

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/320556617>

Music Therapy: A Useful Therapeutic Tool for Health, Physical and Mental Growth

Article · October 2017

CITATIONS

0

READS

14,943

3 authors, including:



Geeta Yadav

Government Post Graduate College, Noida (Sector 39)

2 PUBLICATIONS 2 CITATIONS

[SEE PROFILE](#)



Sarita Yadav

National Botanical Research Institute - India

5 PUBLICATIONS 27 CITATIONS

[SEE PROFILE](#)

Some of the authors of this publication are also working on these related projects:



Development of whitefly resistant GM tomato [View project](#)



Music Therapy: A Useful Therapeutic Tool for Health, Physical and Mental Growth

Ashwani Kumar Goyal[#], Geeta Yadav and Sarita Yadav

[#]Km Mayawati Govt. Girls P. G. College, Badalpur, Gautam Buddha Nagar, U. P.

Department of Botany Govt. P. G. College Noida, Gautam Buddha Nagar, U. P.

Division of Plant Molecular Biology and Genetic Engineering, NBRI, Lucknow, U. P

Article Information	Abstract
<p>Article history: <i>Received: 14.03.2012</i> <i>Revised: 26.09.2012</i> <i>Accepted: 08.10.2012</i></p> <p>Keywords: Music therapy Health Physical activities Mental performances IQ</p>	<p>Music is one of the few activities that involve using the whole brain. It is intrinsic to all cultures and can have surprising benefits not only for learning language, improving memory and focusing attention, but also for physical coordination and development. It is also effective therapy for pain, reducing blood pressure, medicine for the heart, stroke, alzheimer, autism, speeds post-stroke recovery, chronic headaches & migraine remedy. Music boosts immunity, enhances intelligence, learning and IQ. Music improves concentration, athletic performance, body movement and coordination, productivity, fatigue fighter, mood and decreases depression. Relaxing music induces sleep and reduces stress and aids relaxation. Listening to music helps control negative aspects of our personalities like worry, bias and anger. Of course, music can be distracting if it's too loud or too jarring, or if it competes for our attention with what we're trying to do. But for the most part, exposure to many kinds of music has beneficial effects.</p> <p>© 2012 IAMT. All rights reserved.</p>

1. INTRODUCTION:

From time immemorial, music has been a part of Indian culture. In the Vedas too, music has an important place. The 'Samveda' is full of music. Music therapy has a long history dating back to ancient Orphic school in Greece. Pythagorus, Plato and Aristotle, all were aware of the prophylactic and therapeutic powers of music. India has been known for its rich cultural heritage and traditions and many Indian traditional healing systems like Yoga

and Ayurveda have been welcomed globally and have been given scientific endorsements for their therapeutic values

Music is the art and science of combining vocal or instrumental sounds or tones in varying melody, harmony, rhythm and timber, esp. so as to form structurally, complete and emotionally expressive composition. The sound waves cause your year drums to vibrate which causes a chain reaction in our middle and inner ear. This eventually causes nerve impulses to reach

our brain that are perceived as sound. Environmental sounds are part of our everyday lives. Everybody likes to listen music. We all consider music as a mode of relaxation or entertainment; very few of us view it as a medicine having magical healing and therapeutic properties. Several scientific studies have been conducted to indicate the healing power of music. These interesting studies have given rise to a new form of therapy called Music therapy. Music therapy involves using music to promote physical, emotional and psychological wellbeing. Music has been used for healing since ancient times. In India the practice of music therapy is not widespread but it's slowly gaining significance here also. Music is capable of improving happiness, peace, health and concentration. It is believed that music stimulates the pituitary gland, whose secretions affect the nervous system and the flow of blood. The right kind of music helps one relax and refresh. Even during the course of working, light music improves efficiency. In addition, it can help cure headache, abdominal pain and tension. So, in this regards music is stands for-

- M** - Man's and other living beings
- U** - Under a range of frequencies of
- S** - Sound
- I** - Influence the
- C** - Common and Crucial life.

Music therapy is an allied health profession and one of the expressive therapies, consisting of an interpersonal process in which a trained music therapist uses music and all of its facets—physical, emotional, mental, social, aesthetic, and spiritual- to help clients to improve or maintain their health. Traditionally, music therapy also integrates spirituality and addresses the imbalance between mind, body and spirit in improving health. Music therapy has been used in the treatment of several diseases and illnesses, physical and mental performances. Some of them with which music therapy has been associated are discussed here –

2. MUSIC THERAPY IMPROVES OUR HEALTH: Effective for reducing blood pressure

By playing recordings of relaxing music every morning and evening, people with high blood pressure can train themselves to lower their blood pressure - and keep it low **2**. According to research reported at the American Society of Hypertension meeting in New Orleans, listening to just 30 minutes of classical, Celtic or raga music every day may significantly reduce high blood pressure.

Effective therapy for Stroke

The patient enters the room of the therapist in his wheelchair. The therapist asks him to utter "I am thirsty" Having suffered a stroke that has damaged the part of his brain involved in speech, the patient tries to speak but to no avail. The therapist then chants "I am thirsty" as a song and asks the patient to repeat. "I am thirsty" He sings back. This patient is undergoing music therapy known as Melodic Intonation therapy. The stroke patients who do not show any improvement after speech therapies, often experience positive changes after music therapy. Gottfried Schlaug, a neurologist from Harvard has been conducting clinical trials to find out more about music therapy. "So far the results of the trials have been really positive" says Gottfried. In the stroke patients who participated in these trials, the left side of the brain had been damaged. The left side is the one responsible for speech. Through music therapy these patients were able to tap into similar areas in the right side of the brain. The right brain showed some structural and functional changes when compared before and after the therapy. Once the stroke victims learned to sing sentences, they could easily learn to speak out those sentences.

Effective therapy for pain

Overall, music does have positive effects on pain management. Music can help reduce both the sensation and distress

of both chronic pain and postoperative pain. Listening to music can reduce chronic pain from a range of painful conditions, including osteoarthritis, disc problems and rheumatoid arthritis, by up to 21% and depression by up to 25%, according to a paper in the latest UK-based *Journal of Advanced Nursing* ³. Music therapy is increasingly used in hospitals to reduce the need for medication during childbirth, to decrease postoperative pain and complement the use of anesthesia during surgery ⁴.

Therapy for Heart diseases

We all know about the effects of music on our breathing rate, heart beat and blood pressure. A study conducted by researchers at Italy's University of Pavia confirmed the benefits of music for our cardiovascular system. Dr. Bernardi and his colleagues conducted the study on music to further expand its use in hospitals for heart patients. In this experiment involving 24 test volunteers, the volunteers were asked to listen to the play list composed of six different styles of music with 2 minutes pauses between each piece of music. The study came up with the following observations—Music with faster beats had a stimulating effect while slow music had more relaxing effects.

During the pauses, the heart beat, blood pressure and breathing rate of the volunteers returned to normal levels sometimes even healthier levels when compared to the level before listening to music. The Mayo clinic in Rochester uses music to reduce tension and stress in patients who have undergone cardiovascular surgery. This aids in faster recovery by causing the patients to relax and adopt an optimistic state of mind.

Effective for Alzheimer

In the people suffering from Alzheimer's and dementia, music has been known to restore lost memory. "Music stimulates the dormant areas of brain that cannot be accessed due to degenerative

disease" says Concetta Tomaino, executive director of Institute for Music and Neurologic function. Concetta has been carrying out research for more than 30 years to study the effect of music on brain. She conducted a study where dementia patients were subjected to 1 hour of music therapy 3 times a week for 10 months. Their scores on the cognitive-function test were found to improve by 50% at the end of the therapy.

Effective therapy for Autism

Autistic children have problem communicating with others which keeps them confined in their personal world. Music touches them emotionally thereby motivating these children to interact with others and express themselves freely. Music therapy activities like singing songs and rhythm exercises improve their focus and memory.

Music improves mood and decreases depression

Music is a great stress reliever. In a research conducted by Hanser and Thompson, music could uplift the mood of elderly people suffering from depression. When it comes to depression it's better to listen to an inspiring and exhilarating music rather than sad songs which could make you feel worse.

explored fully but there is no doubt that music has a profound effect on our body, mind and soul. So whenever you find yourself in a gloomy mood, your boss doesn't seem to stop yelling at you or your stressful life is driving you crazy, you know what to do. Instead of venting out your fury and frustration just grab your iPod, plug in your earphones and switch on your favorite music. Get carried away by the musical waves and you will feel relaxed and happy in an instant ⁵.

Effective for Speeds Post-Stroke Recovery

A daily dose of one's favorite pop melodies, classical music or jazz can speed recovery from debilitating strokes, according to the latest research. When

stroke patients in Finland listened to music for a couple of hours each day, verbal memory and attention span improved significantly compared to patients who received no musical stimulation, or who listened only to stories read out loud, (the study reports)⁶.

Useful for Chronic headaches & migraine

Music can help migraine⁷ and chronic headache⁸ sufferers reduce the intensity, frequency, and duration of the headaches.

Useful In epilepsy

Research suggests that listening to Mozart's piano sonata K448 can reduce the number of seizures in people with epilepsy. This has been called the Mozart's effect⁹.

Effective for adolescents with mood disorder

Adolescents have identified many benefits of listening to music, including emotional, social, and daily life benefits, along with the formation of one's own identity. Music can improve one's mood by reducing stress and lowering anxiety levels, which can help counteract or prevent depression¹⁰. As children make the transition into adolescence they become less likely to sit and watch TV, an activity associated with family, and spend more of their leisure time listening to music, and activities associated with friends.

Ethnomusicologist Alan Merrim (1964) once stated that music is a "universal behavior;" it is something that everyone can identify with. Among adolescents, music is a unifying force, bringing people of different backgrounds, age groups, and social groups together.

Therapy for boosting immunity

Music can boost the immune function. Scientists explain that a particular type of music can create a positive and profound emotional experience, which leads to secretion of immune-boosting hormones¹¹. This helps contribute to a reduction in the factors responsible for illness. Listening to music or singing can also

decrease levels of stress-related hormone cortisol. Higher levels of cortisol can lead to a decreased immune response^{12,13}.

Music therapy improves physical performance:

Effective for athletic performance

Choosing music that motivates you will make it easier to start moving, walking, dancing, or any other type of exercise that you enjoy. Music can make exercise feel more like recreation and less like work. Furthermore, music enhances athletic performance¹⁴⁻¹⁵. Anyone who has ever gone on a long run with their iPod or taken a particularly energetic spinning class knows that music can make the time pass more quickly.

Therapy for improving body movement and coordination

Music reduces muscle tension and improves body movement and coordination¹⁶⁻¹⁸. Music may play an important role in developing, maintaining and restoring physical functioning in the rehabilitation of persons with movement disorders.

Therapy for Fatigue fighter

Listening to upbeat music can be a great way to find some extra energy. Music can effectively eliminate exercise-induced fatigue¹⁹ and fatigue symptoms caused by monotonous work²⁰. Keep in mind that listening to too much pop and hard rock music can make you more jittery than energized. Vary what you listen to and find out what type of music is most beneficial for you. You could try classical music one day, pop the next day and jazz the third and can observe the effect of these type of music.

Useful for improves productivity

Many people like to listen to music while they work. There may be many reasons for wishing to listen to music in the workplace; it really improves your productivity²¹. According to a report in the journal *Neuroscience of Behavior and Physiology*²², a person's ability to recognize visual images, including letters and

numbers, is faster when either rock or classical music is playing in the background.

Music therapy improves Mental performance:

Music enhances intelligence, learning and IQ

The idea that music makes you smarter received considerable attention from scientists and the media. Listening to music or playing an instrument can actually make you learn better.

Emotional intelligence

Earlier it has been thought that listening to classical music, particularly Mozart, enhances performance on cognitive tests. However, recent findings²³ show that listening to any music that is personally enjoyable has positive effects on cognition. Listening to music enhances our concentration and creativity. It has also been found to improve our cognitive ability. Psychologist George Lozanov conducted a study to test the effect of music on memory and learning. The study found that when students learning foreign languages listened to classical music they could learn around 1,000 new words in a day. Their memory and retention rate increased to a very high level.

Useful for improve memory performance

The power of music to affect memory is quite intriguing. Mozart's music and baroque music, with a 60 beats per minute beat pattern, activates the left and right brain. The simultaneous left and right brain action maximizes learning and retention of information. The information being studied activates the left brain while the music activates the right brain. Also, activities which engage both sides of the brain at the same time, such as playing an instrument or singing, cause the brain to be more capable of processing information. Listening to music facilitates the recall of information²⁴. Researchers have shown that certain types of music are a great "keys" for recalling memories. Information learned while listening to a particular song can often be recalled simply by "playing" the songs

mentally. Musical training has even better effect than just listening to classical music. There is clear evidence²⁵, that children who take music lessons develop a better memory compared with children who have no musical training.

Therapy for improve concentration and attention

Easy listening music or relaxing classics improves the duration and intensity of concentration in all age groups and ability levels. It's not clear what type of music is better, or what kind of musical structure is necessary to help, but many studies have shown significant effects²⁶.

Relaxing music induces sleep

Relaxing classical music is safe, cheap and easy way to beat insomnia. Many people who suffer from insomnia find that Bach music helps them. Researchers have shown that just 45 minutes of relaxing music before bedtime can make for a restful night²⁷. Relaxing music reduces sympathetic nervous system activity, decreases anxiety, blood pressure, heart and respiratory rate and may have positive effects on sleep via muscle relaxation and distraction from thoughts.

Music reduces stress and aids relaxation

Listening to slow, quiet classical music, is proven to reduce stress²⁸. Countless studies have shown that music's relaxing effects can be seen on anyone, including newborns. One of the great benefits of music as a stress reliever is that it can be used while you do your usual deeds so that it really doesn't take time.

3. CONCLUSION:

Music plays a vital role in re-create harmony and health. Modern music therapy provides healing Systems as a non medical modifier and protector of the impacts of disorders. It is an integration of ancient healing practices and musical traditions coupled with the recent modifications derived based on the modern day practice and the knowledge gained by current clinical studies. In present music therapy open great scope in health care sector and further research.

4. REFERENCES:

1. Copeland, B.L. and B.D. Franks. (1991). Effects of types and intensities of background music on treadmill endurance. *J Sports Med Phys Fitness*. 31(1):100-3.
2. Edworthy, J. and H. Waring. (2006). The effects of music tempo and loudness level on treadmill exercise. *Ergonomics*. 49(15):1597-610.
3. Fox, J.G. and E.D. Embrey. (1972). Music an aid to productivity. *Appl Ergon*. 3(4):202-5.
4. Ho, Y.C., M.C. Cheung and A.S. Chan. (2003). Music training improves verbal but not visual memory: cross-sectional and longitudinal explorations in children. *Neuropsychology*. 17(3):439-50.
5. Hughes, J., Y. Daaboul, J. Fino, and G. Shaw. (1998). The Mozart effect on epileptiform activity. *Clin Electroencephalogr*. 29 (3), 109-19.
6. Jing, L. and W. Xudong. (2008). Evaluation on the effects of relaxing music on the recovery from aerobic exercise-induced fatigue. *J Sports Med Phys Fitness*. 48(1):102-6.
7. Labbe' E, N. Schmidt, J. Babin and M. Pharr. (2007) - Coping with stress: the effectiveness of different types of music. *Appl Psychophysiol Biofeedback*. 32(3-4):163-8.
8. Ladenberger-Leo E. (1986). Effect of music on the general feeling of persons performing monotonous work. *Med Pr*. 37(6):347-52.
9. Lai, H.L. and M. Good. (2005). Music improves sleep quality in older adults. *J Adv Nurs*. 49(3):234-44.
10. Mammarella, N., B. Fairfield and C. Cornoldi. (2007). Does music enhance cognitive performance in healthy older adults? The Vivaldi effect. *Aging Clin Exp Res*. 19(5):394-9.
11. Oelkers-Ax R., A. Leins, P. Parzer, T. Hillecke, H.V. Bolay, J. Fischer, S. Bender. U. Hermanns and F. Resch. (2008). Butterbur root extract and music therapy in the prevention of childhood migraine: an explorative study. *Eur J Pain*. 12(3):301-13.
12. Patston, L.L., S.L. Hogg and L.J. Tippett. (2007). Attention in musicians is more bilateral than in non-musicians. *Laterality*. 12(3):262-72.
13. Pavlygina, R.A., M.V. Frolov, V.I. Davydov, G.B. Milovanova and A.V. Sulimov. (1999). Recognition of visual images in a rich sensory environment: musical accompaniment. *Neurosci Behav Physiol*. 29(2):197-204.
14. Risch, M., H. Scherg and R. Verres. (2001). Music therapy for chronic headaches. Evaluation of music therapeutic groups for patients suffering from chronic headaches. *Schmerz*. 15(2):116-25.
15. Rosenkranz, K., A. Williamon and J.C. Rothwell. (2007). Motorcortical excitability and synaptic plasticity is enhanced in professional musicians. *J Neurosci*. 27(19):5200-6.
16. Schellenberg, E.G. and S. Hallam. (2005). Music listening and cognitive abilities in 10- and 11-year-olds: the blur effect. *Ann N Y Acad Sci*. 1060:202-9.
17. Siedliecki, S.L. and M. Good (2006). Effect of music on power, pain, depression and disability. *J Adv Nurs*. 54(5):553-62.
18. Simpson, S.D. and C.I. Karageorghis. (2006). The effects of synchronous music on 400-m sprint performance. *J Sports Sci*. 24(10):1095-102.
19. Sumathy, S. (2007). Traditional healing system and modern music therapy in India, *Music therapy today* 8: (3).
20. Teng XF, M.Y. Wong and Y.T. Zhang. (2007). The effect of music on hypertensive patients. *Conf Proc IEEE Eng Med Biol Soc*.:4649-51