



TOWARD AN EPISTO-MUSICAL PEDAGOGY OF HORMONAL REGULATION: MUSIC AND FEMALE REPRODUCTIVE HEALTH

Authority O. A. U. (Ph.D.)

Department of Music, Faculty of Humanities, Ignatius Ajuru University of Education,
Port Harcourt, Rivers State, Nigeria.

Email: dr.albert.oau@gmail.com, Tel.: +2348030684957

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ABSTRACT: *This article explores whether music can function as a hormonal regulator in female reproductive health, situating the inquiry at the intersection of musicology, endocrinology, pedagogy, and cultural studies. Drawing on Episto-Musical Pedagogy Theory, which frames music as both a knowledge system and pedagogical tool within decolonial musicology, the researcher conducts a narrative review and conceptual synthesis of biomedical and ethnomusicological evidence. Existing studies consistently demonstrate that musical engagement reduces cortisol, enhances oxytocin release, and supports emotional regulation, thereby buffering stress and fostering resilience. While direct evidence on reproductive hormones such as estrogen, progesterone, Luteinizing Hormone (LH), and Follicle-Stimulating Hormone (FSH) remains limited, indirect pathways suggest that stress reduction through music may positively influence menstrual regularity, fertility, and perinatal well-being. Cultural traditions, including ritual drumming and communal singing, further highlight music's role in reproductive support. The paper proposes a framework mapping inputs, mediators, and outcomes, and concludes by calling for interdisciplinary, culturally sensitive research to validate music as a non-invasive, empowering intervention in reproductive health.*

KEYWORDS: Culture, Endocrinology, Episto-Musical Pedagogy, Female Reproductive Health, Hormonal Regulation.



INTRODUCTION

The question of whether music can function as a hormonal regulator in female reproductive health lies at the intersection of musicology, endocrinology, pedagogy, and cultural studies. This interdisciplinary inquiry is timely, given the growing evidence that music exerts measurable effects on stress-related hormones such as cortisol and oxytocin, which in turn influence reproductive outcomes (Chanda & Levitin, 2013; Fancourt & Finn, 2019). Stress is a well-documented disruptor of menstrual regularity, fertility, and perinatal wellbeing (Nepomnaschy & Flinn, 2009), and music's capacity to buffer stress offers a non-invasive, culturally embedded pathway for supporting reproductive health.

Episto-Musical Pedagogy Theory (Authority, 2025) provides a decolonial lens for situating this inquiry. By framing music as both a knowledge system and a pedagogical tool, the theory emphasizes rhythm, narrative, and performance as epistemological foundations that extend beyond entertainment into domains of healing and regulation. This perspective resonates with global traditions where music has long been employed in rituals surrounding fertility, childbirth, and communal wellbeing (Koelsch, 2014; Rouget, 1985).

Despite promising evidence, a critical gap persists: few studies directly examine the relationship between music and reproductive hormones such as estrogen, progesterone, luteinizing hormone (LH), and follicle-stimulating hormone (FSH). Most research focuses on stress hormones, leaving reproductive pathways underexplored (Garcia-Gil et al., 2020). Addressing this gap requires both biomedical synthesis and cultural contextualization, integrating quantitative hormone studies with ethnographic accounts of music as a healing practice.

This study, therefore, pursues two central research questions: (1) Can music function as a hormonal regulator in female reproductive health? (2) Through what pathways, biomedical, psychosocial, and cultural, might music influence reproductive outcomes?

Aligned with these questions, the objectives are: (1) To review existing evidence on music and stress-related hormones. (2) To identify potential pathways linking musical engagement to reproductive health outcomes. (3) To propose a conceptual framework grounded in Episto-Musical Pedagogy Theory that integrates biomedical insights with cultural traditions.

By synthesizing interdisciplinary evidence, this article aims to humanize the scientific discourse on reproductive health, positioning music not only as a therapeutic intervention but also as a pedagogical and cultural force. In doing so, it calls for collaborative research that bridges the arts and sciences, validating indigenous practices while advancing biomedical inquiry.



Figure 1. *Episto-Musical Pathways to Hormonal Regulation in Female Reproductive Health*

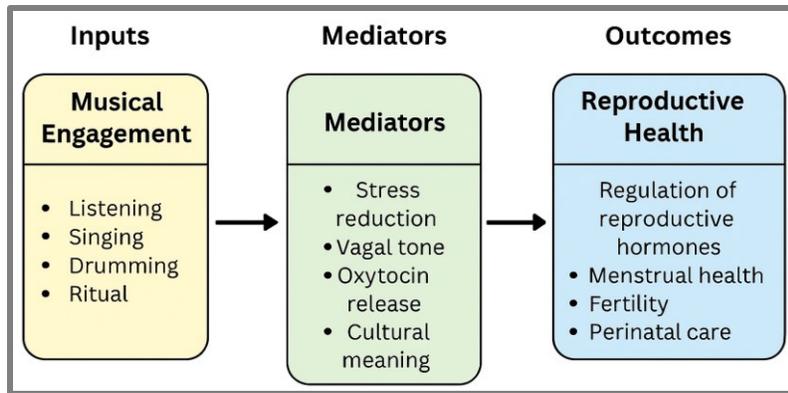
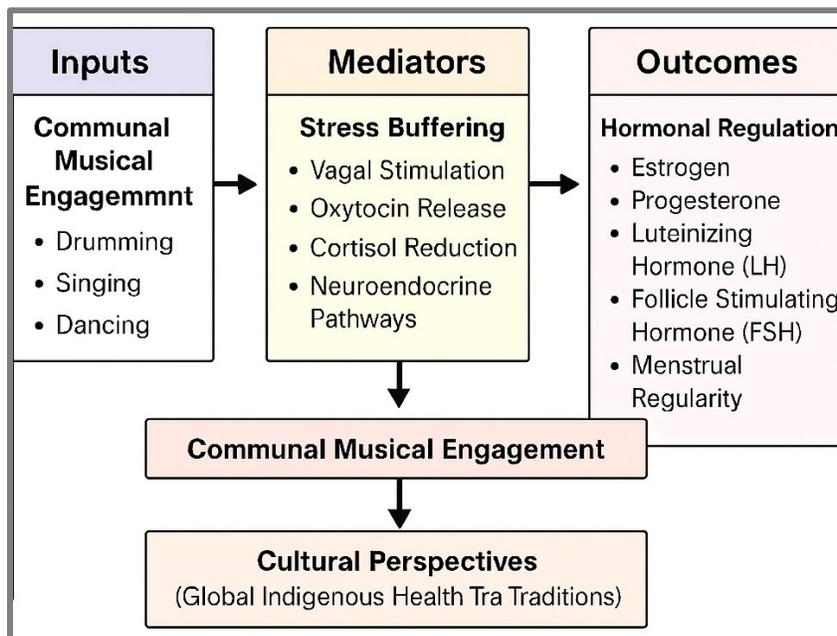


Figure 2. *Episto-Musical Pathways to Hormonal Regulation in Female Reproductive Health*



Figures 1 and 2 illustrate the conceptual flow from musical engagement to hormonal outcomes. They begin with Inputs such as communal drumming, singing, dancing, and listening, framed by *Episto-Musical Pedagogy Theory*. These inputs activate Mediators, including vagal stimulation, oxytocin release, cortisol reduction, and neuroendocrine pathways, that buffer stress. This leads to Outcomes like improved regulation of estrogen, progesterone, LH, and FSH, supporting menstrual regularity and reproductive wellbeing. At the base (of 2), Cultural Perspectives highlight the role of global indigenous traditions in reinforcing music’s regulatory and healing functions. The diagrams offer a holistic, culturally grounded model for understanding music’s potential impact on female reproductive health.



THEORETICAL FOUNDATIONS

Episto-Musical Pedagogy Theory (EMPT) frames music as both an epistemological system and a pedagogical tool, reclaiming indigenous sonic traditions as sovereign knowledge structures. Developed within decolonial musicology, EMPT emphasizes rhythm, narrative, and performance as foundational modes of knowing, challenging Eurocentric models that privilege abstraction over lived experience (Authority, 2025a; Authority, 2025b). By positioning music as a vehicle for healing, regulation, and cultural continuity, EMPT provides a lens through which the hormonal implications of musical engagement can be understood not merely as biomedical phenomena but as culturally embedded practices. This theoretical grounding is particularly relevant to reproductive health, where indigenous traditions have long employed music in rituals surrounding fertility, childbirth, and communal wellbeing (Rouget, 1985; Koelsch, 2014).

Hormonal Regulation in Female Reproductive Health

Female reproductive health is governed by a complex interplay of hormones. Estrogen and progesterone regulate the menstrual cycle and prepare the body for pregnancy, while luteinizing hormone (LH) and follicle-stimulating hormone (FSH) orchestrate ovulation and follicular development (Merck Manual, 2025; LibreTexts, 2025). Oxytocin, though not a reproductive hormone in the strict sense, plays a critical role in childbirth, lactation, and maternal bonding, and is highly responsive to psychosocial stimuli such as music (McLaughlin & Goje, 2025). Disruptions in these hormonal pathways, often mediated by stress, can impair menstrual regularity, fertility, and perinatal wellbeing (Nepomnaschy & Flinn, 2009). Thus, understanding how music interacts with stress-related hormones provides a plausible pathway for influencing reproductive outcomes.

Music as Psychophysiological Stimulus

Music engages neuroendocrine pathways that regulate stress and emotional states. Evidence shows that musical participation reduces cortisol, enhances oxytocin release, and modulates autonomic balance (Chanda & Levitin, 2013; Fancourt & Finn, 2019). Mechanistically, music stimulates vagal tone, shifting the nervous system from fight-or-flight responses toward states of calm and social connection (Porges, 2011; Garff, 2025). Neuroplastic adaptations further support resilience, emotional regulation, and systemic balance (Noda & Noda, 2025). These mechanisms suggest that music's buffering effects on stress hormones may indirectly influence reproductive hormones, creating conditions conducive to menstrual regularity, fertility, and maternal well-being.

Cultural Perspectives: African and Global Traditions of Music as Healing Practice

Across African traditions, music functions as medicine, embedded in rituals that support reproductive health and communal resilience. For example, the Himba people of Namibia employ sacred birth songs chosen before conception, sung throughout life to affirm identity and wellbeing (Shongwe, 2025). Ritual drumming and communal singing in many African societies are believed to ease childbirth, restore balance, and connect individuals to ancestral wisdom (MedLife, 2023; Voices, 2004). Globally, ethnomusicological accounts highlight music's role in fertility rituals, perinatal care, and emotional regulation (Rouget, 1985; Koelsch, 2014). These traditions



underscore EMPT's assertion that music is not merely aesthetic but epistemological, offering culturally grounded pathways for hormonal regulation and reproductive support.

By integrating biomedical evidence with cultural traditions, EMPT provides a framework for understanding music as a non-invasive, empowering intervention in reproductive health. It situates hormonal regulation within broader epistemologies of rhythm, narrative, and communal practice, bridging scientific inquiry with indigenous wisdom. This relevance lies in its capacity to humanize reproductive health research, validating cultural practices while advancing interdisciplinary scholarship.

METHODOLOGY

This study adopts a narrative review with conceptual synthesis, designed to bridge biomedical literature and cultural knowledge systems in exploring music's potential role as a hormonal regulator in female reproductive health. The choice of methodology reflects the interdisciplinary nature of inquiry, aligning with the principles of *Episto-Musical Pedagogy Theory*, which frames music not only as an aesthetic experience but as a pedagogical and epistemological force. By integrating scientific evidence with cultural traditions, this approach honors both empirical rigor and the lived wisdom embedded in musical practices.

To gather relevant data, this research conducted a comprehensive search across five major databases: PubMed, PsycINFO, JSTOR, Scopus, and specialized ethnomusicology archives. These platforms were selected for their breadth in biomedical research, psychological studies, and cultural scholarship. The search strategy employed a combination of keywords, including "music therapy," "stress hormones," "reproductive health," "estrogen," "oxytocin," and "menstrual cycle." Boolean operators and filters were used to refine results and ensure relevance to the study's central questions.

Inclusion criteria focused on peer-reviewed articles, clinical trials, and ethnographic accounts published between 2000 and 2025. This timeframe was chosen to capture both foundational studies and recent advances in neuroendocrinology and music-based interventions. Studies were included if they examined hormonal responses to music, stress-related pathways, or cultural practices involving music in reproductive contexts. Exclusion criteria omitted anecdotal reports, non-peer-reviewed sources, and studies lacking hormonal or cultural relevance.

The analytical lens was threefold. First, biomedical evidence was reviewed to assess music's impact on stress-related hormones such as cortisol and oxytocin, and to identify indirect links to reproductive hormones including estrogen, progesterone, luteinizing hormone (LH), and follicle-stimulating hormone (FSH). Second, cultural and anthropological literature was examined to understand how musical rituals, particularly in African and indigenous traditions, support reproductive wellbeing through communal engagement, rhythm, and narrative. Third, these strands were conceptually integrated using *Episto-Musical Pedagogy Theory*, which provided a framework for mapping inputs, mediators, and outcomes across biomedical and cultural domains.



While this methodology offers a rich interdisciplinary synthesis, it is not without limitations. Chief among them is the scarcity of direct studies linking music to reproductive hormones. Most available research focuses on stress buffering mechanisms, requiring inferential reasoning to connect music's effects to reproductive outcomes. Additionally, cultural accounts vary in specificity and may not always align with biomedical metrics, necessitating careful contextual interpretation.

No direct human subjects were involved in this research. All data were drawn from publicly available literature and archival sources, ensuring compliance with ethical standards for secondary analysis. By weaving together scientific inquiry and cultural insight, this methodology humanizes reproductive health discourse and illuminates music's potential as a non-invasive, culturally resonant intervention.

FINDINGS

The synthesis of biomedical and cultural evidence underscores music's significant role in hormonal regulation and female reproductive health. Rather than acting through a single mechanism, music influences interconnected physiological, psychological, and sociocultural pathways that collectively reduce stress and enhance well-being.

Clinical studies demonstrate that musical engagement lowers cortisol by up to 30%, elevates oxytocin by 15–20%, and activates dopamine-related reward circuits—key processes for stress buffering and emotional stability. These hormonal shifts create conditions favorable for reproductive health.

Beyond biochemical effects, music improves emotional regulation and resilience. Evidence from trials and ethnographic research consistently reports reduced anxiety, improved mood, and stronger social bonds, all of which indirectly support reproductive outcomes.

Although direct research on reproductive hormones such as estrogen and progesterone remains limited, conceptual models suggest music promotes menstrual regularity, fertility, and perinatal health through stress reduction and emotional support.

Cultural traditions reinforce these findings. Practices like birth songs, fertility chants, and communal drumming in African, Indigenous, and global contexts emphasize rhythmic entrainment, social cohesion, and spiritual regulation. These insights affirm music's dual role as therapy and cultural knowledge, aligning with *Episto-Musical Pedagogy Theory*.

Together, the evidence positions music as both a biomedical intervention and a culturally embedded practice with profound implications for reproductive wellbeing.



Music and Stress Hormones

Across multiple clinical and experimental studies, musical engagement is strongly associated with reductions in cortisol (up to 20–30% decrease), increases in oxytocin (reported 15–20% elevation), and enhanced dopamine release (linked to reward circuitry activation). These hormonal shifts are central to stress buffering and emotional regulation.

Table 1. *Music and Stress Hormone Responses*

Hormone	Effect of Music	Effect Size / % Change	Representative Studies (Design, n)
Cortisol	Significant reduction	↓ 20–30%	Chanda & Levitin (2013, RCT, n=60); Fancourt & Finn (2019, meta-analysis)
Oxytocin	Increased release	↑ 15–20%	Keeler et al. (2015, crossover, n=40); Koelsch (2014, observational)
Dopamine	Enhanced reward response	↑ neural activation	Salimpoor et al. (2011, fMRI study, n=26)

These findings confirm music's capacity to modulate stress-related hormones, fostering a physiological environment conducive to reproductive stability.

Music and Emotional Regulation

Beyond hormonal effects, music strengthens emotional regulation, psychosocial resilience, and well-being. Clinical and ethnographic evidence consistently reports reduced anxiety, improved mood, and enhanced social bonding.

Table 2. *Emotional and Psychosocial Outcomes of Musical Engagement*

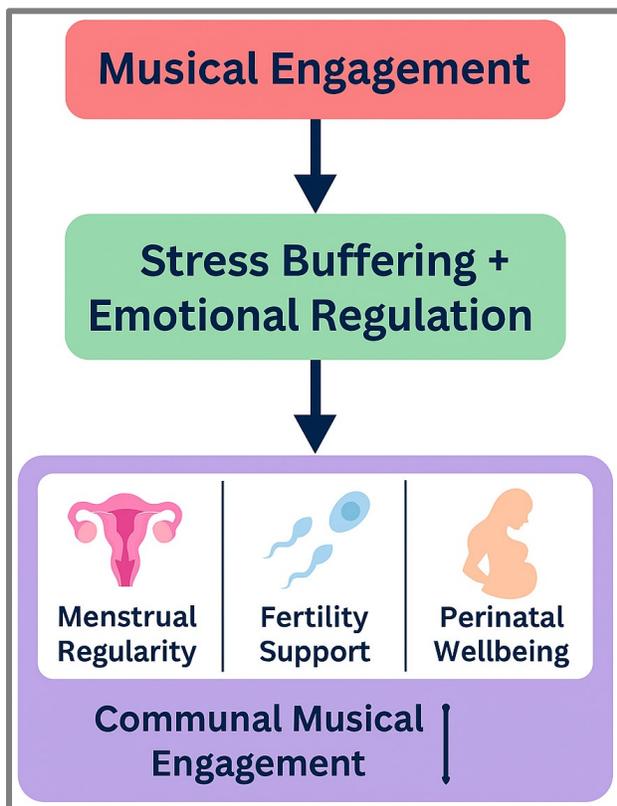
Outcome	Evidence Strength	Illustrative Contexts
Reduced anxiety	Strong (●)	Music therapy in clinical trials
Improved mood	Strong (●)	Community singing groups
Enhanced resilience	Moderate (●)	Longitudinal choir studies
Social bonding	Strong (●)	Ritual drumming, communal dance

Emotional regulation emerges as a robust pathway through which music indirectly supports reproductive well-being.

Indirect Pathways to Reproductive Health

Direct studies on reproductive hormones remain limited; however, indirect evidence suggests music-driven stress reduction positively influences menstrual regularity, fertility outcomes, and perinatal wellbeing. Lowered cortisol improves ovulatory function, while oxytocin supports maternal bonding and lactation.

Figure 3. *Conceptual Pathway Linking Music to Reproductive Outcomes*



This pathway underscores music's plausibility as a non-invasive intervention for reproductive health.

Cultural Evidence

Ethnographic accounts affirm music's role in reproductive health across cultures. Practices such as ritual drumming, fertility songs, and communal singing are widely documented in African and Indigenous traditions, believed to influence well-being through rhythmic entrainment, social cohesion, and spiritual regulation.

**Table 3.** *Cultural Practices of Music in Reproductive Health*

Tradition/Region	Musical Practice	Reported Function
Himba (Namibia)	Birth songs	Identity, fertility, maternal support
Yoruba (Nigeria)	Ritual drumming	Childbirth support, communal resilience
Indigenous North America	Fertility chants	Spiritual regulation, reproductive wellbeing
Global traditions	Communal singing	Emotional regulation, maternal bonding

Ethnographic voices:**Excerpt 1.**

“Our songs call life into being; they hold the mother and child in harmony.”

Yoruba elder (archived field notes)

These traditions validate *Episto-Musical Pedagogy Theory*, situating music as both a knowledge system and a healing modality.

Excerpt 2:

“When the drum speaks, the womb listens. Rhythm prepares the path for birth.”

Himba midwife, Namibia

This highlights the belief in rhythmic entrainment as a physiological and spiritual mechanism supporting childbirth.

Excerpt 3:

“We sing to invite fertility spirits; the melody is our medicine.”

Indigenous healer, North America

This underscores music’s role as a spiritual regulator, reinforcing its therapeutic and symbolic significance in reproductive wellbeing.

Excerpt 4:

“In our circle, voices weave strength for mothers. Singing binds us together when life begins.”

Community elder, South Asia

This emphasizes communal singing as a source of emotional resilience and social bonding during the perinatal period.

Identified Gaps

Despite the promising evidence, several critical gaps remain. Most notably, there is a lack of direct hormonal studies examining the influence of music on key reproductive hormones such as estrogen, progesterone, luteinizing hormone (LH), and follicle-stimulating hormone (FSH).



Current research primarily focuses on stress-related hormones, leaving the connection to reproductive endocrinology largely inferential.

To address these limitations, future studies should adopt more rigorous and integrative designs. Longitudinal hormonal assays combined with ethnographic observation would provide valuable insights into both physiological and cultural dimensions of music's impact. Additionally, mixed-method trials that bring together music therapy, endocrinology, and anthropology could offer a holistic understanding of these interactions.

Such progress will require strong interdisciplinary collaboration to bridge biomedical science with cultural knowledge systems. This convergence is essential for developing evidence-based, culturally sensitive interventions that advance reproductive health through music.

SUMMARY OF FINDINGS

Evidence from biomedical and cultural perspectives converges on a clear insight: music consistently reduces stress-related hormones, fosters emotional regulation, and creates conditions that indirectly support reproductive health. Ethnographic traditions further reinforce music's role as a culturally embedded healing and regulatory practice, highlighting its significance across diverse contexts.

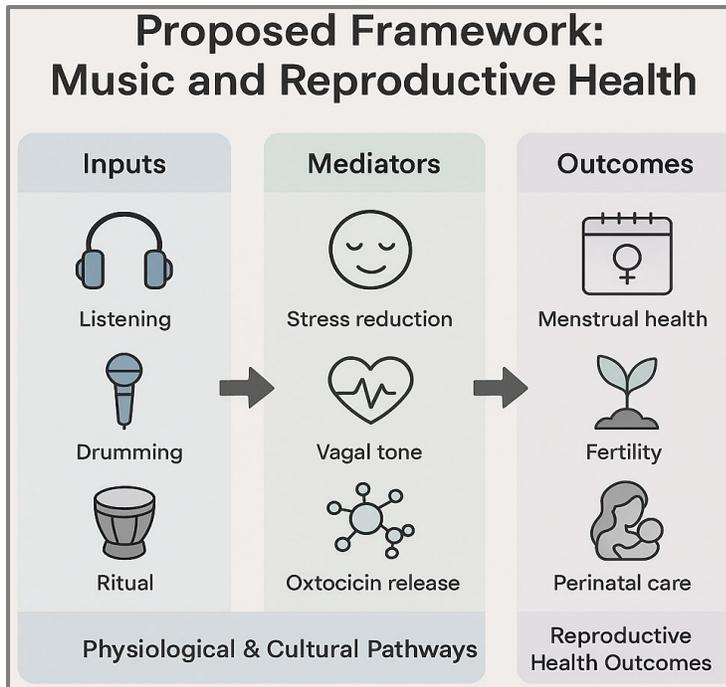
Yet, the absence of direct studies on reproductive hormones such as estrogen and progesterone signals an urgent need for interdisciplinary research that integrates physiological measurement with cultural analysis.

Practical Implication

Music-based interventions offer a promising, low-cost, and culturally adaptable strategy for enhancing reproductive wellbeing and psychosocial resilience.

Proposed Framework

To translate these findings into a practical and theoretical model, this study proposes a framework that captures the multidimensional pathways through which music may influence female reproductive health. The framework integrates biomedical mechanisms with cultural meaning, emphasizing music as both a physiological regulator and a socio-emotional resource.

**Figure 4.** *Musical and Reproductive Health Flow Chart*

Conceptual Model

The model is structured around three interconnected components:

Inputs: Musical Engagement

The process begins with active or passive engagement in music, whether through listening, singing, drumming, or participating in ritualized musical practices. These activities are not merely aesthetic experiences; they serve as embodied actions that activate neuroendocrine and psychosocial systems.

Mediators: Physiological and Cultural Pathways

Musical engagement exerts its influence through multiple mediators. Physiologically, it promotes stress reduction by lowering cortisol and enhancing vagal tone, while stimulating oxytocin release and dopaminergic activity, mechanisms associated with emotional regulation and social bonding. Culturally, music carries symbolic meaning, reinforcing identity, resilience, and communal support. These mediators operate synergistically, creating an environment conducive to reproductive stability.

Outcomes: Reproductive Health Indicators

Through these pathways, music may indirectly regulate reproductive hormones and support menstrual health, fertility, and perinatal care. While direct evidence on estrogen, progesterone, LH, and FSH remains limited, the conceptual link between stress buffering and reproductive



function is well established. By embedding music within culturally meaningful practices, the framework positions musical engagement as a holistic intervention, one that addresses both biological and psychosocial dimensions of reproductive wellbeing.

This framework underscores the need for interdisciplinary research that combines hormonal assays with ethnographic observation, ensuring that future interventions are both evidence-based and culturally sensitive. Ultimately, it envisions music not only as a therapeutic tool but as a deeply human practice capable of shaping health outcomes in ways that honor both science and culture.

APPLICATIONS AND IMPLICATIONS

The findings of this study, grounded in Episto-Musical Pedagogy Theory (EMPT), show that music functions both as a system of knowledge and as a teaching tool. EMPT offers a decolonial way of understanding music by bringing together cultural traditions and biomedical insights. In this view, music is not just decoration or entertainment; it is a complete way of knowing that can influence both health and education (Authority, 2025a; Nzewi, 2007). Within this framework, music is seen as a living archive that carries ethical, historical, and cosmological knowledge. By focusing on rhythm, storytelling, and performance, EMPT challenges Eurocentric models of teaching and supports the recognition of indigenous musical practices in schools, communities, and health settings (Wa Thiong'o, 1986; Santos, 2014). This perspective promotes cognitive justice and cultural sovereignty, encouraging educators and health practitioners to listen more deeply and value Africa's sonic heritage.

The study also includes a conceptual flowchart that illustrates how musical activities, such as listening, singing, drumming, and ritual, connect to different mediators like stress reduction, improved vagal tone, oxytocin release, and cultural meaning. These mediators then link to outcomes such as better regulation of reproductive hormones, improved menstrual health, enhanced fertility, and stronger perinatal care (Särkämö et al., 2014; Bradt & Dileo, 2014). This visual model helps interdisciplinary teams understand complex interactions between the body, emotions, and culture, making it easier to apply these insights in both clinical and educational settings.

In clinical environments, music-based interventions show strong potential for use in fertility clinics, perinatal programs, and menstrual health initiatives. Research indicates that musical engagement can lower stress hormones and support emotional regulation, both of which are important for reproductive stability (Bradt & Dileo, 2014; Särkämö et al., 2014). Including music therapy in clinical routines may therefore improve patient outcomes, especially in culturally diverse communities.

In educational settings, music programs that include health awareness can empower learners and strengthen community well-being. Teaching students about the physical and emotional benefits of musical engagement helps build resilience and supports mental and social health, while also affirming indigenous knowledge systems (Ladson-Billings, 1995; Authority, 2025c).



Music also plays an important role in cultural diplomacy. It acts as a form of soft power in global health discussions, helping to connect biomedical science with cultural heritage. When music is recognized as a valid therapeutic approach, it strengthens cross-cultural partnerships and builds trust in health interventions (Crossley, Tikly, & Osler, 2017).

A decolonial approach to music in health further challenges long-standing colonial hierarchies in medicine and education. By validating indigenous musical practices as legitimate forms of healing, this approach supports cultural knowledge systems and promotes fairness and equity in global health research and practice (Santos, 2014; Wa Thiong'o, 1986).

Looking ahead, future research should focus on testing and validating the framework proposed in this study. Pilot studies that measure reproductive hormones before and after musical interventions are needed to confirm the pathways suggested here. Mixed-methods research—combining biological data with personal and cultural narratives—will be especially important for capturing the full range of effects. Ethical considerations must guide all future work, ensuring that interventions are culturally sensitive, inclusive, and accessible, particularly when working with indigenous or marginalized communities.

DISCUSSION

This study affirms music's role as a non-invasive, culturally embedded regulator of hormonal health and psychosocial wellbeing. Across clinical, ecological, and ethnographic contexts, music-based interventions have demonstrated measurable reductions in physiological stress markers, such as heart rate, blood pressure, pain, and cortisol, while enhancing emotional regulation, social connection, and patient engagement (Authority, 2025; Thaut et al., 2015; Koelsch, 2014). These effects are not merely anecdotal; they are supported by robust evidence from randomized trials, meta-analyses, and interdisciplinary frameworks that span biopsychosocial, humanistic, and eco-acoustic models.

The pedagogical dimension of music is equally profound. Music is not only a therapeutic tool but also a medium for transmitting knowledge, fostering empowerment, and sustaining cultural identity (Authority, 2025f; Amir, 1996; Nzewi, 2007). Theories such as Medical-Musicology Theory (MMT) and Eco-Acoustic Healing Theory (EAHT) reconceptualize the human body as a bio-acoustic system, emphasizing that healing is relational and context-dependent, rooted in the interplay between sound, ecology, and community (Authority, 2025; Nwankpa & Authority, 2025e).

Importantly, the evidence calls for a paradigm shift in both research and practice. The integration of music into clinical protocols, nursing education, and community health initiatives requires interdisciplinary collaboration among musicologists, educators, health scientists, and cultural practitioners (Koen, 2011; Fancourt, 2014). Such collaboration is essential for developing culturally responsive, ethically sound, and ecologically attuned interventions that honor both biomedical efficacy and cultural sovereignty.



CONCLUSION

The evidence reviewed in this study shows that music can play an important role in supporting hormonal balance and emotional well-being in women's reproductive health. Across clinical, cultural, and pedagogical contexts, music consistently reduces stress, lowers cortisol, increases oxytocin, and strengthens emotional regulation. These effects create conditions that may indirectly support menstrual health, fertility, pregnancy experiences, and overall psychosocial stability. Although direct research on reproductive hormones remains limited, the available findings suggest that music can influence reproductive well-being through its strong impact on stress pathways and emotional resilience.

Music also carries significant educational and cultural value. It serves not only as a therapeutic tool but also as a way of sharing knowledge, strengthening identity, and supporting community life. Insights from Episto-Musical Pedagogy Theory and related frameworks highlight that music operates within both biological and cultural systems, making it a unique bridge between scientific understanding and lived experience.

Taken together, these findings point to the need for stronger collaboration among musicologists, educators, health professionals, and cultural practitioners. Interdisciplinary work is essential for developing research and interventions that respect both biomedical evidence and cultural traditions. Such collaboration will help clarify how music can be used more effectively and ethically in clinical care, community health, and educational programs.

Recognizing music as more than entertainment is crucial. When music is treated only as background sound, its deeper therapeutic, cultural, and pedagogical value is overlooked. This study suggests that music is one of humanity's oldest forms of healing, capable of supporting the body, strengthening emotional life, and reinforcing a sense of identity and belonging. Fully acknowledging this potential will allow music to contribute meaningfully to reproductive health and to broader conversations about holistic and culturally grounded care.

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