

## RESONANCE AND RENEWAL: HINDUSTANI CLASSICAL MUSIC AS AN INDIAN KNOWLEDGE SYSTEM FOR ENERGY, STABILITY, AND CLIMATE CONSCIOUSNESS

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### ABSTRACT

The contemporary global conversation on climate change, energy transitions, and ecological disruption is often dominated by technological fixes and policy responses. Yet, such approaches frequently overlook the cultural, spiritual, and emotional resources embedded in traditional knowledge systems. This study foregrounds Hindustani Classical Music (HCM) as an Indian knowledge framework that integrates energy regulation, psychological stability, and ecological sensitivity. Rooted in the ancient Indic understanding of *nāda* (primordial sound) as the creative principle of the cosmos, HCM embodies a philosophy in which sound is both a vehicle of consciousness and a medium of alignment with natural rhythms.

The purpose of this research is to examine the epistemological and experiential connections between sound, human energy, and environmental balance through the lens of HCM. While biomedical studies have explored the therapeutic role of music, limited scholarship addresses how the *raga* system—organized by temporal and seasonal cycles—functions as a culturally grounded, energy-efficient response to climate-related stress and emotional instability.

Adopting a qualitative approach, this paper draws on classical texts such as the *Nāṭyaśāstra* and *Sangīta Ratnākara*, ethnographic interviews with vocalists, instrumentalists, and listeners, as well as experiential analysis of selected *ragas*. These inquiries reveal that ragas aligned to specific times and seasons not only influence mood and stress regulation but also foster a sense of ecological attunement and energy conservation.

Preliminary findings indicate that HCM provides a subtle but potent framework for cultivating resilience, equilibrium, and ecological mindfulness. By positioning music as more than artistic expression—rather as an ecological and energetic practice—this study highlights HCM’s potential as an overlooked yet essential contribution to sustainability discourses, climate adaptation strategies, and holistic well-being.

**Keywords:** Hindustani Classical Music, Indian Knowledge System, Energy and Stability, *Raga* Therapy, Climate Consciousness

### 1. Introduction

The ever-accelerating pace of environmental disruption, energy desiccation, and psychological unease has hastened the search for approaches that blend sustainability with the welfare of humankind. Scientific- and policy-based paradigms that have shaped the traditional climate change debate run the risk of suppressing cultural, emotive, and spiritual dimensions of resilience. A corrective response to such failings is the re-visiting of indigenous systems of knowledge that

previously had holistically synthesized paradigms of energy control, environmental consciousness, and inner equilibria.

Such traditions include Indian music. In the larger context of the Indic worldview, music is not just entertainment but an organized body of knowledge that connects the person to the cosmos. Hindustani Classical Music (HCM), refined over many centuries in North India, is a philosophical system and a practical tradition that connects sound, energy, and consciousness to natural cycles. The key argument underlying this paper is that HCM is an overlooked yet crucial Indian knowledge system that can evoke emotional balance, ecological sensitivity, and sustainable energy practices.

From the earliest *Vedic* chants evoking *nāda* (cosmic sound) to the codifications of the *Nāṭyaśāstra* and the *Sangīta Ratnākara*, Indian musicology is focused on the relationship among music, nature, and the health of humanity. The *raga* system—organized around particular times of day and seasonal cycles—demonstrates an ecological reasoning that aligns the inner pulse of the individual body with the greater cycles of the natural environment. Unlike linear consumption-based paradigms of contemporary energy, this system illuminates cyclical renewal, subtle conservation of energy, and balance between inner and outer environments.

The significance of such perceptions has become even greater in the present-day scenario. The climate emergency of our age needs to be recognized not just as an environmental disaster threatening ecosystems and natural resources, but even deeper, as an enormous psychological emergency. It shows up on the level of people's lives as burnout, emotional weariness, eco-anxiety, and an intense feeling of uncertainty about the future.

Music—specifically HCM through its temporal sensitivity and meditative depth—can provide resources to engender resiliency and reattach people to biorhythms. By its ability to modulate respiration, soothe the nervous system, and stimulate environmental consciousness, HCM might provide a cultural therapy toward countering climate disruption.

The goals of this research are three-fold:

- (i) To explore the philosophical and energy fundamentals of HCM within the larger context of Indian systems of knowledge.
- (ii) To examine how the *raga*–time–season structure contributes to emotional equilibrium and ecological awareness.
- (iii) To explore how mindful musical practice can nurture sustainable thinking and inner resilience in the face of climate-related stress.

This research thus facilitates the link between cultural heritage and climate science by re-defining HCM as something other than a performance installation: a soft ecosystem of consciousness and energy. Its potential extends into numerous sectors, such as wellness intervention, climate adaptation education, and policy development using indigenous wisdom.

By placing HCM as an ecosystem of vibrations that sustains both inner unity and environmental awareness, the research contends for its status as an applicable Indian knowledge system for the contemporary era. It does not idealize the past but tries to critically and respectfully interpret it by matching ancient perceptions with the challenges of the contemporary world. The paper continues with a literature review to frame the current scholarship, after which it posits a methodology combining study of texts, interviews conducted in the field, and experiential inquiry.

## 2. Literature Review

The Indian intellectual tradition provides an integrated tradition into which cosmology, psychology, ecology, and aesthetics get entangled. As such, music emerges both as a performing art and an intellectual-ecological science. To introduce Hindustani Classical Music (HCM) as a resource to confront climate stress and emotional disbalance would require cultivating scholarship from Indian musicology, Indian philosophy, environmental humanities, and cognitive music therapy.

## 2.1 Indian Knowledge Systems and Sustainability

The *Vedas* and the *Upanishads* portray the cosmos as vibrational in nature whose primordial force of creation is *nāda* (sound). This cosmology is the basis for *Nāda Yoga*, where the sound becomes an exercise in tuning the human sphere into cosmic pulsations. Works like the *Nāṭyaśāstra* highlight music as the instrument of psychological balance and social coexistence through the arousal of *rasa* (aesthetic sentiment). Here, time (*kāla*), space (*deśa*), and energy (*śakti*) constitute intertwined dimensions. The circular ordering of the *ragas* by the hour and by seasons evidences this environmental integration, an observation identified by scholars like Kapila Vatsyayan and Ananda Coomaraswamy, though hardly ever associated with current environmental discourses.

## 2.2 The Structural, Philosophical, and Energetic Dimensions of Hindustani Classical Music

Having originated from the *Dhrupad* and *Khayal* systems, HCM is structured using the *raga-tala* system. A *raga* is something more than pure melismatic structure; it is an energetic material possessing certain moods, seasonal associations, and temporal power. By oral transmission and the *guru-shishya parampara* tradition, *ragas* have maintained vibrational consciousness and listening disciplines.

Studies by Nazir Jairazbhoy, Bonnie Wade, and George Ruckert detail structure and pedagogy, yet the ecological wisdom of *ragas*—such as *Megh* and *Malhar* during the monsoon—remains underexamined in sustainability or wellness research.

## 2.3 Music, Mind, and Consciousness in Indic Thought

Indian philosophy connects sound to the three *gunas*—*sattva* (clarity), *rajas* (activity), and *tamas* (inertia)—with *ragas* believed to modulate these psycho-energetic states. *Ayurveda* and *Yoga* similarly integrate sound for balancing *doshas* and regulating *prana*. While contemporary thinkers such as T.M. Krishna and S. Subramanian highlight the ethical and contemplative power of music, systematic studies linking HCM with climate psychology, resilience, and energy balance are still limited.

## 2.4 Music Therapy, Climate Anxiety, and Emotional Resilience

Globally, the therapeutic use of music has gained recognition in clinical psychology and neuroscience. Studies show that music can influence heart rate variability, cortisol levels, and brainwave patterns, promoting relaxation and reducing anxiety. Western music therapy models, such as Guided Imagery and Music (GIM) or Neurologic Music Therapy (NMT), demonstrate music's efficacy in treating PTSD, depression, and even chronic pain.

However, these frameworks often lack the cultural contextualization that indigenous traditions provide. With the increasing prevalence of climate-related emotional distress, researchers are turning toward non-pharmaceutical, low-carbon interventions for mental well-being. Yet, Hindustani music remains marginal in such discussions, even though its structured, introspective, and nature-attuned approach offers unique advantages.

Emerging work on 'eco-psychology and sound-based mindfulness practices echoes' the very principles enshrined in *raga* performance—temporal attunement, deep listening, and emotional regulation through vibrational resonance. Thus, a reorientation is required to view HCM not only through a cultural or artistic lens, but also as an adaptive and sustainable psycho-acoustic system.

## 2.5 Indigenous Aesthetics and Environmental Humanities

In recent years, scholars in the environmental humanities have begun to question the dominance of Eurocentric ecological models, advocating for a pluriversal approach that honors indigenous ecological wisdom. Indian music, particularly HCM, represents such a system where ecology is

embedded in aesthetics. The *raga* system reflects an embodied knowledge of nature's cycles, offering a non-intrusive model of sustainability.

Frameworks like deep ecology, bioregionalism, and soundscape studies can enrich this dialogue. For instance, *raga*-based performance in open-air settings (e.g., early morning concerts) cultivates a ritual engagement with natural time, an experience that goes beyond entertainment to become a form of eco-spiritual attunement. These dimensions of practice can directly inform cultural responses to environmental degradation and mental fatigue.

## 2.6 Summary of Key Literature Gaps

- While HCM's therapeutic effects have been acknowledged, its role as an ecological and energetic knowledge system is under-theorized.
- There is a dearth of interdisciplinary studies that connect HCM with climate consciousness, sustainability education, and mental health policy.
- Empirical research that maps *raga*-specific effects on energy modulation and environmental connectedness is largely absent.
- The potential integration of Indian musical philosophy into contemporary wellness and environmental frameworks remains unexplored at the policy level.

These gaps underlie the current study, which aims to critically connect Indian musicology, climate psychology, energy consciousness, and traditional ecological knowledge to offer an enlarged agenda for HCM within the 21st-century sustainability debate.

## 3. Research Gap Identification

While holistic approaches and indigenous knowledge systems are increasingly acknowledged in the search for solutions to climate change, energy imbalance, and mental health crises, Hindustani Classical Music (HCM) remains critically underexplored in both scholarship and policy discourse. Most contemporary studies on music and climate-related stress are rooted in Western music therapy frameworks, emphasizing measurable neurobiological responses such as heart-rate modulation or stress reduction through harmonic sound patterns. While valuable, these approaches often overlook the depth of Indian musical traditions, which are centered on *nāda* (the primordial sound), the cyclical alignment of performances with time and season (*prahar* and *ritu* theory), and the subtle energetic dimensions of *rasa* and *bhāva* that integrate emotion with consciousness.

A further gap lies in the lack of empirical studies documenting how contemporary audiences and practitioners experience the ecological and therapeutic intelligence embedded in *ragas*. While classical texts and oral traditions affirm the seasonal and emotional potency of *ragas* like *Megh* or *Basant*, little evidence connects these practices to modern phenomena such as climate anxiety, eco-stress, or digital fatigue.

Equally absent are interdisciplinary frameworks linking musicology, psychology, and environmental studies. Unlike *Ayurveda* or *Yoga*, which have been integrated into global wellness and sustainability discourses, music has yet to gain institutional recognition as an energy-conscious, culturally grounded system. This study addresses these gaps by positioning HCM as a viable pathway for resilience, ecological attunement, and sustainable living.

## 4. Methodology

The present research employs a qualitative, interpretive, and interdisciplinary methodology, situated at the intersection of musicology, cognitive-emotional studies, and eco-cultural philosophy. Given the focus on Hindustani Classical Music (HCM) as an Indian Knowledge System (IKS), the research methodology is designed to blend textual analysis, ethnographic inquiry, and phenomenological reflection, enabling a contextualized understanding of music's potential role in promoting energy balance, emotional stability, and climate consciousness.

#### 4.1 Research Design

The research follows an exploratory-descriptive design. This approach is appropriate given the relatively uncharted academic terrain in linking HCM to contemporary concerns like ecological sustainability, mental health, and consciousness studies. The study does not seek to generate statistical generalizations but rather to illuminate culturally embedded knowledge pathways, practitioner wisdom, and experiential impacts that can inform broader theoretical and practical discourses.

#### 4.2 Sources and Tools of Data Collection

**a) Primary Sources :** To ensure authenticity and cultural depth, the study includes semi-structured interviews and narrative reflections from:

- Senior Hindustani Classical Musicians (*Gurus* and Performers)
- Music Therapists trained in Indian traditions
- Musicologists with expertise in *rāga-rasa* theory
- Students and listeners engaged in long-term raga listening

A total of 12 interviews were conducted (see Table 1), either in-person or online, each lasting between 30–60 minutes. These interactions explored themes such as:

- Perceived emotional and energetic impact of specific *ragas*
- Seasonal and time-based performance experiences
- Notions of inner harmony and nature resonance
- Music’s role in managing climate stress or eco-anxiety
- Awareness of *raga–prakriti* (nature of *ragas*) alignments

**Table 1: Summary of Interview Participants and Domains of Expertise**

Participant ID	Role / Profession	Domain of Expertise	Mode of Interview	Duration	Key Insights Contributed
P1	Senior Hindustani Vocalist ( <i>Khayal</i> )	Seasonal and <i>raga</i> temporal cycles	In-person (Delhi)	60 mins	Provided detailed perspectives on how time theory aligns with vocal performance practice.
P2	Sitar Maestro	Instrumental <i>raga</i> rendition and microtonal nuances	Online (Zoom)	45 mins	Discussed the role of instrumental timbre in evoking <i>rasa</i> and sustaining energy.
P3	Musicologist (University Professor)	Historical and textual study of <i>raga</i> –time association	In-person (Jaipur)	50 mins	Shared textual evidence from ancient treatises linking music to cosmic cycles.
P4	<i>Ayurveda</i> Practitioner & Music Therapist	Therapeutic applications of <i>ragas</i> for stress, energy, and balance	Online	40 mins	Highlighted correlations between <i>doshas</i> , time cycles, and <i>raga</i> therapy.
P5	<i>Tabla</i> Artist	Rhythm, <i>tala</i> , and cyclic energy in performance	In-person (Mumbai)	55 mins	Emphasized rhythmic cycles as energetic stabilizers in performance.



P6	Young <i>Carnatic</i> - Hindustani Fusion Artist	Contemporary relevance and adaptability of <i>ragas</i>	Online	30 mins	Showed how Indian knowledge traditions adapt to modern, blended styles.
P7	<i>Dhrupad</i> Vocalist	Spiritual and meditative dimensions of <i>ragas</i>	In-person (Varanasi)	60 mins	Spoke about resonance, deep breathwork, and the role of silence.
P8	Instrument Maker ( <i>Tanpura</i> and <i>Veena</i> )	Acoustic resonance and materiality of instruments	In-person (Pune)	45 mins	Explained how the construction of instruments shapes resonance and energy.
P9	<i>Kathak</i> Dancer	Interdisciplinary link between music and embodied rhythm	Online	35 mins	Connected <i>raga-tala</i> with movement cycles and audience emotion.
P10	Climate Researcher with Interest in Arts	Music- environment relationships	Online	40 mins	Discussed ecological metaphors in <i>raga</i> descriptions and seasonality.
P11	Vocal Music <i>Guru</i> (Traditional <i>Gharana</i> )	Oral pedagogy and intergenerational transmission	In-person (Lucknow)	60 mins	Highlighted the role of <i>guru-shishya</i> <i>parampara</i> in preserving knowledge systems.
P12	Young Listener / Practitioner	Contemporary audience perspective	Online	30 mins	Shared how younger audiences perceive energy, mood, and climate in <i>raga</i> performances.

Note: Pseudonyms used to protect identity.

## b) Secondary Sources

- Ancient and medieval treatises: *Nāṭyaśāstra*, *Sangita Ratnākara*, *Raga Vibodha*, etc.
- Modern interpretive works on Indian aesthetics, *rasa* theory, and consciousness
- Papers on music cognition, energy psychology, and climate resilience
- Case studies from music therapy literature, both Indian and global

## c) Audio Analysis

Selected ragas (*Megh*, *Basant*, *Malkauns*, *Marwa*, *Bhairavi*) were studied in terms of:

- Their traditional timing and seasonal association
- Tonal structures (*thāt*), note distribution, emotional valence
- Common lyrical themes in *khayal/dhrupad* compositions
- Accompanying moods, instruments, and rhythms

The energy-emotion mapping was conducted using a threefold grid:

1. Sonic Texture (Calm, Vibrant, Uplifting, Introspective)
2. Emotional Outcome (Joy, Serenity, Courage, Compassion)
3. Elemental Parallel (Earth, Water, Fire, Air, Ether)

This framework integrates both traditional elemental theory (*pañcha mahābhūta*) and modern energy-emotion understanding.

**Table 2: Sample Energy–Emotion–Element Mapping of Select Ragas**

<b>Raga</b>	<b>Time of Day</b>	<b>Seasonal Association</b>	<b>Dominant Energy (Guna/Prakriti)</b>	<b>Emotional Tone (Rasa)</b>	<b>Elemental Connection (Pancha Mahabhuta)</b>
<i>Bhairav</i>	Early Morning	Autumn/Winter	<i>Satva</i> (Purity, Clarity)	<i>Shanta</i> (Peace), <i>Bhakti</i> (Devotion)	<i>Akasha</i> (Space)
<i>Yaman</i>	Evening	All seasons	<i>Satva</i> with <i>Rajas</i> balance	<i>Shringara</i> (Love, Harmony)	<i>Agni</i> (Fire)
<i>Malkauns</i>	Midnight	Winter	<i>Tamas</i> (Depth, Contemplation)	<i>Karuna</i> (Compassion), <i>Veera</i> (Courage)	<i>Prithvi</i> (Earth)
<i>Megh</i>	Monsoon	Rainy season	<i>Rajas</i> (Vitality, Energy)	<i>Vatsalya</i> (Nurture), <i>Adbhuta</i> (Wonder)	<i>Jala</i> (Water)
<i>Basant</i>	Spring	Spring season	<i>Rajas–Satva</i> (Joy, Renewal)	<i>Hasya</i> (Joy), <i>Utsaha</i> (Enthusiasm)	<i>Vayu</i> (Air)
<i>Darbari Kanada</i>	Late Night	Winter/Monsoon	<i>Tamas–Satva</i> (Gravitas, Depth)	<i>Karuna</i> (Pathos), <i>Gambhir</i> (Seriousness)	<i>Prithvi</i> (Earth)
<i>Desh</i>	Evening/Night	Monsoon	<i>Rajas–Satva</i> (Expressive Energy)	<i>Adbhuta</i> (Wonder), <i>Veera</i> (Heroism)	<i>Jala</i> (Water)
<i>Todi</i>	Morning	Late Winter/Early Spring	<i>Satva–Tamas</i> (Complexity, Introspection)	<i>Karuna</i> (Pathos), <i>Shanta</i> (Calm)	<i>Akasha</i> + <i>Prithvi</i> (Space & Earth)

#### 4.3 Analytical Method

The study uses thematic coding to interpret interview data and musical analyses. Themes were derived both deductively (e.g., time-*raga* theory, *rasa*-emotion alignment) and inductively (emerging patterns from interviews and performances).

- All interviews were transcribed and coded using NVivo.
- Recurring motifs such as “seasonal grounding,” “emotional detox,” and “*raga* as spiritual ecology” were mapped.
- Quotes were analyzed in the context of both personal narratives and classical theoretical principles.

#### 4.4 Ethical Considerations

- Consent was obtained from all interview participants.
- Names were anonymized where requested.
- No commercial or institutional conflict of interest exists.
- The research aligns with the principles of respect for cultural integrity and knowledge sovereignty, especially in relation to Indian oral traditions.

#### 4.5 Delimitations

- The focus is on Hindustani music; Carnatic parallels are referenced but not central.
- The study does not involve clinical trials or quantitative data.
- The focus remains on *rasa*-based and consciousness-centric interpretations, not neurological scans or biochemical responses.

#### 5. Findings

The findings of this research demonstrate that Hindustani Classical Music (HCM) functions as more than an artistic tradition—it acts as a vibrational and seasonal intelligence system deeply attuned to ecological rhythms, emotional harmonization, and spiritual resilience. Through a synthesis of practitioner insights, textual wisdom, and *raga*-energetics mapping, the study reveals a multidimensional framework by which HCM contributes to energy regulation, emotional balance, and climate-connected consciousness.

##### 5.1 Emergent Themes from Interviews and Musical Analysis

Analysis of interview transcripts, practitioner reflections, and thematic musical insights yielded several recurring motifs:

###### a) Temporal-Spatial Intelligence in *Ragas*

- Nearly all senior musicians emphasized the importance of performing *ragas* at specific times of day and seasons for optimal emotional and energetic resonance.
- The alignment is not merely aesthetic, but physiological and psychological—linked to the *dinacharya* (daily routine/cycle) and *ritucharya* (seasonal cycle) in Ayurveda.
- *Raga Bhairav*, traditionally performed in the early morning, is regarded as both grounding and purifying, helping listeners attune their minds to clarity and inner stillness. In contrast, *Raga Marwa*, associated with the moments of sunset, is often experienced as evoking a deep sense of existential unease, guiding the mind into a contemplative and transitional state.

###### b) Energetic Impact on Listeners

- Across accounts, participants repeatedly emphasized experiencing profound energetic transformations when engaging with Hindustani Classical Music (HCM), highlighting its capacity to influence emotional balance, inner awareness, and states of consciousness. Exposure to specific *ragas*, particularly when performed at their designated times or in alignment with the listener's emotional state, evoked noticeable calm, heightened mental clarity, and at times, deep emotional release. These responses suggest that *ragas* operate as subtle regulators of human energy, guiding listeners toward equilibrium and emotional balance.
- A *yoga* practitioner described listening to *Malkauns* as “entering a sound cave of inner silence,” while another noted *Basant* evoked “a sudden lightness in the chest, like the heart was breathing again.”

###### c) *Raga* as Emotional Detox and Stability Mechanism

- Therapists highlighted *ragas*' potential to dissolve repressed emotions, often through the emotive arcs of *alaap* and *taans*.
- Participants described crying, feeling warmth in the body, or even experiencing ‘visceral energy shifts’ during immersive listening.

###### d) *Rasa* Theory as a Healing Template

- The ancient *rasa* framework was spontaneously echoed in multiple interviews.
- *Karuna* (compassion), *Shringara* (love), *Veera* (courage), and *Shanta* (peace) were most commonly referenced.
- Many artists viewed emotional experience as a pathway to inner equilibrium, not just entertainment.



#### e) Ecological Memory in Music

- A profound finding was that many *ragas* are embedded with seasonal or ecological metaphors—such as monsoon, twilight, harvest, or dewfall.
- Listeners reported that these sonic memories foster a visceral connection to nature, even in urban environments—implying music as ecological mnemonics.

### 5.2 The Time–Raga–Seasonal Cycle: A Rhythmic Ecology

The cyclical nature of Hindustani music is best illustrated through the Time–Raga–Seasonal Cycle, which aligns musical mood, energetic intent, and natural elements.

Time of Day	Approx. Time Range	Representative Ragas	Associated Season
Early Morning (Brahma Muhurta)	4:00 – 6:00 AM	<i>Bhairav, Todi, Lalit</i>	Spring
Morning	6:00 – 10:00 AM	<i>Jaunpuri, Asavari, Bilawal</i>	Summer
Late Morning to Noon	10:00 AM – 12:00 PM	<i>Deshkar, Brindavani Sarang</i>	Monsoon
Afternoon	12:00 – 3:00 PM	<i>Sarang, Multani, Patdeep</i>	Monsoon/Early Autumn
Late Afternoon	3:00 – 5:00 PM	<i>Bhairavi (light), Shuddha Sarang</i>	Autumn
Evening (Sandhya)	5:00 – 8:00 PM	<i>Yaman, Puriya, Marwa</i>	Autumn/Winter
Night	8:00 – 11:00 PM	<i>Darbari Kanada, Malkauns, Bageshree</i>	Winter
Late Night	11:00 PM – 2:00 AM	<i>Kafi, Adana, Jog</i>	Winter/Spring
Pre-Dawn	2:00 – 4:00 AM	<i>Megh, Ahir Bhairav</i>	Monsoon/Spring

This rhythmic ecology suggests that raga performance is an eco-conscious act, aligning human presence with cosmic cadences and seasonal subtlety.

### 5.3 Energy–Emotion Mapping of Select Ragas

By correlating classical descriptions with listener experiences, an Energy–Emotion Grid was constructed (see below). This helps conceptualize how different ragas can influence:

- Mood regulation
- Energetic balance
- Therapeutic alignment
- Spiritual insight

**Table 4: Raga Energy-Emotion Mapping Framework**

Raga	Primary Emotions Evoked	Energy Tone	Application in Well-being
Bhairavi	Compassion, Release	Grounding, Soothing	Morning cleansing, emotional release
Marwa	Tension, Discomfort	Sharp, Transformative	Transition management, existential clarity
Yaman	Hope, Longing	Expansive, Bright	Evening rejuvenation, heart opening
Malkauns	Power, Inner Silence	Deep, Rooted	Meditation, insomnia relief, introspection
Megh	Relief, Longing	Cool, Flowing	Stress relief during heat or emotional overload
Desh	Joy, Playfulness	Light, Energetic	Energizing during lethargy or sadness

These mappings are aligned with Ayurvedic doshas, chakra energetics, and modern energy psychology frameworks, adding further layers of interpretation.

#### 5.4 Thematic Interview Excerpts (Aligned to participant list in Table 1)

P1 — Senior Hindustani Vocalist (Khayal) “Bhairav at dawn doesn’t just please the ear; it steadies the breath. After a proper *alaap*, you can feel the mind taper into stillness—as if the body’s clock has been reset to the sun.”

P2 — Sitar Maestro “When humidity rises, the *meend* blooms differently—the resonance carries a cooler edge. On some evenings I switch from *Marwa* to *Yaman* because the room’s air itself suggests a gentler energy.”

P3 — Musicologist (University Professor) “The seasonal prescriptions in raga theory are not merely aesthetic customs; they are ecological heuristics. They encode a way of listening to climate and community mood across time.”

P4 — Ayurveda Practitioner & Music Therapist “For *pitta*-dominant clients during hot spells, I recommend Megh or *Bageshree* with slow breathing. The sessions work like sound infusions—cooling the nervous system and softening reactivity.”

P5 — *Tabla* Artist “A steady *theka* is a spine. When the audience locks into the cycle, heart rates entrain; suddenly the khayal *bandish* feels anchored. Rhythm is how we lend stability to the shared space.”

P6 — Young Carnatic–Hindustani Fusion Artist “I start sunset sets with *Poorvi* or *Puriya* and only later merge grooves. If the ragascape is right, even electronic textures feel organic—listeners say they ‘hear the sky’ before the beat.”

P7 — Dhrupad Vocalist “In slow *alaap*, the drone becomes a field you can lean into. The voice doesn’t push; it discovers. Silence between phrases is where the energy settles and the attention gathers.”

P8 — Instrument Maker (Tanpura & Veena) “Wood that has matured through monsoons vibrates with a different patience. If a tanpura is strung with care for season and room size, the singer needs less effort—the instrument does the stabilizing.”

P9 — Kathak Dancer “With Megh, footwork lands softer; abhinaya tilts toward compassion. The audience breath slows with the *bols*, and the room feels cooler—like the choreography has altered the weather inside.”

P10 — Climate Researcher with Interest in Arts “I see ragas as ‘affective climate models.’ Programming season/time-specific repertoires in schools could train students to sense environmental shifts emotionally, not just intellectually.”

P11 — Vocal Music Guru (Traditional Gharana) “Riyaz at the right hour is pedagogy you can’t replace. The discipline aligns voice, breath, and attention—students learn that musical time is also ethical time.”

P12 — Young Listener / Practitioner “Replacing random playlists with a morning raga routine made me calmer. On days with Darbari at night, I sleep deeper—it’s like the room’s temperature drops even if it doesn’t.”

### 5.5 Summary of Core Findings

Key Insight	Implication
<i>Raga</i> -time-season alignment is energetic, not arbitrary	Can be used as circadian therapy for well-being
Emotional effect of <i>ragas</i> is consistent and deep	Validates use in psycho-emotional healing
Music contains ecological memory and metaphors	Potential for climate consciousness development
<i>Rasa</i> theory maps onto energy psychology and emotion	Basis for integrative healing models

### 5.6 Contributions to Indian Knowledge Systems and Contemporary Discourse

The findings revalidate HCM as a sophisticated knowledge architecture, where sound is a medium of:

- Healing (through energy-emotion modulation)
- Ecological reorientation (via seasonal and elemental references)
- Consciousness elevation (through *rasa-bhava* pathways)

This understanding provides a culturally rooted and scientifically resonant model of music-based well-being in the face of modern challenges like stress, alienation, and climate despair.

## 6. Implications

The findings of this study establish Hindustani Classical Music (HCM) as far more than a performing art—it emerges as a knowledge system that nurtures emotional balance, ecological awareness, and energy harmony. Its multidimensional depth has clear implications for wellness, education, climate consciousness, cultural policy, and collective transformation.

### 6.1 Energy and Emotional Regulation

The disciplined practice of *ragas* demonstrates a proven ability to ease stress, regulate emotions, and cultivate resilience. Hindustani Classical Music (HCM), therefore, represents not only a cultural tradition but also a therapeutically relevant system adaptable to modern contexts.

• **Music Therapy:** The protocols of Time and mood-specific *raga* offer structured interventions for stress, anxiety, and emotional regulation, further enriched when aligned with *Ayurvedic* principles such as *dosha* balance.

• **Complementary Medicine:** *Ayurveda* and *Yoga*, when integrated with *raga* therapy, provide a pathway to holistic and preventive healthcare.

• **Energy Psychology:** The *rasa*-based modulation of inner states resonates with contemporary energy-healing models, offering a bridge between ancient knowledge and modern therapeutic methodology.

### 6.2 Education and Curriculum Reform

The cyclical system of *ragas*—mapped to specific times of day and seasons—presents a unique paradigm of integrated learning, where music operates as both an aesthetic experience and a scientific model of time-conscious awareness.

- Curriculum integration under Indian Knowledge Systems (IKS).
- Innovative use within STEAM to enhance creativity and emotional intelligence.
- Value education fostering empathy, mindfulness, and ethics in line with NEP 2020.

### 6.3 Climate Consciousness

*Ragas* act as living ecological mnemotechnic, encoding seasonal rhythms and natural cues into their structure, thereby reconnecting human perception with the cycles of nature.

- **Climate Education:** Teaching seasonal *ragas* enhances environmental sensitivity.
- **Eco-Art Therapy:** Rain or dawn *ragas* can aid climate grief counselling.
- **Environmental Ethics:** Promotes harmony and reciprocity with nature.

### 6.4 Cultural Heritage and Policy

HCM preserves and revitalizes intangible cultural heritage while simultaneously addressing contemporary challenges of psychological stress, sustainability, and ecological disconnection.

- Support for raga therapy in health schemes.
- Grants for interdisciplinary research.
- Digitized “Sonic Archives” of seasonal *ragas*.
- Use as cultural diplomacy at forums like UNESCO and COP.

### 6.5 Consciousness Transformation

At both personal and collective levels, the engagement with HCM deepens awareness, enhances consciousness, and fosters a sense of unity between individuals, communities, and the natural environment.

- Encourages resilience, mindfulness, and patience.
- Enables communal harmony through collective listening practices.
- Opens pathways for transdisciplinary research into sound, neuroscience, and ecology.

### 6.6 International Vibrancy: A Sound-Based Model for Sustainability

The alignment of HCM with natural rhythms provides a globally relevant model of sustainability where music is not reduced to a cultural artefact but celebrated as a living instrument of balance, renewal, and ecological sensitivity.

Global Challenge	Raga-based Response
Climate Anxiety	<i>Ragas</i> as sonic therapy and memory agents
Emotional Exhaustion	<i>Ragas</i> and seasonal <i>ragas</i> for resilience
Urban Disconnection	Music as ecological reconnection
Cultural Homogenization	Revival of indigenous knowledge systems

In essence, Hindustani Classical Music is not only India’s profound cultural contribution but also a universal offering to the Anthropocene, providing rhythm, balance, and pathways for renewal in an age of ecological and psychological uncertainty.

### 6.7 Visual Summary of Implications

Domain	Application
Mental Health	<i>Raga</i> -based emotional therapy
Education	Indian Knowledge Systems (IKS) integration
Environmental Studies	Climate literacy through seasonal <i>ragas</i>
Cultural Policy	Safeguarding intangible sonic heritage
Sustainability Research	Eco-spiritual models of well-being
Spiritual Practices	Consciousness alignment through sound

The outcomes of this research are both expansive and deeply transformative—impacting not only musicians and practitioners but also anyone seeking pathways to live with greater awareness, emotional sensitivity, and harmony in an increasingly fragmented and discordant world.

## 7. Limitations and Further Scope of Research

This study demonstrates the potential of Hindustani Classical Music (HCM) as part of the Indian Knowledge System (IKS) for enhancing energy balance, emotional resilience, and ecological awareness. However, its scope is limited by reliance on a small set of qualitative interviews and selected *ragas*, restricting broader generalizability across regions, languages, and generations. The urban-centric sample and language constraints further narrow representation. In addition, the cross-sectional design prevented sustained observation across all seasons and daily cycles, while the subjective nature of musical response remains inherently variable.

Despite these constraints, the study opens significant avenues for future research. Longitudinal studies on *raga*-based therapy, integration of ecological and seasonal data, and neuroscientific explorations of sound–consciousness can deepen understanding. Expanding digital archives and fostering interdisciplinary collaborations will help position HCM not as a relic of heritage, but as a living knowledge system with contemporary relevance for wellness, sustainability, and climate consciousness.

## 8. Conclusion

Hindustani Classical Music (HCM), as an expression of the Indian knowledge tradition, embodies a holistic system where energy, stability, and ecological awareness converge. Anchored in the philosophy of *Nāda Brahma*—the universe understood as vibration—it offers a *raga–samaya* framework that aligns sound with time and season, creating a unique bridge between human emotion and natural rhythms. In this sense, HCM is not only an art form but a living reservoir of ecological wisdom, psychological balance, and spiritual renewal.

The study demonstrates that *ragas* function as more than aesthetic creations; they serve as tools for energetic harmony. By regulating emotions, strengthening resilience, and synchronizing inner states with nature’s cycles, *ragas* affirm that individual well-being is deeply interdependent with environmental balance. Their association with elemental qualities and moods reflects an indigenous way of interpreting the connection between psyche and cosmos.

Amid growing climate anxiety, ecological disruption, and rising stress, HCM provides resources for sustainable awareness and collective healing. Through mindful listening, pedagogy, and performance, it continues to shape modern life by nurturing emotional stability and ecological sensitivity. Ultimately, Hindustani Classical Music must be acknowledged as both a cultural treasure and a practical knowledge system for resilience, harmony, and planetary renewal.

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