

The Development of The Brain-based Learning Instructional Package of Phin Performance for the Isan Folk Music Undergraduates Students

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Abstract

This study aimed to develop a brain-based learning instructional package for Phin performance based on the teaching techniques of expert Phin masters in the Isan region of Thailand. The research was conducted in three phases: (1) analyzing the instructional methods of eight expert Phin masters through interviews and observations; (2) developing a brain-based instructional package using the data from Phase 1 and validating it with experts in music education; and (3) investigating the effectiveness of the package by comparing the Phin performance skills of undergraduate music students taught using either conventional methods or the developed package. The participants included eight Phin masters, five music education scholars, and ten undergraduate students. The findings revealed that students taught through the brain-based learning package achieved significantly higher performance scores than those taught through conventional methods. The study demonstrates the effectiveness of integrating neuroscience-informed pedagogy with traditional music instruction and provides a model for preserving and promoting local musical heritage through innovative teaching practices.

Keywords: brain-based learning, Phin, Isan music, instructional package, folk music education

1. Introduction

Music is a fundamental component of cultural identity, and its preservation plays a vital role in sustaining the cultural heritage of communities (Clayton et al., 2012; Scates, 2023). In an increasingly interconnected world where intercultural competence is highly valued, music education has begun to prioritize the inclusion of local and indigenous musical traditions. This approach not only supports the development of students' musical and cultural literacy but also serves as a vehicle for preserving traditional knowledge through performance-based practices (Wolffenbüttel, 2021). Integrating local music into formal instruction could lead to greater cultural diversity and promote mutual appreciation and respect among learners from different cultural backgrounds.

Thailand is a country characterized by profound cultural diversity, with each region possessing its own unique linguistic, social, and musical traditions. In this context, the preservation of regional folk musical instruments is particularly critical (Morton, 2023). The Thai national core curriculum underscores the importance of maintaining and transmitting local artistic and musical identities (Ministry of Education, 2008). Northeastern Thailand—commonly referred to as "Isan"—is notable for its rich and longstanding musical traditions (McCargo & Hongladarom, 2004). Traditional Isan instruments such as the Khaen, Phin, and So are essential not only in folk ensembles but also in contemporary fusion genres. Of these, the Phin, a fretted plucked-lute classified as a chordophone, holds particular cultural and pedagogical significance. Its performance embodies regional aesthetics and offers learners both artistic enrichment and potential career pathways in cultural and creative industries.

Nevertheless, the Phin presents technical challenges for novice learners. Unlike many string instruments that emphasize harmonic or chordal functions, Phin playing is predominantly melodic in nature (Miller & Williams, 2017). Mastery requires the memorization of traditional melodic patterns (Lai Phin), intricate coordination of both hands, and synchronization with rhythmic accompaniment within ensemble settings. These demands—particularly the simultaneous control of tone production and rhythmic precision—can be daunting for beginners and may hinder their confidence and long-term engagement with the instrument.

In traditional Isan music pedagogy, transmission of Phin performance techniques is typically conducted through master-apprentice models, wherein revered musicians—often designated as national artists or local musical philosophers—pass down their knowledge through oral instruction and demonstration (Khuntajan, 2024). These sessions are deeply personalized, culturally immersive, and reflective of long-established pedagogical traditions. However, many of these experts are advanced in age and unfamiliar with contemporary educational technologies, posing a significant challenge to the preservation and broader dissemination of their techniques (Wang & Ariunaa, 2024). Documenting and systematizing these teaching methods in an accessible instructional format is crucial for integrating traditional knowledge into modern music education. Such an effort can connect intergenerational gaps and ensure that folk music traditions continue to thrive in both formal and informal learning contexts.

Given the challenges inherent in Phin instruction, brain-based learning (BBL) emerges as a promising pedagogical framework. According to Caine et al. (2015), BBL is an instructional approach informed by principles of cognitive neuroscience, designed to align educational practices with the brain's natural learning processes. It emphasizes emotional engagement, experiential learning, pattern recognition, and meaningful contextualization (Connell, 2009; Jensen & McConchie, 2020). By aligning the intuitive and expressive nature of Phin performance with these principles, a BBL-informed approach could offer more effective strategies for learning retention, technical skill acquisition, and musical expression. If expert-derived performance techniques are adapted into a structured BBL framework, learners can experience deeper engagement, improved cognitive processing of melodic patterns, and more meaningful connections with the cultural essence of Phin music.

Accordingly, this study aims to enhance the Phin performance skills of undergraduate music students through the development of a brain-based instructional package informed by the techniques of expert Phin masters. By translating traditional oral methods into a neuroscience-informed curriculum, this research seeks to bridge the gap between cultural heritage and contemporary educational practices. The outcomes of this study hold potential contributions for the field of music education by offering an innovative, culturally responsive model for preserving indigenous knowledge, supporting musical skill development, and fostering sustainable transmission of regional music traditions in the 21st century.

2. Literature Review

2.1 Phin

The *Phin* is a fretted chordophone traditionally classified as a plucked string instrument and serves as a central feature of the musical heritage of Northeast Thailand, or Isan (Klangphasri, 2023; Miller & Williams, 2017; Un-udom et al., 2022). Although the exact historical origin of the *Phin* is uncertain, similar lute-like instruments with regional variations in construction and nomenclature appear across multiple cultures. Over time, the *Phin* has evolved into three primary forms: acoustic (*Phin Prohng*), electric, and semi-acoustic (*Phin Prohng-Fai-Fa*). Traditional acoustic *Phins* were commonly crafted from jackfruit wood due to its resonant qualities and ease of carving. Other types of wood, such as *mahad* and rosewood, were occasionally used, though they were less common due to their density and limited availability (Un-udom et al., 2022). In modern practice, instrument makers may also use alternative materials such as coconut shells, gourds, bamboo, or turtle shells, often paired with thin wooden or animal skin soundboards to enhance acoustic resonance.

Structurally, the *Phin* comprises several key components, including the resonating body (*tao-phin*), neck (*kho-phin*), headstock (*hua-phin*), frets (*khan baeng siang*), bridge (*yong*), tuning pegs (*luk-bit*), strings (*sai-phin*), and pick. The sound production mechanism varies by instrument type: acoustic *Phins* project sound naturally through a hollow resonator, while electric versions utilize electronic pickups to amplify sound via external devices (Wilart & Chonpairot, 2020). Historically, strings were fashioned from rope or bicycle brake cables, but modern *Phins* typically employ either acoustic or electric guitar strings, depending on the design. Tuning systems and string gauges are often adapted to suit the player's style and the structural characteristics of the instrument. The *Phin* is known for its bright, penetrating timbre and expressive tonal qualities, enabling performers to convey a wide emotional range—from melancholic introspection to vibrant celebration—making it a symbol of Isan musical identity.



Figure 1. Phin Isan

A standard *Phin* is equipped with fixed frets (*khan baeng siang*) that divide the fingerboard into defined pitch intervals. In its three-string form, the instrument can accommodate multiple modal scales, referred to as *Lai*, which correspond with the tonal systems used in *Khaen* music. These include *Lai Yai* (Am), *Lai Noi* (Dm), *Lai Se* (Em), *Lai Sut Sanan* (C), *Lai Po Sai* (F), and *Lai Soi* (G). The *Phin* is often fitted with an additional fret for the semitone interval F# (*Fa Sharp*), which extends its modal versatility beyond that of the traditional *Khaen* (Broughton et al., 2000). This makes the *Phin* suitable for both solo performance and ensemble integration. However, mastering these modes requires a high level of skill, as accurate finger positioning and aural discrimination are crucial for pitch accuracy and stylistic authenticity.

In performance practice, the *Phin* is primarily used for melodic improvisation and ornamentation rather than harmonic accompaniment. A common feature of *Phin* performance is the repetition and variation of *Lai Phin*, or recurring melodic themes, which learners must internalize and reproduce with fluency. This demands the coordination of both hands, with the dominant hand executing various plucking techniques while the other manages pitch modulation and ornamentation through precise fingering. Additionally, rhythmic alignment with percussion and other melodic instruments is essential in ensemble contexts (Sawangchot, 2025). As such, *Phin* performance is a technically and expressively demanding art form that requires both muscle memory and cultural sensitivity.

Although the *Phin* is not primarily a harmonic instrument, chordal textures can be produced through multi-string fingering techniques similar to those used on the guitar. Chords are formed by simultaneously pressing three or more pitches, generating harmonic resonance. However, due to the distinct tuning configuration of the *Phin*, chord shapes and finger placements differ significantly from those on the guitar—even when the chord labels are nominally identical (Sturman, 2019). Consequently, *Phin* learners must develop an instrument-specific understanding of harmonic structure and application, particularly when accompanying vocalists or integrating with contemporary ensembles.

2.2 Brain Based Learning

Brain-based learning (BBL) is an educational approach grounded in principles of neuroscience and cognitive psychology. It is defined as a method of instruction that aligns with how the human brain naturally learns, processes, and retains information (Caine et al., 2015). Central to this approach are key principles such as recognizing the brain's search for meaning and pattern, the role of emotions in learning, the integration of body and mind, and the importance of a rich, stimulating environment (Jensen & McConchie, 2020). Effective brain-based instruction considers various factors including learners' prior knowledge, emotional readiness, and the need for active engagement (Tang, 2017). From a cognitive perspective, BBL supports the idea that memory, attention, and problem-solving are enhanced when instruction is meaningful and connected to real-life contexts (Bonomo, 2017). Additionally, constructivist theories align with BBL, emphasizing the learner's active role in constructing knowledge through experiences (Rodgers & Hales, 2021). These educational foundations encourage teachers to design learning environments that are student-centered, emotionally supportive, and rich in multisensory stimuli.

In the field of music education, brain-based learning offers promising implications. Music, by its nature, involves

cognitive, emotional, and physical processes, making it a fitting area for BBL applications (Viljoen, 2016). Research suggests that learning music stimulates both hemispheres of the brain, enhances memory, and supports motor-skill development through repetitive practice and pattern recognition. When applied to traditional instrumental instruction, such as learning the Phin, BBL can provide strategies that enhance memorization of Lai Phin (melodic themes), develop coordination between both hands, and foster deeper emotional engagement with the music. This is to create a learning experience that resonates with students' brains—through storytelling, movement, visualization, and pattern-based repetition—Phin instruction. Ultimately, BBL supports the preservation of cultural heritage by making traditional music learning accessible, engaging, and aligned with how learners naturally acquire complex skills.

2.3 Previous Studies

Brain-based learning has increasingly gained attention in the field of music education as a strategy for enhancing music skill development. Although traditionally underutilized, recent research highlights its potential to transform music instruction by aligning pedagogical practices with cognitive and emotional processes in the brain. According to Artıktay (2024), cognitive neuroscience offers valuable insights into how music learning engages various brain functions such as memory, auditory processing, and motor coordination. Cole (2011) also advocated for the integration of brain-based research into music education, suggesting that when teachers understand how the brain responds to music, they are better equipped to foster musical growth, creativity, and engagement among students. Supporting this notion, Raponi (2024) conducted an action research pilot study on beginning band students and found that applying brain-based learning strategies—such as movement-based exercises, emotional connection, and pattern recognition—led to improved student focus, motivation, and instrumental technique. In the domain of technology-assisted learning, Jandaghian et al. (2023) demonstrated how a brain-emotional learning model could be used in music emotion recognition systems, suggesting further intersections between cognitive models and musical experience.

Despite growing interest in brain-based learning, previous studies have not paid sufficient attention to its application within music education. As far as can be determined, only a few studies—namely Artıktay (2024), Cole (2011), Jandaghian et al. (2023), and Raponi (2024)—have explored the relationship between brain-based learning and music instruction. This is notably limited given the strong alignment between brain-based learning principles and the core components of music skill development, which include coordinated movement, memory retention, and creative expression. These are precisely the areas in which brain-based strategies excel. Furthermore, no studies to date have examined the use of brain-based learning in the context of folk music instruments, nor have they considered how the teaching methods of traditional masters could be systematically analyzed and integrated into brain-compatible instructional design. This gap highlights the need for studies that not only apply brain-based learning to music education but also contextualize it within culturally significant practices such as Phin performance. Therefore, the current study applied the principles of brain-based learning to instruct the teaching of Phin masters in developing Phin playing skills of music major students. The purposes of the study were 1) To examine the instructional methods and techniques used by expert Phin masters in traditional Isan music performance, 2) To develop a brain-based learning instructional package for Phin performance based on the expert masters' approaches, 3) To investigate the learning outcomes in Phin performance skills of students who were taught using the developed brain-based instructional package.

3. Methodology

3.1 Research Design

This study employed a developmental research design consisting of three main phases to achieve its objectives. In the first phase, a qualitative approach was used to explore and analyze the teaching techniques of expert Phin performers through interviews and observations. In the second phase, the data collected from the experts were synthesized and used to design a brain-based instructional package aimed at developing Phin performance skills. This package was structured around principles of brain-based learning, emphasizing active engagement, emotional connection, and multisensory input. In the third phase, an experimental approach was applied to evaluate the effectiveness of the instructional package. Students majoring in music were selected as participants, and their performance skills were assessed before and after the intervention to determine learning outcomes.

3.2 Phase 1 Examining the Instructional Methods and Techniques Used by Expert Phin Masters in Traditional Isan Music Performance

The semi-structured interview protocol was designed to elicit rich, in-depth qualitative data regarding traditional

instructional approaches. Open-ended questions were crafted to explore both the teaching perspectives of *Phin* masters and the learning experiences of their students. For *Phin* masters, sample questions included:

1. What is your typical process for initiating instruction with a new *Phin* student?
2. How do you introduce and teach *Lai Phin* (melodic patterns)?
3. What common challenges do students encounter when learning the *Phin*?
4. How do you adapt your teaching methods to suit individual student learning styles?

For students, the interview focused on their experiences and perceptions of the instruction they received. Sample questions included:

1. How does your teacher typically begin a *Phin* lesson?
2. What specific techniques or melodic patterns have you learned so far?
3. How do you retain and practice the melodic lines introduced by your teacher?
4. How would you describe your overall learning experience with your teacher?

Each interview question was tested by 3 experts with content validity (IOC = 0.67-1.0).

Data from interviews and observations were analyzed using content analysis to identify and categorize the instructional techniques and methods used by the **Phin** masters. These findings served as the foundation for the development of the brain-based instructional package in Phase 2.

3.3 Phase 2 to Develop a Brain-Based Learning Instructional Package for Phin Performance Based on the Expert Masters' Approaches

The second phase of the study aimed to develop a brain-based learning instructional package for *Phin* performance based on the instructional methods and techniques identified in Phase 1. Data gathered from expert *Phin* masters in the first phase were used as the core content for designing the learning package. The instructional design was guided by the principles of brain-based learning, which emphasize active engagement, emotional connection, pattern recognition, and multisensory input. Participants in this phase included the same eight *Phin* masters from Phase 1 and five scholars in music education. The scholars were selected using purposive sampling based on the following criteria: (1) over 10 years of experience in music education, (2) holding academic ranks such as assistant professor or higher, and (3) possessing research experience in music instruction or curriculum development. The instruments used in this phase included a draft version of the brain-based learning instructional package and an expert evaluation form. The evaluation form assessed key components such as appropriateness for music education at higher education level, quality of Folk music education, and quality of brain-based learning. Feedback from both the *Phin* masters and scholars was used to revise and finalize the instructional materials for implementation in the next phase.

3.4 Investigating the Learning Outcomes in Phin Performance Skills of Students Who Were Taught Using the Developed Brain-Based Instructional Package

The third phase of the study aimed to investigate the learning outcomes in *Phin* performance skills among students who were taught using the developed brain-based learning instructional package. This phase involved 10 undergraduate music major students enrolled in a public university in Thailand. While the participants had prior experience with conventional musical instruments, learning the *Phin* was new to them. The participants were selected using a convenient sampling method and were divided into two groups: the control group ($n = 5$), which received instruction through traditional methods such as lecture, demonstration, and practice; and the experimental group ($n = 5$), which received instruction using the brain-based instructional package developed in Phase 2.

The brain-based instructional package for *Phin* performance included clearly defined learning objectives, structured learning activities, and assessment guidelines over a six-week period. The activities were designed following the principles of brain-based learning—beginning with emotional engagement and prior knowledge activation, followed by hands-on, multisensory learning tasks, and concluding with reflection, reinforcement, and performance-based practice. Students were guided through six traditional *Phin* songs, learning one song per week through progressively scaffolded instruction.

To evaluate performance, a *Phin* performance assessment form was used. This tool assessed students based on the number of note mistakes made during test performances. The criteria were as follows:

- 5 points: No mistakes – interpreted as very high performance
- 4 points: No more than 2 mistakes – high performance

3 points: No more than 4 mistakes – moderate performance

2 points: More than 4 but not more than 6 mistakes – low performance

1 point: More than 6 mistakes – needs improvement

Data were analyzed using mean scores, standard deviation, and a dependent t-test to determine the effectiveness of the brain-based instructional package in improving students' Phin performance skills compared to the traditional teaching method.

4. Results

The findings from Phase 1 revealed several key characteristics of the instructional methods used by the eight expert Phin masters. First, it was found that all masters employed highly effective teaching techniques that allowed learners to gain a clear and accurate understanding of Phin performance. A notable method was the use of analogies and vivid descriptions to help students grasp musical concepts, which contributed to correct and aesthetically pleasing execution in accordance with traditional principles. The instruction followed a systematic sequence and was adaptable to individual learners' abilities and strengths. As a result, students were able to develop their skills and understanding of Isan folk music to their fullest potential while also cultivating a positive attitude toward traditional music—an essential foundation for learning not only the Phin but also other forms of Isan musical instruments.

Secondly, the masters served as role models for their students in multiple dimensions, including musical expertise, moral values, and life philosophy. Their ethical conduct and lifestyle choices were clearly observed and appreciated by their pupils, who viewed them as sources of both inspiration and discipline. Thirdly, the masters demonstrated genuine love and compassion for their students. They openly shared their knowledge without withholding any details and showed deep care for their students' overall well-being—emotionally, socially, and professionally. Some, such as blind masters Boonma Khawong and Pornchai Buasri, maintained strong emotional connections by continuously checking on their students' lives and offering support when needed. This nurturing approach reflects the traditional teacher-student bond deeply rooted in Isan folk music culture.

Lastly, all eight masters displayed seriousness and sensitivity in their teaching. They showed strong dedication to ensuring that each student could perform accurately and beautifully before progressing to new content. Their attention to detail—particularly in achieving high sound quality in every note—was a shared trait that contributed significantly to their success as music educators. These traditional yet effective teaching characteristics offer valuable insights for integrating into modern educational frameworks, especially within formal institutions aiming to preserve and promote Isan musical heritage.

The analysis of instructional content revealed that the teaching of Phin performance by expert masters followed a comprehensive and structured progression from foundational to advanced levels. The content could be categorized into four main components: instructional drills, melodic patterns (Lai Phin), performance knowledge, and practical playing skills.

Instructional Drills

Short melodic phrases and technical exercises were used to train specific skills such as plucking, rolling, tremolo, accenting, brushing, flicking, upward/downward plucking, and cut plucking. These drills were appropriately selected and sequenced to match the learner's skill level and support gradual technical development.

Melodic Patterns (Lai Phin)

A series of Lai Phin or practice songs were employed to strengthen skill acquisition. These included beginner, intermediate, and advanced melodies. While the specific patterns varied, the goal was consistent: to develop technical fluency and musical understanding. Flexibility in song selection allowed adaptation to learners' needs and performance contexts.

Knowledge of Performance Techniques

Students were taught both theoretical and practical aspects of Phin playing, including different methods of pick-holding, correct sitting and standing posture, expressive hand techniques, tonal control, and improvisation based on traditional phrasing structures. Emphasis was also placed on scale exercises that promote strength, fluency, and accuracy.

Practical Playing Skills

Learners developed a range of performance skills, including accurate picking techniques, graceful posture,

expressive tone production, and familiarity with a variety of performance styles. These skills reflected a deep understanding of traditional Phin music and supported students in achieving high levels of performance proficiency.

Table 1. Expert Evaluation of the Draft of Brain-Based Learning Instructional Package for Phin Performance Based on the Expert Masters' Approaches

Lesson plan	Expert evaluation				
	Appropriateness for music education at higher education level	Folk music education	Brain-based learning	\bar{x}	S.D.
1	4.111	4.462	4.359	4.311	0.147
2	4.278	4.333	4.000	4.204	0.146
3	4.333	4.333	4.028	4.231	0.144
4	4.389	4.667	4.182	4.413	0.199
5	4.778	4.661	4.000	4.480	0.343
6	4.778	4.661	4.000	4.480	0.343
Overall	4.378	4.491	4.114	4.328	0.235

The results of the studies indicate that the quality of the brain-based learning instructional package for Phin performance based on the expert masters' approaches was at a high level ($\bar{x} = 4.328$, S.D. = 0.235). Moreover, all aspects of evaluation namely appropriateness for music education at higher education level ($\bar{x} = 4.378$), quality of folk music education ($\bar{x} = 4.491$), and quality of brain-based learning ($\bar{x} = 4.114$) were also at high level. The eight experts' comments were also taken into consideration in the revising process of the instructional package before implementation in the third phase.

Table 2. The Comparison between the Conventional Teaching and Brain-based Learning

Test	N	\bar{x}	S.D.	t
Conventional	5	2.71	0.69	3.034*
BBL	5	3.07	0.75	

P<0.05

Table 2 compares the performance outcomes between students taught using conventional methods and those taught using the brain-based learning (BBL) instructional package. The results show that the mean score for the BBL group ($\bar{x} = 3.07$, S.D. = 0.75) was higher than that of the conventional group ($\bar{x} = 2.71$, S.D. = 0.69). The t-test analysis yielded a statistically significant difference between the two groups ($t = 3.034$), indicating that students who learned through the brain-based instructional package performed better in Phin performance than those who received traditional instruction.

5. Discussion

The results of this study provide compelling evidence that a brain-based learning (BBL) approach can substantially enhance students' *Phin* performance skills when compared to conventional instructional methods. Participants who engaged with the BBL instructional package demonstrated superior musical accuracy and higher overall performance scores. These outcomes reinforce the theoretical premise that multisensory, emotionally resonant, and student-centered learning environments foster more effective musical skill acquisition. This finding is consistent with existing literature (e.g., Artıktay, 2024; Cole, 2011; Jandaghian et al., 2023; Raponi, 2024), which highlights the efficacy of instructional models that align with cognitive and emotional processes in the brain. By leveraging principles such as pattern recognition, embodied learning, and affective engagement, BBL supports not only technical development but also sustained motivation and meaningful musical understanding.

Importantly, the instructional content in this study was rooted in the pedagogical knowledge of master *Phin* performers, whose teaching methods reflect deeply embodied cultural practices. Techniques such as the use of metaphor, analogy, imitation, and oral repetition resonate with the core tenets of brain-based learning, particularly the emphasis on contextual and experience-driven instruction. The translation of these traditional, apprenticeship-based methods into a structured BBL framework served as a critical bridge between indigenous knowledge systems and

contemporary educational neuroscience. This hybrid model preserved the cultural integrity of *Phin* instruction while making it pedagogically adaptable for institutional implementation. As such, it exemplifies how cultural heritage and educational innovation can be mutually reinforcing in the design of effective music curricula.

The implications of these findings are profound for the field of music education, especially in settings where non-Western musical traditions are marginalized or underrepresented in formal instruction. The success of the BBL approach in facilitating both technical proficiency and expressive performance in a culturally rooted instrument like the *Phin* underscores the value of integrating neuroscience-informed strategies into heritage music education. Moreover, it demonstrates that BBL is not limited to Western classical paradigms but is flexible and responsive enough to accommodate diverse musical cultures. For educators, curriculum designers, and policymakers, this suggests a powerful pedagogical opportunity: to revitalize traditional music learning by honoring its cultural essence while enhancing its accessibility, sustainability, and pedagogical rigor through research-based instructional design.

6. Conclusion

This study aimed to develop and evaluate a brain-based learning instructional package for *Phin* performance grounded in the traditional teaching techniques of expert Isan *Phin* masters. The findings revealed that students who received instruction through the brain-based package outperformed those taught through conventional methods, demonstrating greater accuracy and fluency in their *Phin* playing. The package effectively combined neuroscience-informed teaching principles with cultural authenticity.

The integration of brain-based learning with folk music pedagogy offers a valuable approach for enhancing music education, especially in contexts where traditional art forms are at risk of fading. This study highlights the potential for educators to bridge modern instructional theory with indigenous knowledge systems to create engaging and effective learning experiences. The results underscore the importance of culturally responsive teaching methods and support the continued development of instructional models that honor local wisdom while leveraging contemporary educational research.

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The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

Provenance and peer review

Not commissioned; externally double-blind peer reviewed.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

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