



THERAPUTIC USE OF MUSIC: With Special Reference to Indian Classical Music

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Abstract: *Music is a universal human trait emerged spontaneously throughout the history of mankind across all cultures and remained an integral part of human life throughout the evolution process of human civilization. Music initiates a powerful co-ordination between human body and mind that led to research studies to establish its therapeutic potential and scientific application in the form of music therapy. Music as a healing agent dates back to prehistoric period and was found in ancient traditions worldwide. Its capacity to cure psychological and psychological ailments has made music therapy an alternative therapeutic tool. Indian music therapy, based on raga music in particular, is a powerful means of curing diseases because of its unique form, characteristics, structure and aesthetic values. While rendering, various components and elements of raga triggers the neurotransmitters and thereby impacts on nervous system and influences human body and mind inducing emotion. Indian raga therapy has multiple effects for holistic developments and wellbeing. Music therapy with Indian classical music is flexible and can be the best classical solution to pathological condition of life. But it requires sufficient scientific and evidence based research to have worldwide endorsement.*

Key words: *Music therapy, Indian classical music, sound vibration, Aesthetic value, Wellbeing.*

Introduction:

Music is a universal human trait and it has emerged spontaneously throughout the history of mankind across all cultures. It cannot be claimed that it is invented at one time and at one location and then spread (Peretz 2006). The exact time period of emergence of music is not known but archeological evidences show a continuous record of musical instruments which dates back to at least 30,000 years (D'Errico et al. 2003). History suggests that music has remained an integral part of human life throughout the evolution process of human civilization and culture. It plays a dominant role, in human life (Nawasalkar & Bootey 2012) and used by people throughout the day by one or the other way by one or other individual. Some listen to music during leisure; some even listen during work, activity or study; in rituals, cultural activities and festivals; and some listen to music simply to relax. Integration of music with human activity is indicative of producing

pleasure. Human has created music, but the definition cannot delimit its boundary and its influence. From the prehistoric period, music's long and significant association with human life irrespective of all demography attracted researchers to initiate studies on music and its various perspectives related to its association and impact in human life. The researchers from various branches of knowledge consisting music, musicology, psychology, neuro-science, sociology have made in depth studies to find out its impact other than producing pleasure, particularly its influence on human body and mind i.e. it's physiological, biological and psychological impacts.

In addition to being a source of entertainment, emotional content of music has the capability to alter and modify mood and emotion. The effect of music in every living being may not be assessed immediately, but it has a long lasting effect on the feeling, mind, emotion and behaviour of both the producer as well as the receptor (Sitaram, 1992). Music initiates a powerful coordination between the body and the mind. It works as a mood booster or stabilizer which indicates its impact on human mind, emotion and feeling. Music's impact on body is evident from the fact that when an individual listens to music, rhythmic movement of different parts of the body is seen in the form of tapping finger, toes, nodding head etc. Researchers tried to establish scientific reasons for these responses and found biological and neuro-scientific reasons of music's impact through processing of music in the brain. The complex processing of music consists of perceptual processing, emotional processing, autonomic processing, cognitive processing and motor or behavioural processing.

Music is considered to be the art of sound in time to express ideas and emotions in significant forms through its basic elements (Nizame & Tikka 2014). Music is a coordinated sound vibration, created by a systematic arrangement of notes in a pattern that gives a pleasing experience. Regular sound vibrations created and transmitted to the receptor has an impact on mind and body creating pleasing effect. Studies established that different combinations of the essential and basic elements of music (e.g. melody, harmony and rhythm) have the attributes which influence human body and mind differently. The inherent capacity of music impacts differently on human emotions and behaviour. Along with relaxing mind and energising body music has the capacity to calm and rejuvenate, restore, maintain and improve psychological and physiological wellbeing which led music from being an art form to a scientific curative tool. The psychological effects of music are powerful and wide ranging and can be used to promote emotional health, cope with stress, boost psychological wellbeing and provide insight into different aspects of personality (Cherry, 2019). From the recent past, scientific and neuro-scientific studies have found out and documented various influences of music on human body and mind. This trait has the potential to cure illness particularly, psychological disorders.

Music has psychological influence on both the performer and the listener. It can induce and express emotion when words seem to be inadequate. This potential of music later led to its scientific application in the form of music therapy particularly in psychological or mental health related problems.

In the context of music's vital role in human life, Indian classical music because of its structure and aesthetic influence on human body and mind, has significant therapeutic potential. Indian classical music is empirical in nature as it always points to some emotive, social, moral, religious and spiritual values. (Pudaruth 2016).

Music Therapy

As alternative healing practice there are various therapies available across the world for physical and psychological wellbeing. Music therapy is one of the important therapies in the field of psychology and psychotherapy that comes under the broad field of study called expressive art therapy (Koul, 2021). From prehistoric period to modern time, it has been shown that desirable sound of music has a wide range of psychological and physiological beneficial health effect in diverse population in different conditions (Murrock & Higgins 2009). Human being has a natural apt of responding to music. Researchers connected this to conduct study on relationship between music and its processing in the brain and observed that it is a powerful means to affect human cognition, emotion and physical wellbeing and gradually made a systematic use of music in the health care sector. Music interventions address multiple domains such as cognitive, emotional and social domains of functioning which are adversely affected in psychiatric condition (Hedge, 2017). History suggests that use of music in maintaining wellbeing in prehistoric period took the form of music therapy later for psychological interaction to elevate mental health. American Music Therapy Association in its book 'Standard of Clinical Practice (2013)' defined music therapy as the clinical and evidence based use of music intervention to accomplish individualized goal within a therapeutic relationship by a trained person who has completed an approved music therapy programme. So, music therapy is a systematic intervention or process where the therapist helps the client to promote health using music experiences and the relationship developing through that as dynamic force of change (Brushia 1998). Music is an important resource for achieving psychological, cognitive and social goal (Ragilo et al. 2014) and it has been proved to be a safe alternative tool in a therapeutic set up to heal ailments.

Healing sounds always been considered in the past as an important aid in medical practice and now a days clinical evidences have confirmed the efficacy of music therapy in treating many diseases (Litti et al. 2010). Gold et al. (2009) proposed two forms of music therapy on the basis of its structuring – structured form and flexible form. Structured form of music therapy is given with structured music where musical activities are selected before the therapy session. But in the flexible form of therapy, music making and selection of musical activities are done during the therapy session. While using musical intervention in therapeutic set up, it is used in two ways – active and receptive. The active experience is when the receiver actively

participates in music by playing selected or preferred music. On the other hand, active listening to music presented by the music therapist is the receptive experience.

Musical Process, Mechanism & Emotion

While processing music in the brain, musical elements like pitch and timbre produce minute fluctuation in air pressure that trigger electro-physiological impulses in cochlea which in turn produces signals that reaches brain stem and finally to the auditory cortex for emotional interpretation and memory. The objective physical changes in the acoustic signals induce psychological effect as subjective and abstract as feeling (Valla et al, 2017). In this process the musical sounds affect the brainwaves to vibrate with the sound pattern and that affect whole body including tissues, nerve cells etc. These neurobiological processes trigger various neurotransmitters and keep them in balance to restore and maintain physical and psychological wellbeing.

The mechanism of our body is based on the rhythmic working of its various parts with regular vibration which somewhat manifests music in the form of either sound or rhythm. Thus we are always with music whether within or outside continuously interact. Any irregularity in this vibration in any part of the body results in psychological disorders. When we listen to music its regular vibration through its neurobiological complex process helps to regularize irregular vibration within us and through its psychological power works in healing.

Research study show six mechanisms by each musical emotional pieces induce emotion (Mathur et al. 2015), they are - brain stem reflexes (reaction to dissonance), conditioning (particular music is associated with positive or negative emotion), contagion (listeners perceive the emotional expression of music and then mimic this expression internally), visual imagery (images evoked by music act as cue to an emotion), episodic memory (associated with a particular event which in turn is associated with an emotion), and expectancy that are fulfilled or denied (emotion is induced in listeners because a specific feature of music violates, delays or confirms the listeners' expectation about the continuation of music).

History of Music Therapy

Using music as a therapy dates back to prehistoric time (Hedge 2017) when our ancestors began to attribute magical power to sound that were perceived to be able to control the spirit and natural world and to create and sustain life (Biley 1999). It is assumed that in the ancient period music was used in the daily life and in healing rituals. Ancient Hindu texts describe using hymns for healing, and according to Islamic belief, singing and listening to sacred hymns are thought to provide spiritual healing and improve mental health (Swamy 2007). Indian traditional system of wellbeing includes various approaches of musical treatment (Sundar 2018). The Egyptian in their writing in 1500 B.C. mentioned the use of music to influence human body. On the whole the primitive people used music to pacify the evil spirit and also used it in curative rituals using instrument or voice which was actually to cure psychosomatic disorders. The evidence of

music used in therapeutic purposes was found in ancient Greek, Arabian, Roman, Indian and Chinese tradition. Greek philosopher Pythagoras, Aristotle and Plato believed in the healing and transformative power of music. Evidence of music's therapeutic potential is also referred in mythological and biblical resources. The earliest reference of music therapy appeared in 1789 in an article "Music Physically Considered". In the 17th and 18th century the curative potential of music was explained as impact of vibration. According to the article, music spreads vibration through skin exciting muscles and other anatomical structures, and these vibrations are transferred by nerve fibres that make changes in liquid circulation in the body and thus influences body and mind (Dobrzynska et al. 2006). Though the curative property of music was known and used for centuries, but it is only after the II World War in 1950, the therapeutic use of music got a scientific base when music was used in the hospitals for the war victims for their healing.

Therapeutic Potential of Indian Classical Music

In India, music plays a vital role in the life of human being. In addition to being a source of entertainment, it performs multi-dimensional role in the life of Indians. Some of them are spiritual, religious, ritualistic, forms of prayer, socio-cultural experiences and sometimes simply for relaxation to keep body, mind and soul in harmony. From the ancient period, the traditional healing system of India, particularly *Yoga* and *Ayurveda* remained very effective without any adverse side effects. Because of their safe healing potential, Indian traditional healing systems are widely recognized across the world and gradually their therapeutic potential got scientific endorsement. But, music therapy, in India as a clinical practice or as a profession is still at the developmental stage. Music therapy is a commonly heard phrase though not much in vogue in India (Srihari 2012).

In *Ayurveda*, there are considerable evidences linking *Ayurveda* with music in ancient time. There exists a relation between various scales and humors of the body (Aithal & Viswanathan 2015). According to *Ayurveda* human body is dominated by three *doshas* or elements i.e. *kapha* (associated with water and physical structure), *pitta* (fire that is associated with digestion, assimilation and nutrition) and *vata* (associated with energy of movement). These three elements rise and fall in cyclic order in 24 hours of a day and differ with seasons. Balance of these three elements determines human health. *Ayurveda* includes music to balance the three elements (Swamy 2017). The concept that *ragas*, performed at its dedicated time and season can influence the health of human body and mind, is acclaimed by *Ayurveda*. Indian music therapy is an integration of ancient healing practices and musical traditions coupled with modifications derived by current clinical practices.

Indian music therapy is based on classical music in general and *raga* in particular. Music is a regular sound vibration. The *raga* therapy is based on use of vibration as a healing tool. Matanga Muni defines *raga* as a sound composition consisting of melodic movement which has potential of colouring the heart of man. The articulation, speech, tone and specific arrangement of *swaras* (notes) in a particular *raga* stimulates, alleviates and cures various illness inducing electro-magnetic change in the body. Vedic tradition which dates back to about 5000 years had a great intuition about the power of sound and intonation. The vedic chant and music which had more sound and rhythm, used as a source of healing and upliftment, reflected the intuition that each intonation and inflection of voice could have beneficial or adverse effect. In ancient period it was believed that music is a hidden cosmic flow of sound and Indian sages devised various musical patterns in the form of chanting vedic hymns which could create distinct spiritual effect. Indian classical music is rooted from vedic period and handed over from generation to generation as an oral tradition. Over centuries it has been preserved, developed and elaborated by the traditional musicians to its present form. This voice based form of music is innovative and improvisational in nature.

Indian classical music which is primarily *raga* based differs from music of other countries in its structure. It has a synthetic vision, spiritual in nature and some special characteristics of its own. Its temperament and improvisation is different. A synthesis between philosophy, psychology, spirituality and aesthetics is the most striking feature in Indian Classical Music (Deva & Virmani 1988). Indian classical music has a psychological and physiological effect on the participants and research studies revealed the fact that it has a healing power with a deep effect on our mind and body. The pleasing sound pattern has the ability to relax the nervous system.

Music therapy is designed in coordination with choice of classical music and other parameters of the patient and then keeping a balance between the relevance of musical sound and the patients' acceptance of that music (Koul 2021). Indian music therapy, based broadly on *raga* system is a scientific method of effective healing of various physical and mental disorders. The basic of music is sound, which is a form of energy, produced by vibration, and caused by movement of particles in the air. Each *raga*, produced by vibration has a great influence over human functionality and emotion. Repeated listening to a particular *raga* creates a network of sound vibration which affects various body parts, muscles, *chakras* (nerves) that are contracted by the impulse of vibration and relax during interval. Contraction and relaxation of nerve fibers during listening to a *raga* make the blood flow regulated reducing pressure. Thus repeated exposure to music enhances energy flow in affected areas of human body. This process makes quick and fast healing energy transmitted from universe energy field (UEF) to human energy field (HEF) by strokes of different tones of *raga* which affect the central nervous system (Koul 2021), and distributed to various parts of body. Alternatively, we can say that sound vibrations created by *raga* touch every part of a physical being, so to say we perceive music through every cell of our body instead of listening only and it works as a nutrient for the nervous system.

According to researches some of the following ragas help to cure psychological ailments: *Ahir Bhairav*, *Todi* & *Purvi* for headache and anxiety, *Bilahari* reduces depression, *Bhimpalasi* cures anxiety, *Darbari*, *khamaj* and *Puria* defuse tension and sleep disorder (Sarkar et al. 2015), *Bageshree* for hypertension, *Nat Bhairavi* cures headache and psychological disorders (Dikshitulu 2014), *Malkauns* and *Asavari* cures low blood pressure, *Chandrakauns* for heavy ailments (Koul 2021). This way Indian classical music is suitable for emotional healing in psychological and physiological problems.

The therapeutic potential of Indian classical music lies in its combination of notes and even on every note in an octave. The *raga*, a combination of selected notes (shruties) is related to different moods and emotions which can intensify definite feelings of joy, sorrow, peace, violence etc. and based on this quality of music musical application is determined for its therapeutic use (Pathak 1969, Thomas 2021). Indian scale known as 'saptak' containing seven notes expresses different emotions. *Madhyama* (Ma) and *Pancham* (Pa) create a feeling of love and laughter, *Gandhar* (Ga) and *Nishad* (Ni) evoke compassion, *Dhaivat* (Dha) creates fear and disgust, and *Sadaja* (Sa) and *Rishava* (Re) evokes a mood of anger (Thomas 2021). The existence of microtones (*shruti*) and its embellishment make it difficult to write down (Sundar 2006; Koul 2021). Western musical scale is based on the ratio of frequency called interval, whereas Indian scale is based on microtonal distance, known as *Shrutiantar* (Vaishnav 2015). *Shruties* are thus fundamental to Indian *raga* music which has more softness, viscosity, steadiness, resonance and accuracy creating delightfulness that evokes emotions. The components such as *swaras*, *bandish*, *taan*, *vistaar*, *tala* (*rhythm*), etc. of *raga* are used in such a manner so that it induces emotion affecting mental health in *raga* based music therapy.

Rhythm of music also plays an important role in therapeutic use. Musical beats has a very close relationship with heart beat. Music beats 72 to 75 beats per minute is equivalent of normal heartbeat of 72 per minute which creates a soothing effect. Music with slower rhythm creates a positive suspense in the body and mind which anticipates that the beats will speed up and when restored, vital energy gives a deep relaxation to the body and mind. On the other hand, faster rhythm than normal heart beat excite and rejuvenate body and mind (Sarkar & Biswas 2015, Koul 2021).

Tala system in Indian *raga* music contains largest number of complex *talas*. They are infused in a *raga* in a creative and scientific manner which produces emotion. Much like Western music, though there are similarities in the subdivisions and tempo of a *tala*, the rhythmic phrases and asymmetrical meter makes it unique. *Ragas* tuned with *tala* or appropriate beats can balance emotional turmoil. It establishes a strong association between music and emotion. Melody laced with *bhavas* (emotion) and mathematical precisions of *tala* or beat system, Indian classical music creates impact on emotional and intellectual faculties of listeners and balance with emotional and analytical aspects of personality (Sairam 2015).

Melodic configuration plays a vital role in Indian *raga* system. The melodic movements of a *raga* with the occurrence of tones or musical notes create a single line in contrast with being based on harmony of Western music which uses several lines of melody. The melodic pattern of *swaras* used in rendering various parts of a *raga* such as *alaap*, *vistar*, *taan* etc. have a definite impact on ailments. The rich embellishment using tone, semitone and microtones creates wide scopes of multiple permutation and combination of notes to produce intended effect on human body and mind with a great therapeutic value (Sanivarapu 2015). This way Indian classical music is more effective than other forms of music in producing positive effect on the listeners' mind which was evidenced by EEG findings (Nawasalkar & Butey 2012). The other therapeutic value is use of time appropriate *ragas*. The time theory of Indian classical music makes it unique when compared to other music from various countries. In Indian classical music, *ragas* are assigned to particular time of a day when they are at its peak of splendor and beauty and effective to evoke particular emotion or sentiment at their highest level. Hindustani classical music relates to the time of day, season with human emotions (Thakkar & Chhaya 2014). There is daily cycle of changes in our body. A connection between *raga* and cyclic change in the body at a particular time can arouse and stimulate emotions.

Mathur et al. (2015) explained different emotional responses associated with various parts of a *raga* (*alaap*, *vistar* *taan* etc.). It reported that *ragas* elicit distinct emotions across various modes of presentation. Specific tonic intervals are robust predictors of emotional responses and tonality determines emotions experienced for a *raga* where the rhythm regularity and tempo modulate levels of arousal. They also reported that major intervals (*suddha swaras*) are predictors of reported positive valence and minor intervals (*vikrita swaras*) are predictors of negative valence. It suggests that the level of arousal changes in different areas of a *raga* influencing different emotions. *Alaap*, which introduces a *raga* is an important part with which the recital begins. It is the exposition of a *raga* with unstructured phrases or expanding the structure of a *raga* without rhythm which is highly emotional and intuitive that has the ability of balancing emotional flow in a presentable manner by affecting the brain areas (Sairam 2014). *Vistar*, the exposition of *raga*, is the soul of Indian classical music that has enormous importance in rendering a *raga*. This extemporization is highly intuitive and regulates emotional flow in a pleasing way (Sairam 2014). Through *vistar* collaborated with rhythm, thoughts and feelings unite in one integrated process and induces *bhava* and *rasa* which impact the emotional experiences. *Taan*, the concluding part of a *raga* is a melodic pattern of *swaras* with fast tempo which brings about the emotional arousal of listeners into climactic stage producing *bhava* and *rasa*. *Gamaka* is an important part of *taan*. It is the manipulation of notes in any manner to produce a musical effect. This delicate vibration adorns the musical notes and produce an emotional effect calls *ragabhava* (Sambamurthy 2002). It adds to aesthetic beauty that can console grieving heart and relieve suppressed emotion (Sairam 2012). *Rasa* is the essence of *raga* and the *bhava* is the emotion conveyed, which instill life to a *raga* and create the fundamental concept of Indian aesthetic. Aestheticism is the soul of Indian classical music. Rendition of Indian classical music is mainly based on ornamentation (*kan*, *meend*, *khatka*,

murki, zamzama, gamaka etc.) and embellishment (*alap, vistar, taan* etc.). These two together creates multiple *bhava* and *Rasanubhuti* or aesthetic consciousness through which sublimated emotion emerges (Pudaruth 2016). Aesthetic experience, created by different vibrations and frequencies of microtones in Indian classical music impacts on different parts of the brain that has therapeutic potential.

Indian classical music is a powerful means for different emotional modifications by controlling the brain wave pattern. With shift in emphasis on notes one *raga* can have multiple effects for holistic wellbeing and development (Sambamurthy 2002).

Conclusion

The therapeutic potential of music was identified from ancient time across culture and was used for healing purpose through rituals and other social functions. Gradually benefits of music therapy were experimentally proved to be effective to cure ailments worldwide. The therapeutic use of Indian classical music has remained quite obvious from the period of our ancestors belonging in Vedic period. The cosmic flow hidden in the musical sound was recognised by the Indian sages and was used in the form of chanting mantras or Vedic hymns. This made the nervous system relaxed and used for holistic health development. This tradition was carried forward generation after generation and took the form of Indian classical music and its therapeutic use. Indian classical music is versatile with its multiple rendition style, its different elements with different emotional approach and its diversity which impacts the brain distinctively and makes it different from other forms of music. This particular feature has made music therapy with Indian classical music flexible and unique. Indian ragas can be said to be the best classical solution to pathological condition of life. But the complex nature of Indian classical music requires a deep knowledge and skill to use it in the therapeutic practice. But till today sufficient researches are not available to establish the uniqueness of Indian classical music in music therapy. It requires evidence base research in clinical setup to establish its relationship with neurobiological process and to plan and organize systematic therapy. The traditional Indian healing system particularly *Yoga* and *Ayurveda* has become very popular worldwide because of its scientific endorsement. Likewise it is expected that with evidence based scientific study Indian classical music therapy will also be equally popular worldwide.

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