwa, 2015). Studies (e.g., Chan, Chan, & Mok, 2010; Nayak, Wheeler, Shiflett, & Agostinelli, 2000), showed that music therapy is associated with a decrease in depression, improved mood, and a reduction in the state of anxiety.

Music is very beneficial for people with physical health conditions. Nayak, Wheeler, Shiflett and Agostinelli (2000) investigated the efficacy of music therapy techniques as an aid in improving mood and social interaction after traumatic brain injury or stroke. Eighteen individuals with traumatic brain injury or stroke were assigned either standard rehabilitation alone or standard rehabilitation along with music therapy (3 treatments per week for up to 10 treatments). Pre-treatment and post-treatment assessments of participant self-rating of mood, family ratings of mood and social interaction, and therapist rating of mood and participation in therapy were conducted. It was found that there was a significant improvement in family members' assessment of participants' social interaction in the music therapy group relative to the control group. Findings suggest that self-ratings and family ratings of mood showed greater improvement in the music group than in the control group. This points to the efficacy of music therapy as a complementary therapy for social functioning and participation in rehabilitation with a trend toward improvement in mood during acute rehabilitation.

Both descriptive and experimental studies have documented effects of music on quality of life, involvement with the environment, expression of feelings, awareness and responsiveness, positive associations and socialization (Hanser & Thompson, 1994; Siritunga, Wijewardena, Ekanayaka, & Mudunkotuwa, 2015). Additionally, Nayak et al. found that music therapy had a positive effect on social and behavioural outcomes and showed some encouraging trends with respect to mood.

Some aspect of music therapy include making music, listening to music, and writing songs. It may also involve imagery and learning through music. The therapy can be done in different places such as hospitals, cancer centres, hospices, at home, or anywhere people can benefit from its calming or stimulating effects. The patient does not need to have any musical ability to benefit from music therapy. According to Music Therapy Association of Ontario (2010), a music therapist should be trained in the use of music therapy in a therapeutic relationship. The therapist should pay attention to verbal as well as non-verbal communications. Like other

therapists, music therapists conduct client assessments, articulate treatment plans, treat clients' issues, and evaluate progress in light of available research so as to ensure optimum benefit for the client.

One therapeutic model based on neuroscience, called “neurological music therapy” (NMT) is based on a neuroscience model of music perception and production, and the influence of music on functional changes in non-musical brain and behavior function (Davis, 2008). In other words, NMT studies brain functions with music and without music, measures the differences, and uses these differences to cause changes in the brain through music that will eventually affect the clients non-musically. Davis (2008) posits that the brain that engages in music is changed by engaging in music. NMT trains motor responses (that is, tapping foot or fingers, head movement etc) to better help clients develop motor skills that help entrain the timing of muscle activation pattern (Roth, 2011).

Music therapy (including assessment) for children is conducted to determine the child's level of functioning in relevant developmental areas with and without music. It is used to address physical, social, cognitive, language and emotional needs of children (Leslie & Hoskyns, 2002). Researchers discovered that the experience of listening to music starts inside the womb when the fetus, surrounded by amniotic fluid, hears sounds. It hears the mother's heartbeat speed up and slows down, as well as music, conversations, and environmental noises. Some researches (e.g., Charlene, Elan, & Adam, 2012) discovered that at the age of one, children recognize and express a preference for music they were exposed to in the womb. The auditory system of the fetus is fully functional at about twenty weeks after conception. Music therapy for premature infants is typically targeted at integrating and increasing the infant's tolerance for physical and auditory stimulation and at increasing strength and speed of sucking in order to promote growth. It has been found that music can be beneficial to babies and that it is played or sung to them to help slow their heartbeat and calm breathing. By reducing the stress, music can help aid their sleep and also improve their feeding behavior (Standley & Moore, 1995).

Positive effects of music for psychosocial functioning and health

Music has been shown to have many positive effects. For instance, it improves verbal and visual abilities (Forgeard, Winner, Norton, & Schlaug, 2008). Forgeard et al. (2008) investigated the association between instrumental music training in childhood and outcomes closely related to music training as well as those more distantly related. Children who received at least three years ($M = 4.6$ years) of instrumental music training outperformed their control counterparts on two outcomes closely related to music (auditory discrimination abilities and fine motor skills), and on two outcomes distantly related to music (vocabulary and nonverbal reasoning skills). Duration of training also predicted these outcomes. The strong predictive effect of training duration suggests that instrumental music training may enhance auditory discrimination, fine motor skills, vocabulary, and nonverbal reasoning.

Music induces happiness. Logeswaran Bhattacharya (2009) investigated processing of emotional faces (neutral, happy and sad) primed by short excerpts of musical stimuli (happy and sad). Their behavioural experiment showed a significant effect of musical priming: prior listening to a happy (sad) music enhanced the perceived happiness (sadness) of a face irrespective of facial emotion. Further, this musical priming-induced effect was largest for neutral face. Their electrophysiological experiment showed that such cross-modal priming effects were manifested by event related brain potential components at a very early (within 100 ms post-stimulus) stages of neuronal information processing. Overall, music can have many positive effects on different aspect of people's lives.

Another work by Schauer and Mauritz (2003), showed that music has proven useful in the recovery of motor skills. Rhythmical auditory stimulation in a musical context in combination with traditional gait therapy improved the ability of stroke patients to walk. The study consisted of two treatment conditions, one of which received traditional gait therapy in combination with the rhythmical auditory stimulation. During

the rhythmical auditory stimulation, stimulation was played back measure by measure, and was initiated by the patient's heel – strikes. Each condition received fifteen sessions of therapy. The result revealed that the rhythmical auditory stimulation group showed more improvement in stride, length, symmetry deviation, walking speed and rollover path length (all indicators for improved walking gait) than the group that received traditional therapy alone.

Music can have many positive effects on a person's health. A review of 23 studies covering almost 1,500 patients found that listening to music reduced heart rate, blood pressure and anxiety in heart disease patients (Bradt & Dileo, 2009). Studies have found that when stroke patients listen to their favorite music, some of their visual attention is restored (Tsai, Chen, Huang, Lin, Chen, & Hsu, 2013). Tsai et al. (2013) determined whether listening to excerpts of classical music ameliorates unilateral neglect (UN) in stroke patients. They recruited and separately tested 16 UN patients with a right-hemisphere stroke under three conditions within one wk. In each condition, participants were asked to complete three subtests of the Behavioral Inattention Test while listening to classical music, white noise, or nothing. All conditions and the presentation of the tests were counterbalanced across participants. Visual analog scales were used to provide self-reported ratings of arousal and mood. Participants generally had the highest scores under the classical music condition and the lowest scores under the silence condition. In addition, most participants rated their arousal as highest after listening to classical music. Listening to classical music may improve visual attention in stroke patients with unilateral neglect.

A study conducted by Jeong and Kim (2007), examined the impact of music therapy when combined with traditional stroke therapy in a community – based rehabilitation programme. Thirty three stroke survivors were randomized into one of two groups: the experimental group, which combined rhythmic music and specialized rehabilitation movement for eight weeks; and a control group that sought and received traditional therapy. The result of this study showed that participants in the experimental group gained not only more flexibility and widened range of motion, but an increased frequency and quality of social interactions and positive mood.

In a study by Thoma, La Marca, Brönnimann, Finkel, Ehlert and Nater (2013), sixty healthy female volunteers (mean age = 25 years) were exposed to a standardized psychosocial stress test after having been randomly assigned to one of three different conditions prior to the stress test: (1) relaxing music ('Miserere', Allegri) (RM), (2) sound of rippling water (SW), and (3) rest without acoustic stimulation (R). Salivary cortisol and salivary alpha-amylase (sAA), heart rate (HR), respiratory sinus arrhythmia (RSA), subjective stress perception and anxiety were repeatedly assessed in all participants. After the stressor, sAA ($p=0.026$) baseline values were reached considerably faster in the RM group than in the R group. HR and psychological measures did not significantly differ between groups. The findings indicate that music listening impacted the psychobiological stress system. Listening to music prior to a standardized stressor predominantly affected the autonomic nervous system (in terms of a faster recovery), and to a lesser degree the endocrine and psychological stress response. This suggests that music has beneficial effect on the human body. It can improve one's health by relieving stress. Not only is music stress relieving, but it can also effect one's emotions by making a good mood better.

Maladaptive Effects of Music

Just as music has positive effects on the body and mind, it can also have negative effects. Depending on the type of music, it can sometimes influence teens in negative ways (Furnham & Bradley, 1997; Smith & Morris, 1977). Music with lyrics that are racist, violent, sexist, or homophobic can influence young, vulnerable children (Cundiff, 2013). For example, studies have shown that teenagers who listen to heavy metal kind of music can sometimes get involved in substance abuse, psychiatric disorders, suicide risk, or risk-taking behaviors during their adolescence (Arnett, 1996; Cundiff, 2013). Studies suggest a connection between the

types of music youth listen to and a wide range of troublesome attitudes and behaviors such as aggression, violent attitudes. For example, Rubin, West and Mitchell (2001) found that college students who prefer rap and heavy metal music report more hostile attitudes than students who prefer other styles of music, such as country, alternative, dance/soul, or adult contemporary. Fans of rap music tend to be more distrustful than fans of other styles, and heavy metal fans tend to hold more negative attitudes toward women. This is supported by some other authors (e.g., Martin, Clarke, & Pearce, 1993; Villani, 2001) who found correlation between risky, violent behavior and attitudes, as well as homosexual tendency and liking of heavy metal music.

Martin et al. (1993) studied more than 200 Australian high school students. They found that those who preferred heavy metal or hard rock music reported feelings of depression, suicidal thoughts, and deliberate infliction of self-harm more frequently than others in the sample. About 20 percent of the male and more than 60 percent of the female heavy metal/hard rock fans reported having deliberately tried to kill or hurt themselves in the last six months, compared with only 8 percent and 14 percent, respectively, of the pop music fans.

Although music can help students intellectually/cognitively (Bowman, 2007; Forgeared et al., 2008; Jones, West, & Estell, 2006; Wilson, 2006), it can also have the opposite effect (Fogelson, 1973). It was found that people spend 2-7 hours listening to music per day (Statista, 2015). Spending much time in music can take impact on time that should be spent in academic/intellectual, social and community service activities.

Recommendations

Since music therapy promotes wellness, manage stress, alleviate pain, express feelings, enhance memory, improve communication, and promote physical rehabilitation, it is important that its effectiveness should be supported in a wide variety of healthcare and educational settings to encourage the wide use of it. The world is rapidly changing and problems abound. It is therefore, important to advance public awareness of the benefits of music therapy and increase access to quality music therapy services such that can help manage some individual problems/sickness; hence some sickness does not need medication instead, they will respond to good music.

Therapists should be aware of the content and messages that are carried along by some genres of music, as to know what type of music is suitable for a particular problem. This is to avoid causing more harm to the patient instead of helping in the management of his/her situation. States should seek for legislation to ensure that consumers (clients/or patients) are treated by qualified and broad certified music therapist to avoid administering wrong therapy to their clients. More research on music therapy has to focus on determining both the effectiveness and the underlying physiological mechanisms which will in turn lead to symptom improvement of some problems. Further, future research should be needed especially in investigating the psychological and public health consequences of music therapy. Such research would provide important evidence regarding the connection between certain problems and listening to music while also suggesting ways to improve on it, if positive and to limit or curtail the adverse effects if negative.

Conclusion

In the contemporary society, music is the in-thing. Millions musical pieces are produced and released in the market, in the internet, in the public and private domain every year. As the musical sounds are released, the public, especially youths, with their insatiable appetite are eager to grab and consume them. It is not uncommon to see that the prevailing 'popular' music among youth are loud, fast, energetic - lyrics that can move from sentimental to obscene with sexually provocative words. Videos of such music are becoming more obscene than ever as artists compete with one another on who will outdo the other in pornographic videos. Even some upcoming, amateur artists claim they are inspired by pornographic pictures and artists that

produce them. Such pornographic artists are adored, and voted as the most popular, hence, impressionable youths are inundated by unwholesome music that put stress on their psycho-emotional equilibrium. Violence is rampant, crime is on the all-time high sensitivity to other people's needs are submerged on the altar of outright hedonism. Given this scenario, the authors are concerned about how this great resource – music – can be used for psycho-spiritual healing.

References

- Amazing Discoveries (2010). *The philosophers talk music*. Retrieved from http://amazingdiscoveries.org/s-deception-music_philosophers_culture_plato
- Arnett, J. (1996). *From the mouths of the metalheads: Heavy metal music and adolescent alienation*. Boulder, Co: Westview Press.
- Arandjelovic, P. D., Stranojkovic, S., Vladejic, S., & Mladenovic, J. (2010). Music therapy. *European Psychiatry, 1*(25), 839.
- Bowman, B. (2007). Does listening to Mozart affect listening ability? *International Journal of Listening, 21*, 124-139.
- Bradt, J., & Dileo, C. (2009). Music for stress and anxiety reduction in coronary heart disease patients. *Cochrane Database of Systematic Reviews*.
- Canadian Association for Music Therapy / Association de Musicothérapie du Canada Annual General Meeting (1994). Vancouver, British Columbia, May 6, 1994. Retrieved from <http://www.musictherapyontario.com/page-1090464>
- Chan, M. F., Chan, E. A., & Mok, E. (2010). Effects of music on depression and sleep quality in elderly people: A randomised controlled trial. *Complementary Therapies in Medicine, 18*(3-4), 150-159.
- Charlene, K., Elan, H., & Adam, B. C. (2012). Safe sound exposure in the fetus and Preterm infant. *Journal of Obstetrics and Neonatal Nursing, 41*(2), 166 – 170.
- Cundiff, G. (2013). The influence of rap/hip-hop music: A mixed-method analysis on audience perceptions of misogynistic lyrics and the issue of domestic violence. *The Elon Journal of Undergraduate Research in Communications, 4*(1), 71-93.
- Davis, G. T. (2008). *An introduction to music therapy, theory and practice (Third – Edition)*. Maryland: Silver Spring.
- Ferguson, Y. L., & Sheldon, K. M. (2013). Trying to be happier really can work: Two experimental studies. *The Journal of Positive Psychology, 8*(1), 23-33.
- Fogelson, S. (1973). Music as a distracter on reading-test performance of eighth grade students. *Perceptual and Motor Skills, 36*, 1265-1266.
- Forgeard, M., Winner, E., Norton, A., & Schlaug G (2008). Practicing a musical instrument in childhood is associated with enhanced verbal ability and nonverbal reasoning. *PLoS ONE, 3*(10), e3566.
- Furnham, A., & Bradley, A. (1997). Music while you work: The differential distraction of background music on the cognitive test performance of introverts and extraverts. *Applied Cognitive Psychology, 11*(5), 445-455.
- Gooding, L. F. (2010). *The effect of a music therapy-based social skills training program On social competence in children and adolescents with social skills deficits*. Tallahassee, Florida: Florida State University.
- Hanser, S. B., & Thompson, L. W. (1994). Effects of a music therapy strategy and depressed older adults. *Journal of Gerontology, 49*(6), 265 – 9.

- Howells, J. G., & Osborn, M. L. (1984). *A reference companion to the history of Abnormal Psychology*. Greenwood Press.
- Jeong, S., & Kim, T. M. (2007). Effects of a Theory – driven music and movement programme for stroke survivors in a community setting. *Applied Nursing Research*, 20(3), 125 – 131.
- Jones, M., West, S. D., & Estell, D. B. (2006). The Mozart Effect: Arousal, preference, and spatial performance. *Psychology of Aesthetics, Creativity, and the Arts*, 1, 26-32.
- Keke, M. T. O. (2011). Musical revolution and its effect on the youths. *The Sanctuary Voice*. Nsukka: St. Peter's chaplaincy UNN
- Hanser, S. B., & Thompson, L. W. (1994). Effects of a music therapy strategy and depressed older adults. *Journal of Gerontology*, 49(6), 265 – 269.
- Leslie, B. & Hoskyns, S. (2002). *Music therapy: Practicalities and basic principles of music therapy*. New York: Brunner – Routledge.
- Logeswaran, N., & Bhattacharya, J. (2009). Crossmodal transfer of emotion by music. *Neuroscience Letters*, 455(2), 129-3
- Lou, M. F. (2001). The use of music to decrease agitated behavior of the demented elderly: The state of the science. *Scandinavian Journal of Caring Science*, 15, 165- 174.
- Martin, G., Clarke, M., & Pearce, C. (1993). Adolescent Suicide: Music Preference as an Indicator of Vulnerability. *Journal of the American Academy of Child & Adolescent Psychiatry*, 32(3), 530-535
- Music Therapy Association of Ontario, MTAO (2010). *Music therapy scope of practice*. Retrieved from <http://www.musictherapyontario.com/page-1090464>
- Nwadike, C. E. (2002). The piper and the tune in the dynamic of popular music in Nigeria. In A. Yerima and A. Akinwale (Eds.), *Theatre and democracy in Nigeria*. Ibadan: Kraft Book.
- Nayak, S., Wheeler, B., Shiflett, S. C., & Agostinelli, S. (2000). Effect of Music therapy on mood and social interaction among individuals with acute traumatic brain injury and stroke. *Rehabilitation Psychology*, 45(3), 274–283.
- Newton, M. (2007). Newton fitness power line - the healing power of music. *Music*, 8(2), 2-4.
- North, A. C.; Hargreaves, D. J., & O'Neill, S. A. (2000). The importance of music to adolescents. *Journal of Educational Psychology*, 70(2), 255-272.
- Robert & Christensen, (2001). Popular music in childhood and adolescence. In D. G. Singer and J. L. Singer (Eds.), *Handbook of Children and the Media*. Thousand Oaks, CA: Sage Publications; 395–410.
- Roth, E. A. (2011). *Neurologic music therapy, rhythmicity and brain function: Toward a scientific model of music in therapy*. Kalamazoo, MI: Academy of Neurologic Music Therapists, Western Michigan University.
- Rubin, A., West, D., & Mitchell, W. (2001). Differences in aggression, attitudes toward women, and distrust as reflected in popular music preferences. *Media Psychology*, 3, 25-42.
- Schauer, M., & Mauritz, K. H. (2003). Musical Motor Feedback (MMF) in walking hemiparetic stroke/patient: Randomised trials of gait improvement. *Clinical Rehabilitation*, 17(7), 713-22.
- Siritunga, S., Wijewardena, K., Ekanayaka, R., & Mudunkotuwa, P. (2014). Effect of music on state of Ischaemia in stable Angina: A Randomized Controlled Trial. *International Journal of Clinical Medicine*, 5, 1173-1179.

- Siritunga, S., Wijewardena, K., Ekanayaka, R. and Mudunkotuwa, P. (2015). Effect of music on quality of life in stable Angina: A Randomized Controlled Trial. *International Journal of Clinical Medicine*, 6, 307-313.
- Smith, C.A., & Morris, L. W. (1977). Differential effects of stimulative and sedative music anxiety, concentration, and performance. *Psychological Reports*, 41, 1047-1053.
- Standley, J. M., & Moore, R. S. (1995). Therapeutic effects of music and mothers voice on premature infants. *Paediatric Nursing*, 21(6), 509 – 12.
- Statista, J. (2015). *During a typical day approximately how much time do you spend listening to music?* Retrieved from <https://www.statista.com/statistics/539798/hours-adults-spent-per-day-listening-to-music-in-the-uk/>
- Thoma, M.V., La Marca, R., Brönnimann, R., Finkel, L., Ehlert, U., & Nater, U. M. (2013). The effect of music on the human stress response. *PLoS ONE*, 8(8), e70156.
- Tsai, P-L., Chen, M-C., Huang, Y-T., Lin, K-C., Chen, K-L., & Hsu, Y-W (2013). Listening to classical music ameliorates unilateral neglect after stroke. *American Journal of Occupational Therapy*, 67, 328-335.
- Villani, S. (2001). Impact of media on children and adolescents: A 10-year review of the research. *Journal of the American Academy of Child & Adolescent Psychiatry*, 40(4), 392-401.
- Wilson, M. (2006). *How students really learn: Instructional strategies that really work*. Lanham, Maryland: Rowman & Littlefield Education.