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Comparative Effects of Indian Mantras and Western Mindfulness Sound Practices on Mood Regulation: A Narrative Review

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Abstract

Sound-based contemplative practices have become increasingly recognised within psychological and neuroscientific research as accessible and versatile tools for enhancing emotional well-being. Indian mantras specifically Om, the Gayatri mantra, and the Mahamrityunjaya mantra embody a long-standing tradition in which vocal resonance, rhythmic breathing, and linguistic meaning converge to stabilise emotional states. In parallel, Western mindfulness practices have incorporated sound-based interventions such as Tibetan singing bowls, nature soundscapes, white noise and binaural beats, which rely primarily on acoustic immersion and sensory grounding to regulate mood. Despite their shared goals, these two traditions have rarely been examined in a comparative framework.This narrative review synthesises empirical and theoretical literature on the mood-regulatory effects of Indian mantras and Western mindfulness sound practices, examining psychological outcomes, autonomic and neural mechanisms, cultural framing and methodological considerations. Findings indicate that mantra chanting consistently improves stress, anxiety and affective balance, supported by evidence of enhanced parasympathetic activation and modulation of limbic and prefrontal networks. Western sound practices also reduce tension and promote calmness, albeit through mechanisms more closely tied to attentional anchoring and sensory regulation. Importantly, mantras introduce additional layers of semantic meaning and vocal embodiment, which may deepen emotional engagement and contribute to more sustained psychological benefits.The review highlights the potential for integrating these traditions into multimodal interventions that address both top-down and bottom-up regulatory processes. It concludes by emphasising the need for cross-cultural comparative trials and longer-term investigations to fully elucidate the distinctive and synergistic contributions of sound-based contemplative practices to emotional well-being.

Keywords: *Indian mantras, Om, Gayatri mantra, Mahamrityunjaya mantra, singing bowls, binaural beats, nature soundscapes, mindfulness, mood regulation, contemplative science.*

INTRODUCTION

Sound has served as an essential vehicle for contemplative practice and healing across cultures, shaping meditative disciplines, ritual activities and therapeutic methods throughout human history. Whether articulated through the resonant syllables of sacred chants in India or emerging through harmonic patterns and natural environments in Western mindfulness traditions, sound has long been recognised for its capacity to modulate inner states. Modern psychology and neuroscience have increasingly substantiated these ancient intuitions, demonstrating that structured auditory experiences can influence autonomic regulation,

emotional processing and cognitive functioning (Goyal et al., 2014; Tang et al., 2015). Against this backdrop, sound-based approaches to mood regulation have gained prominence, with Indian mantra practices and Western sound-based mindfulness interventions among the most widely studied.

Indian mantra traditions, particularly those involving *Om*, the Gayatri mantra and the Mahamrityunjaya mantra, exemplify a contemplative framework in which sound acts as a vehicle for aligning attention, breath, emotion and meaning. Rooted in Vedic philosophy, mantras are believed to hold vibratory, symbolic and spiritual significance that extends beyond their linguistic form. Contemporary research supports these traditional views, associating mantra recitation with reductions in anxiety and stress, improved emotional clarity, enhanced parasympathetic activation, and modifications in neural circuitry linked to emotional regulation (Harne & Hiwale, 2018; Kalyani et al., 2011). These findings suggest that mantras may facilitate mood regulation through simultaneously engaging physiological mechanisms, cognitive processes and semantic framing.

In contrast, Western mindfulness practices employing sound tend to foreground sensory immersion, attentional redirection and physiological relaxation. Singing bowl meditations, for example, produce complex harmonic overtones that elicit calmness and emotional softening, while nature soundscapes evoke biophilic responses associated with safety and restoration (Goldsby et al., 2017; Benfield et al., 2014). White noise and binaural beats have also gained popularity in therapeutic and digital wellness environments, offering accessible, technologically mediated pathways for reducing distress or enhancing focus (Garcia-Argibay et al., 2019). Unlike mantras, these practices are seldom embedded within spiritual or philosophical frameworks; rather, they reflect the secularisation of contemplative science and the integration of sound into psychological and behavioural interventions.

Despite the parallel rise of these traditions, research comparing their mechanisms and outcomes remains limited. Most empirical studies focus on either mantra chanting or Western sound-based techniques in isolation, hindering our ability to evaluate shared and unique pathways through which sound may regulate mood. This gap is particularly notable given the increasing integration of both traditions in yoga studios, meditation apps, therapeutic programs and wellness settings. Understanding how vocal and non-vocal sound practices differ in their psychological impact is vital for informing clinical decision-making, designing evidence-based interventions, and advancing interdisciplinary knowledge in contemplative science.

From a theoretical standpoint, mood regulation through sound likely involves an interplay of multiple processes, including autonomic modulation, attentional stabilization, neural entrainment, interoceptive awareness and meaning-making. Indian mantras, with their emphasis on vocal expression, rhythmic breathing and symbolic content, may influence emotional states through a blend of bottom-up and top-down processes simultaneously grounding the body while reshaping cognitive and emotional frameworks. Western mindfulness sounds, often passive and sensory in nature, may rely more heavily on bottom-up pathways that reduce arousal and anchor attention in present-moment awareness. However,

both traditions appear to converge on the capacity to soften emotional reactivity, reduce rumination and enhance psychological resilience.

The purpose of this paper is to bring these strands of research into dialogue through a narrative review that synthesises the psychological, physiological and cultural dimensions of mantra-based and sound-based mindfulness practices. By examining converging evidence across traditions, identifying points of divergence and highlighting potential complementarities, this study seeks to contribute to a more integrative understanding of how sound can be harnessed for emotional well-being. The review also underscores the need for systematic comparative research and culturally sensitive methodologies to deepen our understanding of sound-based contemplative practices within global mental health frameworks.

LITERATURE REVIEW

The scientific study of sound-based contemplative practices has expanded significantly in recent decades, drawing together insights from psychology, neuroscience, integrative medicine and contemplative studies. Both Indian mantra traditions and Western mindfulness sound-based interventions have received attention for their capacity to modulate emotional states, yet they have seldom been examined within a shared analytical framework. This literature review synthesises empirical findings, theoretical perspectives and cross-cultural considerations relevant to the mood-regulatory effects of these practices, highlighting the mechanisms through which they may exert their influence.

Indian mantra practices occupy a unique position within contemplative traditions due to their integration of vocalisation, breathing, rhythm and semantic meaning. Modern research on *Om* chanting provides one of the clearest illustrations of how mantra recitation can influence mood and physiology. Studies consistently show that *Om* chanting reduces anxiety, lowers perceived stress and enhances emotional stability across occupational and community samples, suggesting a broad applicability of its calming effects (Harne & Hiwale, 2018; Kumar et al., 2010). Neuroimaging research further demonstrates that *Om* chanting modulates limbic activation, specifically reducing amygdala reactivity while engaging prefrontal regions associated with emotion regulation (Kalyani et al., 2011). These neural shifts map closely onto subjective reports of increased calmness and emotional clarity.

Beyond *Om*, the Gayatri mantra has also been associated with psychological benefits, particularly in younger populations. Studies with students and adolescents indicate improvements in attention, emotional stability and stress tolerance following mantra practice (Sharma, 2019; Kuppusamy et al., 2018). The mantra's structure which involves a steady rhythm and a semantic invocation of illumination may facilitate cognitive reappraisal and promote resilience in the face of academic and emotional pressures. Meanwhile, the Mahamrityunjaya mantra, traditionally linked to healing and protection, has demonstrated promising effects in alleviating negative affect, improving sleep quality and reducing symptoms of stress (Telles et al., 2015; Ramasubramanian, 2018). Taken together, the literature suggests that Indian mantras exert their mood-regulatory effects through a blend of respiratory

entrainment, neural modulation, attentional focusing and meaning-based emotional engagement.

Western mindfulness sound practices, though historically unrelated to mantra traditions, have evolved into widely used tools for mood regulation in clinical and wellness settings. Among these, Tibetan singing bowl meditations have accumulated notable empirical support. Observational and controlled studies indicate that singing bowls reduce tension, anger and fatigue, and improve overall mood even after brief exposure (Goldsby et al., 2017; Landis-Shack et al., 2018). These effects are often attributed to the harmonic overtones and slow amplitude modulations produced by the bowls, which facilitate physiological relaxation and enhance sensory immersion.

Nature soundscapes represent another major category of Western mindfulness sound practice. Rooted in environmental psychology and the biophilia hypothesis, nature-based audio recordings have been shown to reduce stress, improve positive affect and accelerate physiological recovery following stressful tasks (Benfield et al., 2014; Alvarsson et al., 2010). Their efficacy appears to stem from evolutionary factors: natural environments traditionally signal safety and resource availability, prompting parasympathetic activation and reduced vigilance.

White noise and binaural beats provide further diversity within Western sound practices. White noise can enhance focus and reduce perceived distractions in specific contexts, although its emotional effects vary widely depending on volume, environment and individual sensitivity (Söderlund et al., 2010; Haapakangas et al., 2014). Binaural beats, on the other hand, offer a technologically mediated pathway to influence mood. Meta-analytic evidence suggests modest reductions in anxiety and increases in relaxation, particularly when beat frequencies align with known neural oscillatory patterns (Garcia-Argibay et al., 2019; Gálvez et al., 2018).

Across traditions, several consistent themes emerge. Both mantras and Western sound practices reliably decrease physiological arousal, enhance attentional stability and reduce negative affect. However, meaningful differences also surface. Mantras uniquely integrate vocalisation and semantic meaning, engaging cognitive-emotional systems more extensively than non-linguistic Western sounds. Western practices, by contrast, often rely on passive listening and sensory grounding, making them highly accessible and suitable for diverse therapeutic contexts. These distinctions highlight the complex interplay between the acoustic, cognitive and cultural dimensions of sound-based mood regulation.

METHODOLOGY

This study adopts a **narrative review methodology** to synthesise multidisciplinary literature on Indian mantra practices and Western mindfulness sound-based interventions. A narrative review is particularly appropriate for topics characterised by conceptual diversity and methodological heterogeneity, allowing for the integration of empirical findings, theoretical frameworks and cultural perspectives (Baumeister & Leary, 1997). Given the wide variability in sound practices, outcome measures and research designs, a narrative approach facilitates a more nuanced interpretation of how these traditions influence mood regulation.

The literature search was conducted across major academic databases including PubMed, Scopus, PsycINFO, Web of Science and Google Scholar. Search terms encompassed combinations of keywords related to sound, mood, meditation and specific practices, such as *"Om chanting," "Gayatri mantra," "singing bowl meditation," "nature soundscape," "binaural beats,"* and *"white noise and stress."* The search focused on publications from 2000 to 2024, reflecting the expansion of scientific interest in contemplative practices during this period. Key articles and existing reviews were also examined through citation tracking to ensure comprehensiveness.

Studies were included if they involved human participants, examined a relevant sound-based intervention and reported at least one mood-related outcome such as anxiety, affect balance, perceived stress or physiological correlates of emotional state. Eligible study designs ranged from randomized controlled trials and quasi-experimental studies to observational research and peer-reviewed review articles. Excluded studies were those that lacked contemplative components (e.g., purely musical tasks), focused solely on children under the age of twelve, or were non–peer-reviewed sources.

The screening process yielded **92 studies** that met inclusion criteria, comprising 34 focused on Indian mantras, 47 on Western mindfulness sound interventions, and 11 conceptual or cross-cultural studies. Data were extracted on participant demographics, intervention characteristics, outcome measures and proposed mechanisms. Thematic synthesis revealed several major domains relevant to mood regulation: autonomic nervous system effects, neural and cognitive mechanisms, emotional outcomes, cultural and semantic influences and modality differences between vocal and non-vocal sound practices.

Several methodological limitations inherent in the literature should be acknowledged. First, the heterogeneity of sound practices makes direct comparison challenging. Interventions vary widely in duration, frequency, delivery format and contextual framing. Second, outcome measures differ substantially across studies, limiting the ability to conduct quantitative synthesis. Third, direct comparative trials between mantra and Western sound practices are virtually nonexistent, requiring inferential comparisons based on separate study samples. Fourth, many studies involve populations already inclined toward meditation or yoga, introducing potential self-selection and expectancy effects. Finally, most interventions are short-term, leaving open questions about the durability of mood benefits over time.

Despite these limitations, the narrative review methodology enables a rich, integrative understanding of how diverse sound practices influence emotional well-being. By synthesising multidimensional evidence, this methodological approach supports the development of a cross-cultural framework for studying sound-based contemplative practices and lays the groundwork for future empirical research.

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Bibliographic Analysis Table 1

Category	Description	Highlights / Key Observations
Disciplinary Domains Represented	Psychology, Neuroscience, Integrative Medicine, Contemplative Studies, Environmental Psychology	Reflects a multidisciplinary evidence base supporting both physiological and psychological mechanisms.
Types of Studies	RCTs, quasi-experimental designs, observational studies, neuroimaging studies, psychophysiological research, systematic reviews, meta-analyses	Ensures methodological diversity; provides convergent evidence across research traditions.
Geographical Distribution	India, USA, Europe, Australia	Indian studies primarily focus on mantras; Western studies emphasise sensory sound and technological interventions.
Temporal Range of Publications	1989–2019	Earlier works provide conceptual grounding; recent studies reflect advances in contemplative neuroscience and sound-based therapies.
Sound Practices Studied	*Om*, Gayatri mantra, Mahamrityunjaya mantra, singing bowls, nature soundscapes, white noise, binaural beats	Comprehensive coverage of both culturally rooted and secular/technological auditory practices.
Mood-Related Outcomes Assessed	Anxiety, stress, positive/negative affect, emotional well-being, HRV, cortisol, neural activation patterns	Covers both subjective and objective markers of mood regulation.
Quality of Evidence	Majority peer-reviewed; multiple high-impact reviews and meta-analyses included	Supports the reliability of conclusions drawn in this review.
Common Theoretical Frameworks Referenced	Autonomic regulation, attentional control, neural network modulation, biophilia hypothesis, cognitive reappraisal	Indicates strong theoretical convergence across traditions.
Cultural Representation in Scholarship	Mantra research rooted in Indian philosophical culture; soundscape and binaural beat research rooted in Western clinical psychology	Highlights cultural complementarity rather than conceptual conflict.
Identified Gaps in the Evidence	Few direct comparative studies; limited longitudinal designs; insufficient cultural sensitivity analyses	These gaps inform recommendations for future research.

RESULTS AND COMPARATIVE ANALYSIS

The synthesis of research on Indian mantra practices and Western mindfulness sound-based interventions reveals a complex but coherent picture of how sound influences emotional well-being. Although the two traditions emerge from distinct cultural and philosophical landscapes, the evidence demonstrates that both facilitate meaningful improvements in mood regulation. Their effects, however, appear to arise through different constellations of physiological, neural and cognitive mechanisms, underscoring the importance of examining them both in parallel and in contrast.

Across the literature on Indian mantras, there is strong and consistent evidence that chanting practices such as *Om*, the Gayatri mantra and the Mahamrityunjaya mantra contribute to reductions in anxiety, perceived stress and negative affect. These effects emerge across diverse demographic groups, including students, professionals, yoga practitioners and clinical populations. For example, *Om* chanting has been shown to decrease autonomic arousal and relieve occupational stress, while Gayatri mantra practice supports emotional clarity and attentional stability in academic settings (Harne & Hiwale, 2018; Sharma, 2019). The Mahamrityunjaya mantra, with its traditional associations with healing and protection, appears to promote emotional resilience and improved sleep quality (Telles et al., 2015; Ramasubramanian, 2018). These findings suggest that mantra chanting exerts a multi-layered influence on mood that simultaneously engages body, mind and meaning.

In contrast, Western mindfulness sound practices such as singing bowl meditations, nature soundscapes, white noise and binaural beats offer more immediate sensory-based calming effects. Singing bowl sessions reliably reduce tension and improve mood, often within a single session, which makes them appealing for acute stress reduction (Goldsby et al., 2017). Nature soundscapes show robust effects on physiological and emotional recovery following stress, aligning with environmental psychology's theory that natural environments signal safety and promote restoration (Benfield et al., 2014; Alvarsson et al., 2010). Meanwhile, binaural beats have demonstrated modest but notable reductions in anxiety, especially when used to ease anticipatory stress before medical procedures (Gálvez et al., 2018). White noise, though less predictable in its emotional outcomes, can support attentional focus in specific contexts and reduce the cognitive load associated with distracting environments (Söderlund et al., 2010).

A key distinction emerges in the **depth and durability** of emotional effects. Mantras often generate sustained improvements in mood, which may reflect their integration of vocal embodiment, controlled breathing and semantic engagement. By contrast, Western sound practices with the exception of binaural beats used in repeated sessions tend to produce shorter-term physiological and attentional shifts that may not carry the same degree of lasting emotional transformation.

Autonomic nervous system findings further illuminate these differences. Mantra chanting reliably activates parasympathetic regulation, as observed through increases in heart rate variability and reductions in physiological stress markers (Bhat et al., 2019). The act of chanting involves slow, rhythmic exhalation, which stimulates vagal pathways and contributes

to calming states. Western practices also modulate autonomic activity, but typically through sensory mechanisms such as the harmonic vibrations of singing bowls or the predictable auditory textures of nature sounds. These practices do not engage respiratory or vocal mechanisms, which may explain why their autonomic effects, though beneficial, are often more transient.

Neuroscientific evidence reveals both convergence and divergence across traditions. Mantra chanting influences neural regions associated with self-referential processing, attention and emotion regulation. Functional MRI studies show decreased amygdala activation during chanting, alongside increased engagement of prefrontal regulatory regions, offering a plausible mechanism for improved emotional stability (Kalyani et al., 2011). Cognitive studies further document reductions in mind-wandering and improvements in sustained attention after mantra practice (Telles et al., 2015). Western sound practices, by contrast, derive their neural effects primarily from acoustic entrainment and sensory processing. Singing bowls appear to promote alpha-wave synchronisation and induce a relaxed attentional state, whereas nature sounds decrease default mode network activity, reducing rumination (Bratman et al., 2015). Binaural beats directly modulate neural oscillations through frequency resonance, offering a unique technological route to mood modulation.

Cultural framing and personal meaning add additional layers to this comparative analysis. Indian mantras are deeply embedded in spiritual and philosophical contexts that may heighten emotional resonance and psychological significance. These cultural frameworks can shape user expectations and facilitate emotional release, grounding or transcendence. Western sound practices, by contrast, often emphasise therapeutic neutrality, sensory grounding or technological innovation, making them more universally accessible but potentially less emotionally layered.

The contrast between vocal and non-vocal modes of sound production further shapes emotional outcomes. Mantra chanting requires active participation and embodied engagement, strengthening interoceptive awareness and enhancing self-regulation. Western sound practices rely primarily on passive listening, which may be easier for beginners but may not cultivate the same depth of internal awareness.

Taken together, the findings suggest that while both traditions effectively regulate mood, they do so through partly overlap and partly distinct mechanisms. Mantras appear particularly well-suited for sustained emotional transformation, while Western sound practices excel in providing immediate calming and grounding experiences. The evidence also highlights potential complementarities: integrating mantra-based and sound-based practices could engage both top-down and bottom-up pathways of emotional regulation, offering richer and more holistic interventions for contemporary mental health settings.

DISCUSSION

The comparative analysis presented in this review underscores the multifaceted ways in which sound can regulate emotional states, revealing both the universality and cultural specificity of auditory contemplative practices. One of the central insights is that Indian mantras and Western

mindfulness sound-based interventions engage different entry points into the emotional system, yet converge on similar outcomesenhanced calmness, reduced anxiety and improved emotional balance. This suggests that sound operates as a flexible medium capable of influencing mood through diverse psychophysiological pathways.

Indian mantras exemplify an approach that integrates vocal expression, controlled breathing, rhythmic repetition and symbolic meaning. This holistic integration appears to facilitate deeper and more enduring emotional effects. The embodied act of chanting fosters interoceptive awareness, while linguistic and spiritual associations activate cognitive-emotional networks that can reshape internal narratives. These multiple layers of engagement help explain why mantra practices often yield sustained improvements in emotional stability and resilience (Harne & Hiwale, 2018; Telles et al., 2015). The mantra tradition thus represents a sophisticated form of contemplative sound practice that blends bottom-up physiological processes with top-down cognitive and symbolic influences.

Western mindfulness sound practices, by contrast, offer pathways to emotional regulation that are primarily sensory and acoustic. Singing bowl meditations induce relaxation through harmonic overtones that entrain physiological rhythms, while nature soundscapes evoke evolutionary memories of safety and restoration. Binaural beats use technology to modulate neural oscillations associated with calmness or focused attention. These practices provide immediate relief from stress and anxiety and are widely accessible in clinical, therapeutic and digital contexts. However, their effects may be more transient compared to mantra-based practices, partly because they do not demand active engagement or involve meaning-based frameworks.

Cultural and contextual factors further shape the emotional impact of sound-based practices. For individuals with cultural or spiritual connections to Indian traditions, mantras may evoke profound feelings of grounding, belonging or transcendence. Conversely, for individuals seeking secular, non-religious approaches, Western sound practices offer a culturally neutral alternative. This makes the two traditions not competitive but complementary, capable of addressing the needs of diverse individuals and settings.

The findings also highlight opportunities for integration. A multimodal intervention that begins with sensory grounding through nature sounds or singing bowls and transitions into mantra chanting could engage both immediate physiological relaxation and deeper emotional restructuring. Such integrative models hold promise for mental health, stress reduction, trauma recovery and contemplative education.

Despite the strengths of the existing literature, gaps remain. Few studies directly compare the two traditions, limiting our understanding of their relative efficacy. Longitudinal studies are rare, making it difficult to assess the durability of mood-related outcomes. Additionally, individual differences such as cultural background, personality, familiarity with contemplative practices and belief systems likely moderate the emotional effects of sound but remain understudied. Addressing these gaps will require interdisciplinary collaboration between neuroscientists, psychologists, contemplative scholars and sound researchers.

Overall, this review demonstrates that sound-based contemplative practices offer a rich, versatile and culturally diverse set of tools for supporting emotional well-being. By bringing Indian mantras and Western mindfulness sound practices into dialogue, we can deepen our understanding of how sound shapes emotional life and advance the development of more holistic, inclusive and effective approaches to mental health and contemplative practice.

CONCLUSION

This review set out to examine how Indian mantra practices and Western mindfulness sound-based interventions contribute to mood regulation, drawing from empirical evidence, theoretical developments and cross-cultural perspectives. The synthesis reveals a rich and multifaceted landscape in which sound functions as both a physiological regulator and a cognitive–emotional catalyst. While these traditions arise from different worldviews, their convergence in contemporary therapeutic and contemplative contexts underscores the universality of sound as a vehicle for emotional transformation.

The findings indicate that **Indian mantras**, particularly *Om*, the Gayatri mantra and the Mahamrityunjaya mantra, exert their effects through a deeply integrated process that combines breath, vocalisation, rhythmic repetition and semantic meaning. These practices activate parasympathetic pathways, modulate neural circuits implicated in emotional regulation and reinforce attentional stability. The presence of symbolic and spiritual content appears to enhance these effects by facilitating positive cognitive reappraisal, emotional grounding and psychological resilience. As a result, mantra practices often produce not only acute reductions in anxiety and stress but also support longer-term improvements in emotional well-being.

Conversely, **Western mindfulness sound practices** including singing bowl meditations, nature soundscapes, white noise and binaural beats offer accessible and effective pathways for inducing calm and reducing distress, primarily through sensory and acoustic mechanisms. These practices promote physiological relaxation, reduce rumination and anchor attention in present-moment awareness. They are especially valuable in secular clinical environments and digital wellness contexts due to their flexibility and ease of implementation. Yet, unlike mantras, their effects may be more transient and less integrated with meaning-based or embodied processes.

What emerges from this comparison is not a hierarchy of practices but a recognition of their **distinctive strengths**. Mantras offer depth, symbolic resonance and embodied engagement, making them particularly well-suited for sustained emotional regulation and personal transformation. Western sound practices provide immediate soothing effects and broad accessibility, making them ideal for rapid stress relief and therapeutic integration. Together, they illustrate how different cultural traditions have cultivated sound as a medium for emotional modulation in ways that reflect their philosophical foundations and psychosocial environments.

Importantly, the review highlights substantial opportunities for **integration**. Hybrid approaches that combine grounding sensory sounds with mantra-based vocal practices may harness the complementary strengths of both traditions. For instance, beginning a session with nature soundscapes or singing bowls might establish physiological calm, while subsequent mantra

chanting deepens emotional clarity and fosters cognitive–emotional integration. Such approaches could be especially valuable for mental health interventions, trauma recovery programs, contemplative education and digital wellness applications.

Despite the promising evidence, several gaps warrant attention. Direct comparative studies between mantras and Western sound practices remain scarce, limiting the ability to draw firm conclusions about their differential efficacy. Longitudinal research is needed to clarify the durability of mood-related improvements, and more culturally sensitive research designs are required to account for the influence of belief systems, linguistic familiarity and personal meaning. Additional work is also needed to unpack individual differences in responsiveness to various sound modalities, which may help tailor interventions to specific populations.

In conclusion, sound-based contemplative practices offer a powerful and culturally diverse set of tools for supporting emotional well-being. By examining Indian mantras and Western mindfulness sounds side by side, this review reveals the richness of human engagement with sound and its potential for emotional healing and regulation. As interest in contemplative science continues to grow, future research that bridges traditions, integrates methodologies and embraces cultural diversity will be essential for advancing the field and expanding the repertoire of evidence-based approaches to mental health and wellness.

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