WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.084
Volume 9, Issue 4, 305-312. Review Article ISSN 2277– 7105

EFFECTS OF MUSIC ON MENTAL HEALTH AND LONGEVITY

Dr. Yogiraj Mishra[1]* and Prof. Ashok Kumar Sharma[2]

[1]MD Scholar *Kriya Sharir*, [2]Professor and HOD *Kriya Sharir*

M.M.M. Govt. Ayurveda College Udaipur.

Article Received on
01 Feb. 2020,

Revised on 21 Feb. 2020,
Accepted on 12 March 2020,

DOI: 10.20959/wjpr20204-17036

***Corresponding Author**
Dr. Yogiraj Mishra
MD Scholar *Kriya Sharir*,
M.M.M. Govt. Ayurveda
College Udaipur.

ABSTRACT

Mental disorders such as Depression has been linked with various psychosomatic issues and to a 50 percent increase in a person's risk of dying from cancer and a 67 percent increase from heart disease. These conditions have a significant impact on life expectancies. One of the clearest places that the link between mental and physical health is illustrated is in longevity. Many studies have found that those with mental health challenges, tend to live shorter lives when compared to those who do not have these conditions.[1] In Ayurveda *manas bhavas* like *raag*, *dvesh*, *kaam*, *mad*, *moh*, *krodh* etc. are the key factors in make a person doing *pragyapradh*, which is further root cause in all diseases or *sarvadoshprakop*.[2] As music plays a crucial role in making a person's thoughts positive. Positive emotions, optimism, life satisfaction and happiness are associated with reduced risk of cardiovascular disease and may even decrease the rate of the disease's progression. Indian classical music is classified in *swar*, *raaga*, *taal*, *chalan*, *gaayan-vaadan samaya* etc. According to *Vaadi-Samvaadi swara*, *raagas* are able to affect *Tridosh*. Music enriched with *shringar*, *haasya*, *shaant* etc. *navarasa*, used for medical therapeutic conditions according to *Saamanya-Vishesh Siddhant* affect and regulate emotions, which affects brain functions and psycho-somatic functions and make help in getting relief in blood pressure, cardiovascular disorders, insomnia, gastrointestinal problems, pain, respiratory problems, autism and mental illnesses as well.

KEYWORDS: mental health, psychosomatic disorders, Indian classical music, *raag*, music therapy.

INTRODUCTION

Mind, along with soul and five elemental body works as a tripod stand for life. The continuous

and balanced combination of all of three is essential for a long, happy and useful life. Mind which is made of *Satva guna* with the help of *Rajo-gun* and the trace of *Tamo-gun* work as a mediator between soul and body and promote sensual and motor functions.[3] When mind is in balanced state and predominant in *Satva guna*, it enlightened with healthy, beneficial and productive feelings like, happiness, love, satisfaction, trust, calmness, tolerance and positive thinking. While disbalance in *Raja* and *Tama gun* produce inauspicious feelings like laziness, collection tendency, fascination, cupidity, jealousy, anger, lack of concentration, ignorance, vanity, maliciousness, tension and restlessness. These all are precursor of all other psychological, psycho-somatic disorders and *Pragyapraadh*. Which is further root cause of all kind of sufferings, pain and diseases.[4]

One of the clearest places that the link between mental and physical health is illustrated is in longevity. Many studies have found that those with mental health challenges, such as schizophrenia or even depression, tend to live shorter lives when compared to those who do not have these conditions. Researchers hypothesize that one reason for the increase in respiratory disease, heart disease, metabolic disorders and cancer risk is that individuals with mental health conditions are less likely to seek care for their physical health. The Mental Health Foundation reported that those who take part in mental health services are statistically less likely to receive many routine checks, such as weight, cholesterol and blood pressure, that could identify health concerns early on. Unhealthy habits, including smoking, drug use and a lack of exercise, also can play a role, according to an article from U.S. News and World Report. On the other side according to a 2012 Harvard University meta-analysis of 200 articles, factors such as optimism, life satisfaction and happiness are associated with reduced risk of cardiovascular disease regardless of such factors as a person's age, socioeconomic status, smoking status or body weight. Whereas positive emotions correlate with a person's mental state, the opposite is also true: negative emotions correlate with deficits in a person's physical well-being. Stress is the perfect example. While chronic stress can wear down the body over time, even short-lived spurts of minor stress, such as temporary stomach-aches, can have an impact, the American Psychological Association (APA) reported. Negative emotions such as anger have been found to correlate with heart attacks and other physical problems that sometimes can lead to death. Evidence indicate that high subjective well-being (such as life satisfaction, absence of negative emotions, optimism, and positive emotions) causes better health and longevity.[5]

Music has been used throughout the world for mental relaxation, expression of feelings, somehow therapeutic uses and for spirituality from ancient time. *Naad* which is the base of music, is seed from which the entire universe is derived. The first textual literature related to music is *Saamved* which is one of the four *vedas*, also known as *veda* of lord Krishna. It is supposed that music presently we know is originated from *Saamved*. In this *veda* there is descriptive knowledge about singing rituals of *vaidic* mantras and *Richas* according to *swar*, *chanda*, *taal* etc. In Ayurveda on various places there is description of *mantra chikitsa*. Mantras are letters and words performed in a specific tone and rhythm, which was primary and ancient way of music therapy and was much effective. In further literature like Bharat muni's *NatyaShaastra* and Narad's *Sangeet Makarand* music became classified according to *Swara*(*Shadaj*, *Rishabh*, *Gandhaar*, *Madhyam*, *Pancham*, *Dhaivat*, *Nishad*), *Shruti* (frequencies between two pure *swaras*), *Graam*(*Shadajgraam*, *Madhyamgraam* and *Gandhaargraam*), *Raaga* and *That*(*bilawal*, *kalyaan*, *maarwa*, *todi* etc.), *Vaadi-Samvaadi swar*, *Gaayan-Vaadan samay*(*Poorvang* and *Uttarand Pradhan raag*, *sandhi-prakaash kaal*, *poorvanh-madhyanh-apraanh-madhyaratri*, according to *prahar* of day and night), *Chalan*(way of performing), *Rasa* and *Prakriti*(i.e. *Shringaar*, *Karun*, *Veer*, *Shant rasa* etc. and *Chanchal-Gambheer prakriti*). Classification of music according to season and day-night time is completely based on nature of notations, way to perform combination of notations, climatic and physiological condition of that particular time and body, which quickly affect *maanas* and *shaarir doshas*.[6]

Now a days a number of Indian as well as other scientists are trying to reveal the way how and how much sound waves and music affect human brain and physio-pathological conditions of body. However western music is not as much well classified but experiments done by western scientists shows auspicious effects on brain activities, neurotransmitters, hormonal levels and other physiological characters like sleep, blood pressure, pain, heart rate and respiratory rate etc.

AIMS AND OBJECTIVES

1. To study in depth about relation between mental health and longevity
2. To finding out effects of music on brain activity, psycho-somatic, neurological and motor functioning.
3. To summarized and elaborate effects of different ragas on specific diseases and *tridosha*
4. To elaborate how can music can be beneficial for longevity.

MATERIALS AND METHODS

1. *Vrihadtrayi* texts of Ayurveda
2. *Vedas* and other ancient texts related music
3. Textbooks of physiology, neurology and mental health
4. Various research articles

DISCUSSION

Sadyah phalati gandharvah maasmekam purankam | Vedah phalati kaaleshu jyotirvaidyonirantaram.[7]

Music has played an important part in every human culture, both past and present. Advances in neuroscience enable researchers to measure just how music affects the brain.

Brain scans shows that musicians have bigger, better connected and more sensitive brains. Musicians have superior working memory, auditory skills and cognitive flexibility. Musicians also have a larger corpus callosum part in brain which is responsible for batter communication between two hemispheres of brain. For those who are not musicians, an increase in music listening time is enough to have an effect on the brain. Listening and playing music reduce chronic stress by lowering cortisol hormone. Listening to music increases the neurotransmitter dopamine, which is a motivation molecule and an integral part of pleasure-reward system. It can help you get in touch with your emotions to help you heal. Playing music with others or enjoying live music stimulates secretion of oxytocin, which is a trust or moral molecule since it helps us bond with and trust others. Music engages a distributed set of cortical modules that process different perceptual, cognitive and emotional components with varying selectivity.[8]

A casual experimental study of short-term enhancement of spatial-temporal reasoning in college students following exposure to a Mozart sonata, analysed by EEG recordings reported the presence of right frontal and left temporo-parietal coherent activity induced by listening music.[9] Another study done on healthy subjects without specific musical education done with Carnatic, jazz and hard rock types of music in resting, with and without mental task conditions, analysed by EEG recording of frontal, parietal and central part of brain showed enhanced attention-based activities while listening to jazz and Carnatic as compare to Hard rock during mental task.[10] Another experimental study done on a group of subjects listening instrumental music while undergoing elective total hip joint replacement surgery under spinal anaesthesia with light sedation reported reduced serum cortisol level and reduced requirement of sedative

drug for reaching light sedation as compared to group with non-listening music.[11] Another study done for determine effect of music intervention on different physiological parameters like pain, mood status, heart rate, anxiety, depression level etc. of neuro-psychological patients reported significant reduction in characters like H.R., anxiety, depression level, pain feeling, mood swing etc. and suggested the inclusion of music intervention as therapeutic intervention for neuro-psychological patients.[12] These types of studies provide the beginnings of understanding of neurophysiological basis of brain activities induced by listening specific music.

In history of Indian classical music culture there are famous stories about miraculous effect of music like- effect of *raga Deepak* and *Megh-malhaar* sung by Taansen, effect of *raga Miya-malhaar* sung by Tana-Rini sisters for treating fever of Taansen caused due to sung *raga Deepak*, effect of singing of saint Haridaas the teacher of Taansen, treatment of insomnia of Italy's ruler Mussolini by pt. Omkaarnaath Thakur, therapeutic effect of vocal music of musician and ayurvedacharya dr. Vijaya lele, miraculous and divine effect of music of saint Dattatreya ramorao parvatikar maharaj also known as Veena baba and a lot of more.

Practicing the basic seven notes of music affects and awake seven *chakras* of body respectively. Practicing music promote delightfulness and feeling of joy in mind and soul. Once soul started to catch joy through music, body started to get heal automatically.

Ranjako janachittanam sa raagah kathito budhaih|[13]

Different *ragas* play a key role in understanding of therapeutic effect of music. *Raga* have a specific pattern of notations and nature, also a specific *raga* is predominant in a specific *rasa*/*bhava*, with the prominent use of specific note, i.e. use of *madhyam* and *pancham* to express *hasya* and *shringaar rasa*, use of *shadaj* and *rishabh*/*mandra rishabh* to express *veer*, *roudra* and *adbhut rasa*, use of *mandra gandhaar* and *nishaad* to express *karun rasa*, use of *dhaivat*/*mandra dhaivat* to express *veebatsa* and *bhayanak rasa* etc. Where use of *shuddha swara* and higher octave makes a *raga chanchal* in *prakriti* and use of *mandra swara* with lower octave makes a *raga gambheer* and *shaant prakriti*. The way used to play notes in any *raga* with the help of *meend*, *gamak*, *vakrata*, ascending-descending order gives a *raga* different character even if the notations are same, i.e. *raga darbari* and *adana* are same in notation but *darbari* is *gambheer raga* while *adana* is very *Chanchal* in nature. On the same way *raga megh* and *madhmaad-sarang*, where first one is *karun ras*, *gambheer raga* and

second one is *shringar ras pradhan* delightful *raga*. These characters make a *raga* capable to influence someone's mind, feelings and *tridosha* as well. For example.

Table 1: raga according to rasa, prakriti and effect on doshas.

Rasa	***Prakriti***	***Raga***	***Dosh***
Shant	*Gambheer*	*Bhairav, Aheer bhairav, Kalingda*	*Vaat*
Veer, Roudra	*Chanchal*	*Durga, Shankara*	*Kapha*
Shringaar	*Chanchal*	*Bheempalaasi, Tilak-kamod*	*Pitta*
Karun, Shant	*Chanchal*	*Multani, Jog, Bhairavi*	*Tridosh*

Table 2: effect of swaras on tridosha: according Dr J. Paul.

Swara	***Effect on reducing tridosha***
sā	*Alleviate pitta dosha*
Mandra re	*Kapha dosha*
Shuddha re	*Pitta-kapha dosha*
Mandra gā	*Kapha dosha*
Shuddha gā	*Pitta dosha*
Madhyam	*Vata-kapha dosha*
Sharp madhyam	*Vata-Pitta dosha*
Pancham	*Kapha dosha*
Mandra dhaivat	*Kapha dosha*
Shuddha dhaivat	*Doshanusaar*
Mandra ni	*Vata-kapha dosha*
Shuddha ni	*Vata dosha*

Another important factor may used in music therapy is music/ *raga* used according to particular time. The classification of *ragas* on the basis of time is not hypothetical infect very scientific. We can clearly observe changes in nature in early morning, noon, afternoon, evening, midnight and late hours after midnight. *Ragas* used according to time have specific characters like *ragas* played in early morning have *mandra Rishabh* and *mandra dhaivat* with *shuddh madhyam*, i.e. *bhairav*, *kalingda* etc. while *ragas* played in evening time usually have *mandra Rishabh*, *mandra*/*shuddha dhaivat* with *teevra madhyam*, i.e. *maarwa*, *poorvi*, *pooriya-dhanashree* etc. *ragas* played after morning and evening time usually have *shuddha Rishabh* and *dhaivat* i.e. *bilaval*, *desh*, *jaijayavanti* late in the morning and *kalyan*, *khamaz*, *bhoopali* late in the evening. *Ragas* used to paly in noon and midnight usually have *mandra gandhar* and *mandra nishad*, i.e. *todi*, *aasavari*, *jaunpuri* in noon and *malkons*, *darbari* in midnight. *Satva*, *raja*, *tama gun* of mind varies according to morning, noon and night. Use of time-based music regulates these *trigun*, even disbalance in *raja* and *tama* also can be cured with the selection of specific and

appropriate *raga*, tempo, rhythm and octave. For example, sleep disturbance caused by elevated *raja gun* can be treated with *raga khamaj* in slow tempo as well *raga darbari* and *raga lalit* in late evening and midnight and *raga bhairavi* in midnight or early morning. On the same way excess sleep caused by elevated *tama gun* can be treated with use of *raga drut malkons* in midnight and *raga bheempalasi*, *hamsadhwani*, *janasammohini* in day time in fast tempo. While for increasing *satva guna*, *raga bhairavi*, *bhairav*, *nat-bhairav* can be used in early morning in slow tempo and *raga shyam-kalyan*, *shivranjini* in evening or afternoon time.[14]

Table 3: experienced ragas on particular illness.

Disorders	***Raga***	**Preferred form/instrument**
Mental disorders, insomnia	*Lalit, kedar, pahadi, bhairavi*	On Flute
Dementia	*Shivaranjini*	Vocal, *flute, veena*
Cardiovascular disorder	*Bhairavi, ahilya-bilaval*	*Flute, shehnai, sarod*
Asthma, anaemia	*Shree, kedar, kalyan, durga*	*Saamgayan*, singing, *flute, shehnai*
Hypertension	*Hindol, konsi-kanada,*	*Surbahar, rudraveena, flute*
Hypotension	*Malkons, aasavari*	
Chronic pain	*Kedar, yaman, pilu*	*Sitar, sarod, flute*
Cancer	*Bhairavi, Sindh-bhairavi*	Self-Singing, playing
Generalised weakness	*Madhuvanti, jaijayavanti*	Singing
Fever	*Miya-malhar, megh-mahlar, sarang, basant-bahar*	Singing, *sitar, veena, sarod*

As we know inauspicious mental feelings like anger, fear, tension, jealousy, laziness etc. are root causes of all kind of disorders, music is excellent way to concentrate and synchronize mind. It improves recognition power and memory as well. Singing or playing music is a more batter way instead only listening, as during singing or playing instruments the whole brain including cerebral cortex, cerebellum and hypothalamus work together in a synchronized way, in addition expression of feelings (which we used to say *bhavas* and *rasa* in Indian classical music) reduce tension, fear and anger, resultant in reduction in pain, anxiety, depression, mood swing and give relief in other major and minor neuro-psychological issues. It promotes self-confidence, positive thoughts and finally quality of life.

CONCLUSION

Music has been considered useful for stress relief and health benefit since ancient times and even modern medical researchers today agree with this view. Therefore, all the analysis of the above based on experiments come to the conclusion that music exerts its therapeutic health effects on the human body both physically and mentally and protects from diseases as well as

health of healthy human beings and contributes significantly to keeping the healthy.

REFERENCES

1. https://onlinedegrees.bradley.edu/blog/*how-mental-health-affects-physical-health*/.
2. *Ashtanghridaya sutrasthan1*/1 by Atridevgupta vidyalankaar.
3. *Charak Samhita sutrasthan* 1/46,57,58 by pt. Kashinath shastri.
4. *Charak Samhita sharirsthan* 1/95,102 by pt. Kashinath shastri.
5. *Positive feelings may help protect cardiovascular health: Harvard T.H. Chan school of public health.*
6. *Sangeetmakarand sangeetaadhyaya Pratham,Tritiya paad* by shree Narad.
7. *vaidyakiya subhashitam sahityam chapter 1*: by Dr Bhaskar Govind ghanekar.
8. *How music affects the brain by Deane Alban*: *Be Brain Fit- batter mind batter life.*
9. *Persistent patterns of brain activity: an EEG coherence study of the positive effect of music on spatial-temporal reasoning* by Johannes Sarnthein: *journal of neurological research.*
10. *Impact of music on brain function during mental task using EEG:* by B Geetanjali, R Rajshekharan, K Adalarasu in *world academy of science, engineering and technology.*
11. *Effects of music listening on cortisol level and propofol consumption during spinal anaesthesia*: by Stefan Koelsch, Julian Fuermetz and others in *frontiers in psychology.*
12. *Music as a therapeutic intervention on an inpatient neuroscience unit.*
13. *Sangeetmakarand sangeetaadhyaya Pratham, Tritiya paad* by shree Narad.
14. *sangeet chikitsa* by Dr Vijay Tare.