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# Therapeutic Application of *Ishta Shabda* in *Sangeet Chikitsa* for Substance De-addiction: A Narrative Review

Dr. Mugdha Gore<sup>1</sup>, Prof. Vd. Arpan Bhatt<sup>2</sup>, Dr. Shalinee Kumari Mishra<sup>3</sup>

- <sup>1</sup> 1st Year Ph.D. Scholar, Dept. of Swasthavritta, Institute of Teaching and Research in Ayurveda (INI), Jamnagar.
  - <sup>2</sup> Professor and Head, Dept of Swasthavritta, Institute of Teaching and Research in Ayurveda (INI), Jamnagar
  - <sup>3</sup> Associate Professor, Dept of Swasthavritta, Institute of Teaching and Research in Ayurveda (INI), Jamnagar

Email: mugdha gore97@yahoo.co.in

Phn No. 9405904366

### Abstract

**Objective:** The rising incidence of psychological disorders has led to an increase in addictive behaviours. Research indicates that underlying mental health conditions significantly heighten the risk of addictive disorders. Addiction is defined as a chronic, relapsing disorder characterized by compulsive drug seeking and use, despite adverse consequences. It is considered a brain disorder, because it involves functional changes to brain circuits involved in reward, stress, and self-control. In Ayurveda, *Prasanna Mana* is an inevitable component of health. Addiction can be classified as *Manasa Vyadhi* and Acharya Sushruta highlights the role of sensory stimuli, including *Ishta Shabda* (sound therapy), as its therapeutic tool.

**Data Sources**: The review incorporated Ayurveda classical texts, alongside electronic databases such as PubMed, Google Scholar, and the Ayushdhara portal. The search terms used in the electronic databases were "Sangeet Chikitsa in De-addiction" and "Music Therapy in De-addiction." The search resulted in 22 articles from PubMed, 472 articles from Google Scholar, and no articles from the Ayushdhara portal.

**Review Methods:** The data obtained from these sources was compiled, analyzed, and assessed. A total of 6 articles were selected for in-depth review based on their relevance and quality.

**Result:** Ayurveda classical texts have underscored the implementation of *Sangeet Chikitsa* in *Manasa Vyadhi* and *Madatyaya*. Contemporary research validates the effection of Music Therapy in de-addiction.

**Conclusion**: The therapeutic potential of Indian classical music through *Sangeet Chikitsa* remains underexplored, offering a promising, cost-effective, and safer alternative for addressing addiction.

Keywords: De-addiction, Music Therapy, Prasanna Mana, Sangeet Chikitsa.

Introduction: The current approach to health has become more holistic. World Health Organization defines Health as a state of complete physical, mental, and social well-being and not merely an absence of disease or infirmity. Treatises of Ayurveda emphasize on all aspects of human life, whether physical, psychological, spiritual, or social while thinking about the condition of health and disease. The holistic approach to health in Ayurveda is quite evident when Acharya Sushruta elaborates on the features of Swastha Purusha. Acharya Charaka states that Ayu (life) is the conjunction of Sharira, Indriya, Sattva and Atma.<sup>2</sup> Acharya Kashyapa mentions the importance of Saumanasya while describing Arogya Lakshana.<sup>3</sup> Thus, Manoswasthya is an important aspect of health. The incidence of psychological disorders has risen in the past few decades owing to the competitive nature of lifestyle. As a result, the incidence of addictive disorders has also increased. Earlier researches have proved that baseline mental disorders strongly increase the risk of substance dependence or abuse, particularly for behavioral disorders, prior substance use, and certain mood or anxiety disorders.<sup>4</sup> Addiction is defined as a chronic, relapsing disorder characterized by compulsive drug seeking and use despite adverse consequences. It is considered a brain disorder, because it involves functional changes to brain circuits involved in reward, stress, and self-control. Those changes may last a long time after a person has stopped taking drugs.<sup>5</sup> In Ayurveda, addiction can be classified as a *Manasa Vyadhi* because it originates from and significantly affects the mind, disrupting mental balance, emotional stability, and decision-making. To mitigate the growing prevalence of addictive disorders, there is a pressing need for non-invasive, safe therapeutic alternatives to pharmacotherapy. Acharya Sushruta offers valuable insights into this domain. The utilization of sensory stimuli, including Ishta Shabda (sound therapy), emerges as a promising approach to addressing addiction disorders. This umbrella term encompasses a variety of modalities, such as counselling, Mantra therapy, and music therapy (Sangeet Chikitsa). Given the extensive references to music therapy as a therapeutic adjunct in Ayurvedic classics, this article delves deeper into this subject.

Aim: To explore the role of *Prasanna Mana* in de-addiction through the use of *Ishta Shabda* w.s.r. to *Sangeet Chikitsa*.

### **Objectives:**

- (1) To critically review the role of *Prasanna Mana* in de-addiction.
- (2) To critically review the role of *Ishta Shabda* in de-addiction.
- (3) To review contemporary research on the efficacy of Sangeet Chikitsa (music therapy) in treating addictive disorders.
- (4) To understand the potential mechanism and probable mode of action of Sangeet Chikitsa (music therapy).

**Data Sources:** The review incorporated Ayurveda classical texts, including the Brihattrayi and Laghutrayi, alongside electronic databases such as PubMed, Google Scholar, and the Ayushdhara portal. The search terms used in the electronic databases were "Sangeet Chikitsa in De-addiction" and "Music Therapy in De-addiction." The search resulted in 22 articles from PubMed, 469 articles from Google Scholar, and no articles from the Ayushdhara portal.

**Review Methods:** The data obtained from these sources was meticulously compiled, analyzed, and assessed. A total of 6 articles were selected for in-depth review based on their relevance and quality. These selected articles are discussed in detail in this paper.

### **Results:**

Importance of *Prasanna Mana* in de-addiction: *Prasanna Mana* is an important aspect of Holistic Health. *Mana* is said to be *Ubhaya Indriya* (acting as both *Karmendriya* and *Jnanendriya*) and it is responsible for initiating the actions of all senses. The three basic causes of disease pathogenesis are—"*Asatmya Indriyartha Samyoga*"; "*Prajna Aparadha*"; "*Parinama*". All the diseases that exist are due to *Trividha Vikalpa* i.e., *Atiyoga, Ayoga*, and *Mithyayoga* of *Kala, Indriya* and *Buddhi*. Addictive disorders are primarily caused due to *Sattva* depletion which causes *Manasa Vikara*, this further leads to "*Asatmya Indriyartha Samyoga*"; "*Prajna Aparadha*"; "*Parinama*". Acharya Charaka elaborated on *Manasa Vyadhi* and mentioned their treatment modalities like *Trivarga Anvekshana, Tadvidya Seva*, and *Atmadividnyana*. Acharya Sushruta advocated that *Manasa Vyadhi* to be treated with *Ishta* and *Sukhavaha Shabda, Sparsha, Rupa, Rasa*, and *Gandha*. Acharya. Vagbhatta advocated the utility of *Dhi, Dhairya*, and *Atmadi Vidnyana* for *Manasa Vyadhi*.

Avurveda concept of Addiction: Clear description regarding addictive disorders is not available in classical texts of Ayurveda. Madatyaya is discussed in Charaka Samhita, following the section on Visha Chikitsa, due to the similar properties of Madya and Visha. Acharya Charaka outlines the Guna of Madya, the stages of Madatyaya (alcohol addiction), its symptoms, side effects, and the corresponding *Chikitsa*. Acharya Sushruta provides an extensive description of Madatyaya in the context of Panatyaya Pratisheda (prohibition of drinking). It is stated that Madya affects Mana due to its Tikshna Guna, 11 and thus implementation of sensory stimuli should be adopted. 12 Ashtanga Sangraha advocates utility of Manorama Katha as a treatment modality to cure the burning sensation<sup>13</sup> And *Harshani Kriya* in *Madatyaya*<sup>14</sup>. In chronic stage, to prevent the relapse of *Madatyaya*, utility of pleasant sound and musical instruments is advised. 15

Current status of substance abuse disorders: According to the Ministry of Social Justice and Empowerment's recently released report on the "National Survey on Extent and Pattern of Substance Use in India" (2019),16 crore people (14.6%) between the age of 10 and 75 years are current users of alcohol, and out of them, 5.2% are alcohol dependents. About 3.1 crore individuals (2.8%) are cannabis users, and 72 lakh (0.66%) people suffer from cannabis problems. Overall opioid users 2.06% and nearly 0.55% (60 lakh) require treatment services/health 1.18 crore (1.08%) are current users of sedatives (non-medical use). 1.7% of children and adolescents are inhalant users as compared to adults of 0.58%. Nearly 18 lakh children need help for inhalant use. It is estimated that about 8.5 lakh people are injecting drugs (PWID – people who inject drugs)<sup>16</sup>

Sangeet Chikitsa Reference in Ancient Literature: Sangeet has its roots in Rigveda and Samveda. In the Chhandogya Upanishat, the sound "Om" is described as encompassing all the Swaras. The syllable "Om" is said to be the essence of all speech, the entire Vedas, and is connected to the soul (Atman) and Brahman (the ultimate reality). 17 The utilization of music dates to the Puranic era, as evidenced by the Brihat Naradiya Purana, which identifies seven Swaras as integral to Akash Tattva. 18 Hathpradipika states that Nada is the supreme controller of Laya, Maruta, Mana, and Indriya successively. 19 Gheranda Samhita describes music as the supreme form of entity in the attainment of spiritual enlightenment. <sup>20</sup> In detailing the necessities of a Vaidyashala, Acharya Charak noted the inclusion of Sangeet Samagri among the prerequisites.<sup>21</sup> The utility of music as a nonpharmacological intervention is mentioned in Ayurvedic classics in conditions like Rajayakshma (chronic debilitating conditions)<sup>22</sup>, Murchha (Delusion)<sup>23</sup>, Madatyaya, <sup>24</sup> and Vajikarana (aphrodisiac).<sup>25</sup>

### Recent Researches regarding implementation of Sangeet Chikitsa (Music Therapy):

- 1. A randomized controlled study evaluated the impact of psychoeducation and music intervention on stress, self-efficacy, and relapse rates in 62 patients with alcohol and substance use disorders. Over three weeks, the experimental group underwent eight sessions, resulting in significantly increased selfefficacy, decreased stress levels, and reduced relapse rates compared to the control group. The findings highlight that psychoeducation and music intervention are effective strategies for managing stress, enhancing self-efficacy, and preventing relapses in these patients.<sup>26</sup>
- In another RCT, participants found group music therapy (MT) to be soothing, calming, and helpful in managing cravings and stress while fostering a sense of community. Sessions were associated with reduced cravings, lower anxiety and depression scores, and fewer days of substance use.<sup>27</sup>
- A meta-analytical review of 21 trials with 1,984 participants found moderate-certainty evidence that music therapy (MT) combined with standard care significantly reduces substance cravings and moderately enhances motivation for treatment compared to standard care alone. The effects were more pronounced for interventions lasting one to three months, highlighting the importance of duration. These findings support MT as an effective adjunctive treatment for managing cravings and increasing treatment motivation in detoxification and short-term rehabilitation settings for individuals with substance use disorders.<sup>28</sup>
- A 7-week trial on music therapy had a 75% attendance rate, with high enjoyment and motivation ratings (4.3 and 4.0 out of 5) among participants, 83% of whom expressed willingness to attend future sessions. Nearly half (46%) reported that music therapy helped them feel more connected to the group, and its effectiveness was consistent across age groups and substance types. These findings suggest that music therapy is a promising method for enhancing engagement in substance abuse treatment programs.<sup>29</sup>

- 5. In a study, 144 participants were cluster-randomized to either an experimental or wait-list control condition for a single-session treatment. While participants in the experimental group showed lower withdrawal and craving scores than the control group, these differences were not statistically significant, and the familiarity of the song in the lyric analysis did not impact the outcomes. The study suggests that group-based lyric analysis may help alleviate withdrawal and cravings temporarily, with implications for clinical practice and areas for further research.<sup>30</sup>
- 6. A clinical study aimed to assess the feasibility and benefits of group music therapy based on emotion-regulation skills for male inpatients with alcohol dependence. The study group received group music therapy alongside treatment-as-usual (TAU), while the control group received only TAU. After two weeks, the study group showed improvements in anxiety, sleep quality, and alcohol cravings, though these differences were not statistically significant. Participants reported feeling more relaxed and improved mood from the music therapy, suggesting it is a feasible and potentially effective treatment, though further long-term research is needed to confirm its efficacy. <sup>31</sup>

### **Discussion**

De-addiction is a complex process, and several factors can hinder an individual's ability to overcome addiction. Contemporary research has demonstrated the positive effects of music therapy on various aspects of addiction management, including reducing stress, enhancing self-efficacy, lowering relapse rates, managing cravings, and improving motivation.

Therapeutic aspects of *Ishta Shabda* in de-addiction: In the context of addictive disorders, substances that lead to addiction are typically characterized by *Ushna* and *Tikshna* qualities, along with *Madaka* (intoxicating) properties. These attributes contribute to an increase in *Rajasa* (hyperactivity, restlessness) and *Tamasa* (inertia, ignorance) *Guna* within the individual. The dominance of these *Guna* disrupt mental equilibrium, leading to emotional instability, poor judgment, and a propensity for addictive behavior. In Ayurveda, *Shabda* (sound) is associated with the *Akasha Mahabhuta* (ether element), which inherently carries a predominance of *Sattva Guna* (purity, clarity, and balance). The *Sattvika* nature of Akasha can act as a therapeutic counterforce to the elevated *Rajas* and *Tamas* in addiction. Furthermore, addictive substances are primarily of *Paittika* nature. Sangeet has been stated as a therapeutic intervention in *Pittaja* conditions.<sup>32</sup>

### Probable mechanism of action of Sangeet Chikitsa:

Addictive disorders present with a wide spectrum of symptoms. Acharya Sushruta described *Manasa Vyadhi* as the ones that are caused due to *Ichcha* and *Dwesha* and are manifested into *Krodha*, *Shoka*, *Bhaya*, *Harsha*, *Vishada*, *Irshya*, *Abhyasuya*, *Dainya*, *Matsarya*, *Kama*, *Lobha*. Within the framework of Ayurveda, these symptoms can be categorized based on *Doshika* dominance.

**Swara**: Indian classical music is composed of seven fundamental notes, or *Swaras*, each of which is believed to exert a distinct influence on the body based on the *Dosha*, *Guna*, *Shadrasa* and *Chakra* according to ancient musicological texts.<sup>33</sup>

*Tala*: The *Tala* forms the metrical structure that repeats, in a cyclical harmony, from the start to the end of any composition. All functions of the body are organized in systemic manner, if this harmony is changed by any factor, then it turns into a diseased condition. Majority of *Tala* in *Sangeet* have 6,10,12,16 beats, thus they correspond to the number of *Dala* present in 6 *Chakras* of body.<sup>34</sup>

**Instrument**: Indian musical instruments can be classified into *Tata Vadya* (string instruments), *Avnaddha Vadya* (Percussion instruments), *Sushira Vadya* (wind instruments), *Ghana Vadya* (idiophonic instruments). These types have their effect on *Urdhvanga*, *Adharanga*, *Madhyanga* and *Sarvanga* respectively<sup>35</sup>

**Raga** Time Theory: According to Sangeet Ratnakar, a framed cluster of specific notes that creates different moods and effects on the mind is known as *Raga*. Indian classical music categorizes all *Ragas* based on specific times of the day. The optimal effects of a *Raga* are experienced when it is performed during its designated time. This Raga time theory aligns with *Dosha Prakopa* theory. This intricate relationship provides a foundation for creating personalized musical compositions designed to address the specific needs of individuals with addictive disorders.<sup>36</sup>

Probable mode of action of Sangeet Chikitsa: Sangeet Chikitsa when catered according to specific conditions can provide relief. Perception of Sangeet (Music) takes place via two pathways, via Shabda Tanmatra (Akasha Mahabhuta) and Sparsha Tanmatra (Vayu Mahabhuta). Via Shabda Tanmatra it reaches Shrotrendriya, further Mastishka and there it regulates Prana Vayu and Sadhaka Pitta. Prana Vayu further regulates Udana and Samana Vayu. Having a simultaneous effect on Mana and Sharira results in the pacification of Rajas and Tamas Guna and promotes Sattva Guna. Sparsha Tanmatra has a local effect on Twak Indriya and results in Rasa Dhatu Prasadana. This leads to overall effect on Mana as well as Sharira. Physiologically, perception of music takes place via two-pathways- auditory as well as tactile stimulus. Both stimuli are processed in the somatosensory cortex, simultaneously, these stimuli regulate the reticular activating system (RAS), which is responsible for maintaining alertness, attention, and the overall state of consciousness. Moreover, the auditory stimuli also activate the limbic system, a key part of the brain responsible for processing emotions, memories, and arousal. The limbic system includes structures like the amygdala (involved in emotional responses), the hippocampus (memory), and the hypothalamus (regulating bodily responses to emotions). When activated by auditory stimuli, the limbic system can influence emotional states, either enhancing relaxation, reducing stress, or invoking positive memories and feelings, all of which are crucial in therapeutic settings like addiction recovery. Thus, the combination of auditory processing, RAS regulation, and limbic system activation allows music or sound-based therapies to significantly alter emotional status, reduce stress, and foster a state of emotional balance, which is essential in the de-addiction process.

Scope of Sangeet Chikitsa: India has a rich cultural heritage in the form of music and musicians. A collaborative effort between physicians and musicians could potentially revolutionize therapeutic approaches by harnessing the power of Bhartiya Sangeet.

Conclusion: Contemporary research has validated the efficacy of Western music in substance-abuse disorders. Although Bharat has extensive literature available on Indian classical music and its therapeutic principles, Indian classical music's efficacy in context with Sangeet Chikitsa for these conditions remains largely unexplored through rigorous research. The judicious utility of Sangeet Chikitsa (Music therapy) offers a promising, potentially cost-effective, and relatively safer avenue for treating substance abuse disorders and could lead to innovative therapeutic approaches.

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### **Conflicts of interest**

There are no conflicts of interest

<sup>[1]</sup> Sushruta Samhita Sutrasthana 15/41, Available from: https://niimh.nic.in/ebooks/esushruta/. [Last accessed on 2025 Jan 20].

<sup>[2]</sup> Charak Samhita Sutrasthana 1/42 Available from: http://niimh.nic.in/ebooks/echarak. [Last accessed on 2025 Jan 20].

<sup>[3]</sup> Pandita Hemraj Sharma, Editor Kashyap Samhita Vidyotini Hindi commentary, Khilasthana, chapter 5 verse 48, Chaukhambha Sanskrit series Varanasi.

<sup>[4]</sup> Swendsen J, Conway KP, Degenhardt L, Glantz M, Jin R, Merikangas KR, Sampson N, Kessler RC. Mental disorders as risk factors for substance use, abuse, and dependence: results from the 10-year follow-up of the National Comorbidity Survey. Addiction. 2010 Jun;105(6):1117-28. doi: 10.1111/j.1360-0443.2010.02902.x. Epub 2010 Mar 10. PMID: 20331554; PMCID: PMC2910819.

<sup>[5]</sup> Goldstein RZ, Volkow ND. Dysfunction of the prefrontal cortex in addiction: neuroimaging findings and clinical implications. Nat Rev Neurosci. 2011;12(11):652-669. doi:10.1038/nrn3119

<sup>[6]</sup> Sushruta Samhita Sutrasthana 1/37, Available from: https://niimh.nic.in/ebooks/esushruta/. [Last accessed on 2025 Jan 20].

<sup>&</sup>lt;sup>7</sup> Charak Samhita Sutrasthana 1/54, Available from: http://niimh.nic.in/ebooks/echarak. [Last accessed on 2025 Jan 20].

<sup>[8]</sup> Charak Samhita Sutrasthana 11/47, Available from: http://niimh.nic.in/ebooks/echarak. [Last accessed on 2025 Jan 20].

<sup>[9]</sup> Sushruta Samhita Sutrasthana 1/37, Available from: https://niimh.nic.in/ebooks/esushruta/. [Last accessed on 2025 Jan 20].

<sup>[10]</sup> Ashtanga Hridayam Sutrasthan 1/26, Available from: https://vedotpatti.in/samhita/Vag/ehrudayam/ [Last accessed on 2025 Jan 20].

<sup>[11]</sup> Sushruta Uttaratantra 47/4, Available from: https://niimh.nic.in/ebooks/esushruta/. [Last accessed on 2025 Jan 20].

<sup>[12]</sup> Sushruta Uttaratantra 47/43, Available from: https://niimh.nic.in/ebooks/esushruta/. [Last accessed on 2025 Jan 20].

<sup>[13]</sup> Ashtanga Sangraha Chikitsasthana, 9/38 Available from: https://vedotpatti.in/samhita/Vag/esangraha/. [Last accessed on 2025 Jan

<sup>[14]</sup> Ashtanga Sangraha Chikitsasthana, 9/60, Available frm: https://vedotpatti.in/samhita/Vag/esangraha/. [Last accessed on 2025 Jan 20].

<sup>[15]</sup> Ashtanga Sangraha Chikitsasthana, 9/127, Available from: https://vedotpatti.in/samhita/Vag/esangraha/. [Last accessed on 2025 Jan

<sup>[16]</sup> https://www.nisd.gov.in/drug\_abuse\_prevention.html#:

- [17] Chandogya Upanishat, 2.10.5, Gita Press Gorakhpur Reprint 2019 2.10.5
- [18] Brihad Naradiya Purana 42/60, Chaukhamba Publication, Reprint 2016
- [19] Hathapradipika Chapter 4, Verse 29, Yoga Publications Trust, Bihar, Reprint 2012
- [20] Gheranda Samhita, Chapter 5, Verse 84, Yoga Publications Trust, Bihar, Print 2012
- [21] Charak Samhita Sutrasthana 15/6, Available from: http://niimh.nic.in/ebooks/echarak. [Last accessed on 2025 Jan 20].
- [22] Charak Samhita Chikitsasthana 8/186, Available from: http://niimh.nic.in/ebooks/echarak. [Last accessed on 2025 Jan 20].
- [23] Sushruta Samhita Uttarasthana Chapter 46 Verse 23, Available from: https://niimh.nic.in/ebooks/esushruta/. [Last accessed on 2025 Jan 20].
- [24] Charak Samhita Chikitsasthana 24/42, Available from: http://niimh.nic.in/ebooks/echarak. [Last accessed on 2025 Jan 20].
- [25] Sushruta Samhita Chikitsasthana ,26/6-8, Available from: https://niimh.nic.in/ebooks/esushruta/. [Last accessed on 2025 Jan 20].
- [26] Kayaoğlu K, Şahin Altun Ö. The effect of combined cognitive-behavioral psychoeducation and music intervention on stress, self-efficacy, and relapse rates in patients with alcohol and substance use disorders: A randomized controlled trial. Perspect Psychiatr Care. 2022 Jul;58(3):968-977. doi: 10.1111/ppc.12884. Epub 2021 Jun 10. PMID: 34114223.
- [27] Schoonover J, Rossetti A, Jacobs A, Rubin SE. Virtual Music Therapy for Substance Use Disorders in a Federally Qualified Health Center. J Am Board Fam Med. 2024 Jan 5;36(6):1043-1049. doi: 10.3122/jabfm.2022.220316R3. PMID: 38092435.
- [28] Ghetti C, Chen XJ, Brenner AK, Hakvoort LG, Lien L, Fachner J, Gold C. Music therapy for people with substance use disorders. Cochrane Database Syst Rev. 2022 May 9;5(5):CD012576. doi: 10.1002/14651858.CD012576.pub3. PMID: 35532044; PMCID: PMC9082681.
- [29] Dingle GA, Gleadhill L, Baker FA. Can music therapy engage patients in group cognitive behaviour therapy for substance abuse treatment? Drug Alcohol Rev. 2008 Mar;27(2):190-6. doi: 10.1080/09595230701829371. PMID: 18264881.
- [30] Silverman MJ. Effects of a Single Lyric Analysis Intervention on Withdrawal and Craving With Inpatients on a Detoxification Unit: A Cluster-Randomized Effectiveness Study. Subst Use Misuse. 2016 Jan 28;51(2):241-9. doi: 10.3109/10826084.2015.1092990. Epub 2016 Jan 22. PMID: 26800444.
- [31] Huang Y, Chen X. Efficacy of Group Music Therapy Based on Emotion-Regulation Skills on Male Inpatients With Alcohol Dependence: A Randomized, Controlled Pilot Trial. Front Psychol. 2021 Oct 28; 12:697617. doi: 10.3389/fpsyg.2021.697617. PMID: 34777089; PMCID: PMC8581445.
- [32] Ashtanga Hridayam Sutrasthana 13/6, Available from: https://vedotpatti.in/samhita/Vag/ehrudayam/[Last accessed on 2025 Jan 20]. [33] Mr. Garg Prabhulal, Sangeet Sagara 1956, pg 133
- [34] Vd. Arpankumar Bhatt et al., An experimental study on effect of music on gastric and allied secretions in digestive system. IPGTRA, Jamnagar 1995 pg 08
- [35] Vd. Arpankumar Bhatt et al., An experimental study on effect of music on gastric and allied secretions in digestive system. IPGTRA, Jamnagar 1995 pg 92
- [36] Pt. Vishnu Narayan Bhatkhande Editor, Bhatkhande Sangeet Shastra, Sangeet Karyalaya Hathras Publication, 1975 pg 85