



## Relationship of Music with Emotion & Psychological Wellbeing: A Conceptual Review

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**Abstract:** Music has a long association with human life in entertainment, social, traditional and gradually in a context of healthcare and wellness in everyday life. This relationship is believed to have started from the mother's womb with the rhythm of mother's heartbeat and after birth individual responds to music naturally. Overall wellbeing of an individual is dependent on emotion regulation and music has the power to regulate emotion which helps in maintaining and improving physiological as well as psychological wellbeing. Scientific analysis observed that combination of musical elements has a strong influence on mood and emotion. Music being a regular coordinated sound vibration can give a rich emotional experience. Regular vibration in human organs determines physical and mental health. Music has the capacity to regularize any irregular vibration to keep individual physically and mentally healthy. The complex neurobiological processing of music in various parts of the brain keeps balance in the neuro-transmitters that helps in maintaining psychological wellbeing. The present study deals with the concept on how engagement in music functions and contributes in emotion regulation and thereby influences psychological wellbeing of individuals.

**Keywords:** Music, emotion, neuro-biology, psychological wellbeing, sound vibration.

### 1. INTRODUCTION:

Relationship of music with human life dates back to prehistoric era<sup>22</sup>. It has become an important element of human life and significantly associated across all human cultures irrespective of ages, professions etc.. Two features of our world which are universal and related to evolutionary development of mankind are the ability to create music, and respond to music and to dance to the beat of time. Music has been spontaneously created by human being and is being used for various purposes and activities right from assisting newborn babies reducing their distress and calm down, for rituals, religious practices, entertainment and to beneficial healthcare.

Religious manuscripts and historical research studies suggest that from ancient times people used music as a healing agent to cure psychological as well as physiological ailments in countries like Greece, China, Arab and India. The physicians or the healer used sound vibration in the form of chanting or using musical instruments like flute, harp, lyres etc. which induced strong emotions and thus brought balance in psychological state of the patients.

From the most primitive human to the most advanced, music has been made by all cultures throughout history and has been continuing as an integral part of human life till today. One of the reasons of strong continuing bonding is that music in the form of rhythm is associated with an individual even before birth. A fetus in the mother's womb develops in a relaxing and protective environment listening to the mother's heartbeat<sup>11</sup>. Thus relationship of music with individuals' wellbeing starts in the mother's womb which prepares an individual to be attached to music at later stages of life. Music persisted in human life and the major reason behind this is that it brings individuals together. It helps in communication between two people, family as well as the society. Thus music leads to a unique bonding like bonding between a mother and a child, or bonding between groups reflecting sentiments, moods, emotion and creates a feeling of togetherness. Scientific studies revealed that music has the power to establish a relation with regulation of emotion that facilitates to maintain and improve emotional and psychological wellbeing. Music has a varied range of physiological and psychological benefits in various conditions and based on motivational quality of music, it has a positive impact in psychological and physiological functioning<sup>8</sup>. Among the psychological effects of music, the most prominent are on the behaviour and temperament of an individual. Emotions, feelings and thoughts are also have been reported to be greatly influenced by music listening or participation<sup>11</sup>. Music has the ability to induce emotion and it is



a potentially powerful means of affect regulation which helps to maintain psychological wellbeing and used clinical applications<sup>3</sup>.

Music is a collection of coordinated sound in time to convey idea and emotions through significant combinations of melody, harmony and rhythm <sup>16,6</sup>. In addition to being a source of entertainment music has four major functions – physiological, psychological, cognitive and social. On the other hand, psychological wellbeing is maintenance of relationship, productive daily life, ability to adapt to change and to cope with circumstances. Altogether, psychological wellbeing is a psychological maturity and emotion regulation, which helps individuals to develop positive feelings and attitude for personal and social functioning. Three major factors that influence mental wellbeing are – biological, psychological and environmental and balance in these three determines mental wellbeing of an individual. Various research studies have established that music has a strong relationship with human emotions and thereby influences psychological wellbeing. The present paper reviews different approaches of its relationship.

## **2. HISTORICAL PERSPECTIVE:**

The relationship of music with human life and their wellbeing is believed to have ancient root. Various research studies particularly archeological records give evidence of music's relation in human life as prehistoric which dates back to 35000 to 42000 years<sup>7,29</sup>. Rudimentary bone flute and Paleolithic cave paintings of prehistoric world are the evidences which suggest that music was an integral part of human life. Relation of music with psychological wellbeing is found in the ancient literature of Egypt, China, Greece, Arab and also in India. During that period mental illnesses were treated in terms of divinity or demonic. Later, particularly the ancient Greek started believing it as an imbalance of bodily fluids, and music could restore peace and harmony to body, mind and soul. In India also the influence of music with human life was identified from ancient period in Vedic text, mythological scriptures and in the texts like Gandharva Tattwa, Raga Chikitsa, Brihaddeshi etc.. Since then people believed in the magical and mystic power of music in curing certain physical and mental illnesses by performing curative and therapeutic rituals in many countries. Gradually the researchers took interest in the healing potential of music and tried to legitimise the curative potential of music scientifically. The first reference of music therapy was published in an article in a Columbian magazine in 1789 on music's therapeutic value titled as 'Music Physically Considered'. It is 1950, a scientific basis of therapeutic use of music emerged after the World War II when musicians were employed to work for the war victims with the use of music to treat post war traumatic disorders and the term 'music therapy' got official recognition and being used at health care discipline to treat a wide range of disability.

## **3. MUSIC, EMOTION REGULATION & PSYCHOLOGICAL WELLBEING :**

Music is created by human being and is considered to have a biological foundation, having psychological basis to regulate human emotion, feelings and mood. Music has the power to provides and provoke response which is universal and related to our evolutionary development which brings about changes in emotions and movement <sup>24</sup> Emotion has the capacity to span a broad range of topics such as motivation, preference, intensity, and affect reactivity <sup>5</sup>. It is a complex phenomenon which is displayed through both psychological and physiological expression which occurs through biological or neural activities, and determines the three major components of emotion i.e. subjective experience, physiological response and behavioural response. Emotional expressions are crucial to the development and regulation of interpersonal relationship, and an individuals' overall wellbeing is dependent on emotion regulation. When emotional expressions are implicitly perceived, it influences the behaviour and psychological functioning of human <sup>15</sup>. Studies found that human emotions and feeling are suppressed if negatively, affects the psychological wellbeing of individuals and overall wellbeing. Studies examining the relationship between emotion regulation and mental health have shown that emotion regulation was positively and significantly correlated with positive indicator of mental health and negatively with negative indicators of mental health<sup>30</sup>. Studies also showed that deficit in emotion that is deficit in the ability to adaptively cope with challenging emotions are related to depression, personality disorder, substance use disorder, eating disorder and many others psychological problems <sup>2</sup>. So, it becomes important to improve emotion regulation for improving psychological wellbeing.

Human emotion is influenced by various factors or stimulus available in the environment. But music is considered to be the most influencing stimulus to evoke human emotion. Music has the ability to directly access emotion. It has the ability to train emotional tolerance and forming the ability to contain complex emotions. It gives form and meaning to emotional experiences and reflects mental structures <sup>12</sup>. Expressing oneself through music is a way of giving form to the expression of emotion. That way musical expression is also a sort of personal reflection over life situation or difficulties <sup>19</sup>. Music is concerned with the problem of emotional content. It is one of the most wonderful art in the hands of human being to alter or modify the feelings and emotions in all living beings to such an extent that it is worth greater than any other form of therapy for psychological wellbeing. People can identify with conflict, struggle, and



reestablishment of order in music. In this way musical activity is able to reconcile the contradictions and paradoxes in the self, and to celebrate the integrity of the person <sup>21</sup>.

#### 4. IMPACT OF MUSICAL ELEMENTS ON EMOTION:

Music is defined as the art of sound in time to convey ideas and emotions through significant combinations of melody, harmony and rhythm<sup>16,6</sup>. The definition itself indicates that the goal of combinations of the principal elements of music is primarily to evoke emotion which has different psychological, physiological and cognitive functions. Neuro-scientific studies revealed that neuro-physiological responses are influenced by listening to music, involving all the musical elements which in turn have a strong influence on mood and emotion. Melody, harmony, rhythm and tempo in music are used to regulate heart rate, blood pressure, sensory perception, cognitive function, neural activity, and emotional response. In India music is believed to be very effective in influencing physically and psychologically. Combination of the principal elements of Indian music like shruti, swara, taal, laya produce bhava, rasa and aesthetics which have potential to elicit different emotions, feelings and mood. The most striking feature of music's structure, temperament and method of improvisation is being a synthesis between philosophy, psychology, spirituality and aesthetics<sup>28</sup>. The elements of Indian music and its significant and complex combinations have the high degree of emotional content which influences greatly the neural activity, sensory perception and emotional responses which has potential to influence and regulate psychological wellbeing. As a whole the combinations of the principal elements of music have an impact in evoking mood or emotion in different degrees and thereby directly influence mental wellbeing. Another important concept is that music has an impact on the environment in which we are living and by creating a congenial environment that helps in maintaining psychological wellbeing. According to Menuhin (1972)<sup>14</sup>, melody brings continuity upon disjointed, rhythm brings unanimity upon divergent and harmony brings compatibility upon the incongruous.

#### 5. SOUND VIBRATION & WELLBEING:

Music is basically a regular and coordinated sound vibration which moves through the medium of ether present in the atmosphere and affect human body and mind <sup>4</sup>. Vibration, though one cannot see it, gives a rich emotional experience, alter perception and consciousness. So music is not only a tool for entertainment but also a psychological experience for both the performer and the listener. As such music or sound vibration has the power to influence psychological, psychological and neurological functions of human being. On the other hand, vibration is the sign of human life. The vibration produced by music is perceived by every cell of the body and affects the whole human system. Regular vibration in human organs determines physical and mental health. Any irregularity in it is the sign of physical or mental illness. Music being a regular sound vibration when perceived by human organs facilitates regularization of any irregular vibration of the body and makes it healthy both physically and mentally.

#### 6. FUNCTIONAL RELATIONSHIP OF MUSIC:

A balanced mental health is essential for regulation of an overall wellbeing and a good mental health management is dependent on three important factors – psychological, biological and environmental and a balance among these three determines psychological wellbeing <sup>25</sup> which in turn determine the quality of life that affects human functions like social, cognitive, intellectual, emotional, behavioural etc. The four principal dimensions of psychological functioning of music are – i) self awareness comprising of thoughts, emotions, sentiments, absorption, escapism, coping and solace which expresses the private relationship with music listening ii) social relatedness iii) arousal & iv) mood regulation <sup>20</sup>, that regulate the emotional imbalance resulting in maintenance of psychological wellbeing. On the whole there are four major functions of music in human life – physiological, psychological, cognitive and social. The major functions of music have the ability to regulate and influence the three major determinants i.e. psychological, biological and environmental of mental health and acts as the vital component to regulate mental and physical wellbeing.

#### 7. IMPACT OF MUSIC THROUGH NEURO-BIOLOGICAL PROCESSING :

Association of music with human life and its influence on human body, mind and emotion attracted the researchers to initiate researches in this area which resulted in using music's curative potential in therapeutic and clinical use. Studies suggest that music is a biological function, a biological perspective of the musical capacity. People who are neuro-biologically intact are believed to be born musical <sup>17</sup>. The recent scientific researches on music and its processing in the brain have developed an interesting field to work with for the neuro scientists, psychologists and healthcare professionals. The neuro-scientific studies revealed that music has the ability to influence complex neuro-biological process in the brain <sup>13</sup>. Processing of music in the brain has wide range of complex cognitive, emotional, behavioural and psycho-physiological responses which improve psychological disorders and wellbeing<sup>27</sup>. Listening and performing



music increases blood flow in the brain regions that generates and controls emotion. The limbic system which is responsible for processing emotion and controlling memory are activated when music is perceived by ear. The neuro imaging studies on music and emotion showed its influence on amygdala, a part of limbic system, responsible for regulation of emotional process releasing endorphins which plays an important role in enhancing wellbeing<sup>9, 26, 23</sup>. The neuro-psychiatrists have observed that individuals suffering from mental health problems have disorders in the brain functions and the major cause is the imbalance of neurotransmitters in the brain that affects the central nervous system. Certain neurotransmitters help in restructuring, regulating, improving and altering emotions that affect psychological wellbeing of an individual. The major neuro-transmitters are dopamine, cortisol, adrenalin, serotonin, endorphin, prolactin, noradrenalin, imbalance in which causes psychological as well as physiological problems. While music is processed in the brain, it triggers the same brain areas responsible for releasing same neuro-chemicals and brings about a balance in them when needed which helps in reducing mental health issues. And thus, music listening or playing helps individuals to become happier, healthier and more productive throughout the life<sup>1</sup>.

## 8. CONCLUSION:

If we review various theoretical concepts and definitions of music we find that music is an emotional expression which has a psychological basis. The evidences of association between music and psychological wellbeing dates back to prehistoric time when the healer or the physician used music as a curative agent to heal physical and mental ailments. With time the process of using music evolved and the healing potential got scientific recognition in the field of professional healthcare for psychological as well as physiological treatments.

Music impacts the developmental process and thereby influences overall wellbeing. Music is a process of externalizing the internal<sup>12</sup>. It helps in releasing pent up emotion and therefore enhances psychological wellbeing. Outcomes of musical activity are both expression and experience of human emotion and feelings which become functional and meaningfully impact human behaviour. It regulates psychological wellbeing of individuals and can enhance coping skills.

The previous discussions established that music influences emotion and mood which in turn influences cognitive processes such as memory, learning and perception. This cognitive process affects individuals' real life events which is a reflection of psychological wellbeing. The cognitive functioning also focuses on evoking, restructuring and modification of psychological state. As such the brain function of music is associated with psychological wellbeing.

In addition to being a source of entertainment scientific research has revealed that music has the ability to influence physiological processes that helps in enhancing physical and mental wellbeing and therefore, music can have critical adaptive functions<sup>18</sup>. So, it can be concluded that music is a biological function and emotion conveyed through it, has a strong relationship with psychological wellbeing. It is a well known fact that music impacts on body, mind and soul and the goal of music is evoking emotion. Music's potential is multidimensional but most important is its curative capacity. The systematic and scientific study in this area has started in recent past, particularly the neuro-biological aspect of music's processing in the brain and its impact on human being. To identify different important dimension of music's potential and its beneficial use, continuous, systematic, evidence based and neuro-scientific studies are required to use music in different dimensions for the welfare of the individual as well as the society.

## REFERENCES:

1. Alban, D. (2019). How Music Affects the Brain. *Be Brain Fit*. Available from <https://brainfit.com/music-brain/>
2. Berking, M & Wupperman, T. (2012). Emotion Regulation and Mental Health: Recent finding, Current challenges and Future Directions. *Curr Opin Psychiatry*, 25(2), 128-34
3. Carlson, E., Saarikallio, S., Toiviainen, P., Bogert, D., Kliuchko, M. & Brattico, E. (2015). Maladaptive and adaptive emotion Regulation through Music: Behavioural and Neuroimaging study of Male and Female. *Frontier In Human Neuroscience*, 9:466, 1-13
4. Field, T., Martinez, A., Nawrocki, T., Pickens, J., Fox, N., & Schanberg, S. (1998). Music Shifts Frontal EEG in Depressed Adolescents. *Adolescence*, 33(129), 109-16. Available from <https://www.ncbi.nlm.nih.gov/pubmed/9583665>
5. Gendron, M., & Barrett, L. F. (2009). Reconstructing the past: A century of ideas about emotion in psychology. *Emotion Review*, 1(4), 316-339.
6. Goodman, K.D. (1981). Music Therapy, In: Arieti, S., & Brodie, H.K. (ed.) *American Handbook of Psychiatry*, 2<sup>nd</sup> ed., New York: Basic Books Inc, 564-85.





7. Gracida, L.S. (2018). History of Music Therapy: From Antiquity to Today. *San's Fans*. available from <https://sansfans.org/history-music-therapy/>
8. Habibzade, N. (2015). The Effect of Music on Mental and Physical Performances. *Actakinesiologica*, 9(1), 31-34.
9. Hodges, D.A. (2011). Psychophysiological measures. In P.N. Juslin & J. Sloboda (Eds.), *Handbook of music and emotion*, 279–311. Oxford: Oxford University Press.
10. Hu, T, Zhang, D, Wang, J, Mistry, R. Ran, G & Wang, X. (2014). Relation Between Emotion Regulation and Mental Health: A Meta analysis review. *Psychol rep*, 114(2), 341-62
11. Khandelkar, B. (2005). SangeetChikitsa- MahatvapurnJankari. *Sangeet*, May, 38-41.
12. Laiho, S. (2004). The Psychological Functions of Music in Adolescents. *Nordic Journal of Music Therapy*, 13(1), 47-63
13. Lin S.T., Yang, P., Lai, C.Y., Su, Y.Y., Yeh, Y.C., Huang, M.F., & Chen, C.C. (2011). Mental Health Implications of Music: Insight from Neuroscientific and Clinical Studies. *Harv. Rev. Psychiatry*, 19(1), 34-36, DOI:10.3109/10673229.2011.549767. Available from <https://www.ncbi.nlm.nih.gov/pubmed/21250895>
14. Menuhin, Y. (1972). *Theme and Variations*. New York: Stain and Day, 139.
15. Niedenthal, P.M. (1990). Implicit Perception of Effective Information. *Journal of Experimental Social Psychology*, 26, 505-527.
16. Nizamie, S.H., & Tikka, S.K. (2014). Psychiatry and Music. *Indian Journal of Psychiatry*, 56(2), 128-140. Available from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4040058/>
17. Peretz, I. (2006). The Nature of Music from a Biological Perspective. *Cognition*, 100, 1-32.
18. Rebecchini, L. (2021). Brain, behaviour, & Immunity. *Health*, 18, 100374, 1-7
19. Ruud, E. (1997b). Music and the Quality of Life. *Nordic Journal of Music Therapy*, 6(2), 86-97.
20. Schäfer, T., Sedlmeier, P., Städtler, C., & Huron, D. (2013). The Psychological Functions of Music Listening. *Frontiers in Psychology*. Available from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3741536/>
21. Small, C. (1998). *Musicking The Meanings of Performing and Listening*. Hanover, NH: University Press of New England.
22. Storr, A. (1992). *Music and the Mind*. New York: Macmillan.
23. Thaut, M. H., & Wheeler, B. L. (2010). Music therapy. In P. Juslin & J. Slodoba (Eds.), *Handbook on music and emotions: Theory, research, applications*. Oxford: Oxford University Press, 819-848.
24. Trimble, M. & Hesdorffer, D. (2017). Music and the Brain: A Neuroscience of Music and Musical Appreation. *BJPsycho International*, 14, 28-30
25. WHO. (2001). *The World Health Report 2001: Mental Health, New Understanding New Hope*. Geneva: WHO.
26. Zatorre, R. J. (2015). Musical pleasure and reward: Mechanisms and dysfunction. *Annals of the New York Academy of Sciences*, 1337, 202–211. DOI:10.1111/nyas.12677
27. Agapaki, M., Pinkerton, E.A. & Papatzikis, E. (2022). Music and Neuroscience Research for Mental Health Cognition and Development: Ways Forward. *Frontiers*, 13. <https://doi.org/10.3389/fhsyg.2022.976883>
28. Deva, V.C., & Virmani, K. G. (1988). Meaning of Music: An Empirical Study of Psychological Responses to Indian Music. *Sangeet Natak*, 10, 54-63.
29. Howland, K.M. (2017). Music Therapy, *Encyclopaedia Britannica*. Available from <https://www.britannica.com/topic/music-therapy>.
30. Hsu, W. C., & Lai, H. L. (2004). Effects of Music on Major Depression in Psychiatric Inpatients. *Archive of Psychiatric Nursing*, XVIII(5), 193-199.