

How music education students embrace pre-performance rituals to enhance their craft

Psychology of Music

1–21

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DOI: 10.1177/03057356251331062

journals.sagepub.com/home/pom

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Abstract

We investigate the prevalence, development, and impact of pre-performance rituals among music education students, uncovering their significant role in enhancing individual and group performance and in fostering community and belonging. Our study employed a mixed-methods approach, combining a survey of 97 undergraduate music students with an in-depth qualitative analysis of open-ended responses. We developed a novel framework to categorize rituals based on their instrumental purpose, psychological influence, and symbolic significance. With 93% of participants incorporating rituals into their preparation, these practices range from symbolic actions to direct performance strategies, highlighting a deep engagement with rituals across a spectrum of music disciplines. Our research further explores the development of these rituals through personal experimentation and community influence, emphasizing the critical role of educators and peers in shaping these practices. Group rituals, in particular, strengthen feelings of camaraderie and support among ensemble members, reinforcing the importance of rituals in creating a cohesive and supportive musical community. Our results offer insights for educators to integrate ritualistic practices into teaching strategies to enhance students' performance, group identity, and psychological well-being.

Keywords

rituals, routines, socio-emotional learning, performance, emotion management

Music education is a journey of passion and perseverance, but it is also fraught with unique emotional challenges that can test even the most dedicated students. As young musicians hone their craft, they often grapple with a silent adversary: anxiety. From the solitary hours spent mastering difficult passages to the heart-pounding moments before a recital, anxiety, and uncertainty loom large over a student's musical journey (Kenny & Osborne, 2006).

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For some students, anxiety arises from the demands of translating abstract musical concepts into tangible performances, all while developing their artistic voice. This process is intensely personal yet paradoxically public, as their growth is constantly on display through performances and evaluations. The fear of judgment—from peers, instructors, audiences, and parents—can be overwhelming, often leading to a heightened state of self-consciousness that interferes with the joy of making music (Gomez et al., 2018; Osborne et al., 2005).

For other students, the source of anxiety stems from parents who harbor high or unrealistic aspirations for their children's musical accomplishments, which can inadvertently place additional pressure on young musicians. Osborne et al. (2005) found that young musicians perceiving elevated expectations from their parents were prone to feelings of inadequacy, fear of failure, and heightened stress during performances. The fear of not meeting these parental standards can create high trait and state anxiety, causing young musicians to be preoccupied with thoughts of disappointing their parents or facing their disapproval (Osborne, 2016).

The challenges posed by anxiety in music education have not gone unnoticed, sparking numerous initiatives and interventions aimed at helping students navigate their anxiety in music contexts (Gómez-López & Sánchez-Cabrero, 2023; Komarenko et al., 2024). Meta-analyses of these interventions have shed light on effective strategies for managing music performance anxiety (Mazzarolo et al., 2023). Cognitive-behavioral therapy has emerged as a particularly promising approach, showing consistent positive outcomes across multiple studies (Kenny, 2005). Relaxation techniques and mental skills training have also demonstrated significant benefits in reducing anxiety and enhancing performance quality (Burin & Osório, 2017). In addition, exposure-based interventions, which gradually acclimate students to performance situations, have shown promise in building resilience and reducing anxiety over time (Brugués, 2011).

Despite these advancements, there remains a need to explore more personalized, student-driven approaches to anxiety management. One such approach is the use of pre-performance rituals, which, while common among performers, has been less formally examined within music education. This study investigates the prevalence, development, and impact of pre-performance rituals among music education students, aiming to uncover their potential role in enhancing performance, fostering community, and contributing to psychological well-being.

Pre-performance rituals are structured sets of actions or behaviors in which musicians engage before performing, often carrying personal or symbolic significance. A violinist might adjust her hairpin three times while a choir joins hands in a circle of encouragement. These rituals, ranging from simple personal routines to more elaborate group practices, offer a unique avenue for students to manage their anxiety and enhance their performance. Rituals are deeply rooted in human culture and psychology and may offer a unique bridge between traditional anxiety management techniques and the specific needs of music students. By examining pre-performance rituals in the context of music education, we can potentially uncover valuable tools for anxiety management that are both personally meaningful to students and practically applicable in various performance settings.

Pre-performance rituals

Rituals have been a fundamental aspect of human culture and have served as powerful tools to forge spiritual connections and strengthen communal bonds. From ceremonial offerings to structured dances, these symbolic acts aim to create a shared sense of unity and purpose (Rappaport, 1999; Whitehouse & Lanman, 2014). Music rituals have played a particularly significant role across societies. Ancient cultures revered melodies and rhythms for their perceived

therapeutic capabilities, often incorporating them into sacred healing traditions (Becker, 2004; Merriam, 1964). These practices highlight the profound interconnectedness of music performance, spirituality, and communal identity—a triad that continues to resonate in modern musical contexts.

In music education, students often engage in rituals before delivering a performance, known as pre-performance rituals. These are deliberate, repeated actions designed to help students manage performance anxiety, boost their confidence, and prepare mentally and emotionally. These rituals include making positive affirmations like “I am confident” and engaging in targeted warm-up routines (Broomhead et al., 2010, 2012; Talbot-Honeck & Orlick, 1998). Rituals involving the centering method, which combines deep breathing with visualization, are effective in helping performers achieve a focused, calm state (Greene, 2002; Osborne et al., 2014). In addition, singers often use rituals in the form of affirmations like “bold” and “expressive” to mentally prepare and enhance their interpretations (Broomhead et al., 2010, 2012, 2018).

How do pre-performance rituals work? These practices operate through multiple psychological and physiological mechanisms to alleviate anxiety and enhance performance. To begin, rituals provide a structured sequence of actions and they satisfy a fundamental need for order and control in high-pressure situations (Boyer & Liénard, 2006). Rituals, in this sense, serve as psychological anchors, transitioning musicians from a state of anxiety to one of focused confidence (Diaz, 2018).

Rituals can also promote calm and focus through meditation-like effects (Kabat-Zinn, 2003), as well as cognitive reappraisal (Brooks, 2014). Moreover, they also boost confidence and resilience by generating a sense of efficacy (White, 1959), acting as psychological cues for readiness (Bandura, 1997), and imbuing goals with greater meaning (Kapitány & Nielsen, 2015). Physiologically, many rituals incorporate relaxation techniques that activate the parasympathetic nervous system, directly counteracting the physical symptoms of anxiety (Kenny et al., 2011).

Pre-performance rituals, when performing in a group, can play a vital role in fostering unity, shared purpose, and collective identity among music students. Group rituals strengthen social bonds and group identity in ensembles (Nikkanen & Westerlund, 2017). They promote a collective mindset, encouraging group members to unify their goals and motivations (Marshall, 2002; Walton et al., 2012). Even simple activities such as holding hands, sharing a moment of silence before a performance, or wearing matching attire can strengthen social bonds, align ensemble objectives, and heighten the sense of unity and motivation (Reddish et al., 2013; Walton et al., 2012). The benefits of these rituals extend beyond immediate performance enhancement, tapping into a deeper need for interdependence and collective unity (Ryan & Deci, 2000).

For instance, anthropological research reveals that participation in group rituals signals a commitment to shared values and norms (Sosis & Alcorta, 2003). Synchronization plays a crucial role, with studies demonstrating that synchronized activities increase feelings of connection and trust among group members (Wen et al., 2016, 2023; Wiltermuth & Heath, 2009). In musical contexts, this synchronization often occurs naturally through collective singing, drumming, or coordinated movement. Even minor ritualistic routines can enhance in-group affiliation among children (Wen et al., 2016).

While pre-performance rituals have been studied extensively in sports and, to some extent, in professional music settings, there is a notable gap in our understanding of how these rituals function specifically within music education. Little is known about how music students develop and use these rituals, how effective they perceive them to be, or how educators can best support

beneficial ritual practices. Moreover, the relationship between ritual use, anxiety levels, and superstitious beliefs among music students remains largely unexplored. This study aims to address these gaps by providing a examination of pre-performance rituals in the context of music education, with a particular focus on their role in anxiety management and performance enhancement for students.

What makes a pre-performance ritual?

Pre-performance practices play a crucial role in preparing individuals for optimal performance. Researchers have extensively studied these practices, often using the terms “pre-performance routine” and “pre-performance ritual” interchangeably (Bonk et al., 2019; Gröpel & Mesagno, 2019; Hawkes, 2021; Tief & Gröpel, 2021). However, it can be important to distinguish and better appreciate the unique ways performers prepare themselves mentally and physically (see Table 1).

Pre-performance *routines* are defined as systematic sequences of task-relevant thoughts and actions consistently carried out before performance execution (Moran, 1996). These routines are primarily designed to improve performance by optimizing physical and mental readiness (Cohn, 1990). They typically have a clear, practical purpose directly related to the performance task, such as warm-up exercises, equipment checks, or mental rehearsal of performance sequences.

In contrast, pre-performance rituals are formal, repetitive behaviors that may lack direct instrumental purpose but are believed by the practitioner to have a positive impact (Hobson, Bonk, & Inzlicht, 2017). While rituals may aim to improve performance, their primary function is often psychological, providing a sense of control or comfort (Schippers & Van Lange, 2006). Rituals also hold symbolic or psychological meaning for those performing them. This is what separates human rituals from innate animal behaviors. Humans imbue symbolic significance into their rituals. As an example, some singers might sprinkle salt on their sheet music to enhance expressiveness, whereas others might do it to clear away negative thoughts (Brooks et al., 2016). The same action can carry different symbolic meanings that shape how people approach the ritual. Rituals can be highly individualized and may include elements of superstition or personal significance, such as wearing “lucky” items or engaging in symbolic actions not directly related to the performance task.

The key differences between routines and rituals lie in their instrumentality, rationality, flexibility, and psychological function. Routines are directly instrumental to performance and based on rational preparation strategies, whereas rituals may lack clear instrumental purpose and involve elements of superstition or personal belief. Routines can be more easily modified based on their effectiveness, whereas rituals often persist regardless of their actual impact on

Table 1. A Conceptual Breakdown of a Routine versus a Ritual.

Characteristic	Pre-performance routine	Pre-performance ritual
Purpose	Improve performance through physical and mental preparation	Provide psychological comfort and a sense of control
Basis	Rational, task-relevant actions	May include superfluous or symbolic elements
Flexibility	Can be modified based on effectiveness	Often persists regardless of the actual impact
Instrumentality	Direct link to performance	May lack direct instrumental purpose
Personalization	Generally consistent across performers	Highly individualized
Examples	Warm-up exercises, equipment checks	Wearing “lucky” items, symbolic gestures

performance (Cotterill, 2010). In practice, the line between routines and rituals can be blurred, with many performers incorporating elements of both in their pre-performance practices. The distinction often lies in the perceived purpose and meaning attributed to the actions of the performer (Czech et al., 2004).

We and others (Werner et al., 2021) view pre-performance activities as existing on a continuum between routine and ritual. Many actions combine practical purposes with symbolic meanings, making it challenging to categorize them definitively. Nevertheless, we attempt to make a distinction between pre-performance routines and rituals, which can be helpful for both researchers and practitioners in the field of music education. For researchers, this distinction offers a framework for examining how musicians prepare for performance and how these practices influence both their outcomes and psychological well-being. For practitioners, recognizing the difference between routines and rituals can lead to more effective guidance for students. By understanding that rituals offer unique psychological benefits beyond the practical advantages of routines, educators can help students develop personalized, meaningful practices that enhance both their technical preparation and emotional readiness for performance. This approach acknowledges the power of rituals in fostering a sense of control, comfort, and personal connection to the performance, potentially leading to more holistic and effective pre-performance strategies for music students.

Another essential aspect of our study is to formally analyze the underlying factors driving ritualistic behavior in music students. We aim to determine whether these rituals stem primarily from superstitious beliefs and excessive personal anxiety or if they have independent, psychologically powerful foundations. Research in sports psychology offers valuable insights into this question. Studies have shown that while some athletes engage in superstitious behaviors as a coping mechanism for anxiety, potentially increasing their risk for anxiety-related disorders (Armstrong & Oomen-Early, 2009; Lang et al., 2015), others use rituals as effective tools to enhance focus, create a sense of control, and boost self-efficacy (Burke et al., 2006; Feltz et al., 2008). It is crucial that we begin documenting the potential maladaptive predictors of ritual and distinguish between these potentially harmful superstitious behaviors and purposeful rituals. The latter can serve as effective coping mechanisms, potentially reducing anxiety and improving performance outcomes (Ofori et al., 2017). By recognizing these differences, music educators can better support their students' mental health while fostering practices that enhance performance and well-being.

Current study

The present study aims to investigate the role of pre-performance rituals among music education students. We seek to examine the nature, prevalence, and perceived benefits of these rituals, as well as their development over time. Specifically, we aim to address the following research questions: what types of rituals do students adopt, and in what settings do they typically use them? How do students develop and refine their personal rituals over time? What role do group rituals play in fostering a sense of cohesion before performances? Is ritual use correlated with general anxiety or superstitious behavior?

Based on the existing literature, we propose several hypotheses. First, we predict that the majority of music education students will report using pre-performance rituals, with a diverse range of practices that can be categorized into direct (e.g., warm-ups) and indirect (e.g., meditation) rituals. Second, we hypothesize that students will predominantly use rituals to manage performance-specific stress rather than general anxiety, serving as psychological anchors for transitioning from anxiety to focused confidence (Diaz, 2018). Third, we expect that students

who engage in group rituals will report higher levels of perceived group cohesion and unity before performances, aligning with research on the social benefits of collective rituals (Reddish et al., 2013). Fourth, we anticipate that ritual use will be more strongly associated with performance enhancement strategies than with superstitious beliefs, reflecting the distinction between psychologically beneficial rituals and mere superstitious acts (Geeves & McIlwain, 2009).

In summary, we seek to bridge the gap between our understanding of music performance anxiety and the potential role of pre-performance rituals in managing this anxiety. By examining the types of rituals students use, how they develop these rituals and the perceived benefits of these practices, we aim to provide a picture of ritual use in music performance. Furthermore, we investigate the relationship between ritual use and factors, such as general anxiety and superstitious beliefs, helping to distinguish between potentially maladaptive behaviors and beneficial coping strategies. Our findings could have significant implications for music educators, offering insights into how to foster positive ritual practices that enhance both performance and student well-being. Ultimately, this research contributes to the broader goal of developing more effective, student-centered approaches to managing anxiety and improving performance in music education.

Method

Design and participants

We employed a cross-sectional survey design to investigate pre-performance rituals among undergraduate music education students. The survey was structured to capture data on ritual types, development, usage contexts, perceived effectiveness, and potential correlates with personal and psychological characteristics.

Our sample comprised ($N = 97$) undergraduate music education majors from a midwestern university. While these students were pursuing degrees in music education, all participants were actively studying either an instrument or voice as part of their degree requirements and regularly performed both solo and in ensembles. Participants' primary performance areas included: Voice ($n = 33$), Strings ($n = 3$), Brass ($n = 22$), Woodwind ($n = 19$), and Percussion ($n = 8$). Given that the domains were imbalanced, we avoided providing specific results for each domain.

This study was approved by the Institutional Review Board at Ball State University (protocol #2086240-2). All participants signed informed consent forms prior to participation and were informed they could withdraw at any time without penalty. Data were collected and stored according to approved protocols to protect participant confidentiality. Participants were recruited through research participation credit requirements.

Measures

We grouped the survey items into several sections, each aimed at exploring different aspects of ritual use among music students. Recognizing a significant gap in research on pre-performance rituals in music education, we designed a survey to examine into students' ritual practices, the scenarios in which they use these rituals, and how they develop them. The research team developed the survey items, drawing on our review of the literature on pre-performance rituals. To maintain the flow and brevity of this article, we provide a succinct description of the item types below. Readers are encouraged to refer to Appendix 1 for the complete list of items used in their original wording and scales used.

Type of pre-performance rituals. We focused on discovering the variety of rituals students use and how common each one is. We asked students an open-response question to describe their specific rituals in detail, followed by a “check-all-that-apply” question with a list of options like “visualizing the performance,” “wearing lucky attire,” and “engaging in relaxation techniques.” This approach allowed students to share both unique and commonly recognized rituals.

Context for ritual use. We asked students to rate how often they use their rituals in various situations, including “auditions,” “jamming sessions,” and “streaming online performances,” among others. Students rated each situation using a scale that ranged from “never” to “always.”

Perceived effectiveness. We assessed the perceived benefits students believe they get from their rituals. Students evaluated how their rituals help with issues like “calming nerves,” “aiding memory recall,” “improving luck,” and “energizing before a performance.” We used a Likert scale to measure the effectiveness of rituals in enhancing performance, mental well-being, and physical preparedness. We also explored how missing a ritual might affect their performance.

Ritual development. Students were queried on the origins of their rituals, including how they developed them and why they began using them. We presented students with multiple-choice and open-ended questions to uncover the pathways through which students discover and adopt their pre-performance practices.

Group pre-performance rituals. This section included an open-ended question about students’ experiences and feelings toward participating in group pre-performance rituals, specifically whether such practices enhanced their sense of belonging. We also asked students to report a simple yes or no about whether they have ever been in a group ensemble or orchestra that had a shared ritual. These items aimed to explore the communal aspect of rituals in music settings.

Correlates of pre-performance ritual use. We examined factors potentially associated with ritual use, including (a) General Anxiety: measured using a single self-rating item. (b) Superstitious Beliefs: assessed using a modified version of the Superstitious Belief Scale (Tobacyk, 2004). This scale, originally developed to measure various dimensions of paranormal belief, includes a superstition subscale. We selected three items from this subscale and adapted them for our study. The original scale demonstrates good reliability and validity across different cultures (Tobacyk, 2004). In our adaptation, we used a 4-point Likert scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). To increase the relevance of our sample, we also included a custom item about a local campus superstition.

Results

Frequency and type of pre-performance rituals

We began by addressing how common rituals are used. We found that more than 93% of the music students surveyed reported using at least one pre-performance ritual. On average, students described using 2.84 ($SD = 1.89$) rituals in the open-ended question but selected about six rituals ($M = 6.11$, $SD = 3.03$) from the provided list in the Select-all-that-apply question. This discrepancy likely stems from the open-ended question tapping into more recent memories,

Table 2. Frequency and Type of Pre-Performance Rituals.

Ritual	Select-all-that-apply	Open response
	<i>M (SD)</i>	<i>M (SD)</i>
Other	.06 (.23)	.14 (.44)
Using scents and aromas	.07 (.25)	.00 (0)
Specific mantra or phrase	.12 (.32)	.07 (0.25)
Vocal warm-up	.27 (.45)	.06 (0.23)
Lucky attire	.28 (.45)	.14 (0.35)
Specific food or drink	.29 (.46)	.22 (0.42)
Group ritual	.30 (.46)	.18 (0.38)
Meditation	.33 (.47)	.08 (0.27)
Following routine	.33 (.47)	.14 (0.35)
Positive affirmation	.34 (.48)	.10 (0.3)
Listening to specific music	.34 (.49)	.13 (0.34)
Review mental and physical cues	.38 (.49)	.07 (0.25)
Imaging success	.42 (.50)	.09 (0.29)
Physical exercise	.42 (.50)	.07 (0.25)
Reviewing	.49 (.50)	.29 (0.46)
Relaxation technique	.52 (.50)	.14 (0.35)
Visualization	.54 (.50)	.14 (0.35)
Calming breathing	.69 (.47)	.33 (0.47)
Prayer or Spirituality		.09 (0.29)
Self-Distraction		.09 (0.29)
Self-Talk		.16 (0.36)
Social Support		.11 (0.32)

Note. Responses provided for the select all that apply question in which students were asked, “Which of the following pre-performance rituals do you use? (Check all that apply).” We also summarize our coded data for the open response question on what rituals people use. This led us to create three additional categories that were not included in the select all that apply category (i.e., self-distraction).

whereas the checklist triggered students’ recognition memory and allowed students to report all rituals ever used, suggesting a combination of current and historical ritual use.

When analyzing the types of rituals most commonly reported, we differentiated between rituals mentioned in open responses and those selected from the checklist of rituals. In the Select-all-that-apply responses, calming breathing was the most frequently reported, with 69% of participants noting its use. Visualization and relaxation techniques also received significant mentions, being used by 54% and 52% of students, respectively. Other notable rituals included reviewing (49%) and physical exercise (42%; see Table 2 for the complete list). This indicates that music education students employ a wide range of rituals, with calming breathing standing out as the most popular method. It is important to understand that these percentages represent the proportion of students who mentioned each ritual, not the percentage of all rituals mentioned. Thus, the percentages do not add up to 100%, as students could list multiple rituals.

For the open-response question, students listed a number of similar strategies but also noted some unique rituals not captured by our previous question. Calming breathing was reported by 33% of students, making it the most common ritual, followed by reviewing the repertoire

(29%), and consuming specific foods or drinks (22%). The open-response question also allowed us to identify other common rituals used that were not captured by the list of items provided in the select-all-that-apply item. We list these additional categories at the bottom of Table 2.

Our findings reveal that music education students employ a diverse array of pre-performance practices, often blending routines and rituals in personalized combinations. These practices range from those with direct, practical links to performance to those with more symbolic, indirect connections. For example, one sophomore flute student described a multifaceted approach:

"I mostly spend a lot of time taking deep breaths to steady my heart rate from before performance stress and anxiety. After taking deep breaths, I say positive affirmations like 'You'll be great', 'You've worked for this', etc. I also do some basic stretches that help release tension in the muscles and help loosen them so I can increase my performance ability."

This response illustrates how students often integrate practical routines (deep breathing, stretching) with more ritual-like practices (positive affirmations) to prepare themselves both physically and mentally.

Other students reported rituals with a stronger emphasis on symbolism and indirect performance links. For instance, a student in the ninth year of playing trumpet mentioned:

"Usually, I will take time before a concert and listen to music that makes me feel happy, rather than the concert music. While that music is playing, I will get ready and gather lucky items (a brooch and stone necklace). The day before, I will also typically only drink water."

These examples highlight the spectrum of pre-performance practices students adopt, from those directly aimed at improving performance to those focused on creating a comforting or symbolically significant pre-performance experience. This variety underscores the individualized nature of these practices and how students adapt them to their personal needs and beliefs.

We next coded whether the reported rituals contained particular elements that have been used to define rituals (Hobson et al., 2017). We asked if the ritual(s) described contained any direct links to the intended performance, such as rehearsing the musical piece. We also asked about indirect links, which refer to activities known for their psychological, emotional, or physical benefits, such as meditation and anxiety reduction exercises, which might indirectly enhance performance. We also coded whether the reported ritual contained symbolic elements, which we operationalized as actions that hold personal or communal significance for musicians. Symbolic actions are distinguished by their personal interpretations and tied to the musician's beliefs or emotions and memories. See Appendix 2 for our codebook and examples.

We focused on coding the responses that each participant provided for the open-ended question specifically, as this allowed students to give more details about how they use the ritual and what it might mean for them. If a participant reported three different rituals in the open-ended question, each ritual was coded on whether they contained direct, indirect, and symbolic elements. Among the open-ended reports of rituals, 37% of them were coded as containing direct links to performance. This includes warm-ups and touching up specific parts of the performance that need additional attention. By contrast, 71% of the rituals reported contained indirect physical or psychological links. This includes breathing and visualization exercises. Among all of the rituals reported, we found that more than 43% of the reported rituals contained symbolic elements. The fact that many rituals contained symbolic elements reflects the personal

Table 3. The Context for the Use of Pre-Performance Rituals.

Variable	<i>M</i>	<i>SD</i>
Jamming session	0.24	1.18
Rehearsal session	2.67	1.20
Group rehearsal	2.88	1.30
Solo rehearsal	3.06	1.43
Recording session	3.52	1.22
Streaming online	3.72	1.46
Broadcasting	3.77	1.38
Events	4.21	1.06
Group live performance	4.30	1.08
Audition	4.32	0.97
Exam or jury	4.33	1.12
Competitions	4.68	0.69
Live performance	4.71	0.65
Solo live Performance	4.76	0.66

Note. Students were asked, “How often do you incorporate this pre-performance rituals before. . .” 1 (Never)—5 (Always).

significance of rituals that go beyond their practical utility. Symbolic rituals represent a distinct category of preparation that transcends the mechanical aspects of performance readiness, infusing it with personal meaning and identity.

The context for the use of pre-performance rituals

Students in our study revealed that they most commonly use rituals in high-pressure situations, with “Solo Live Performance” ($M = 4.76$, $SD = 0.66$) and “Live Performance” ($M = 4.71$, $SD = 0.61$) receiving the highest mean scores. This indicates that students perceive rituals as specifically highly effective during high-stakes performance situations. On the other hand, more relaxed or group activities like “Group Rehearsal” ($M = 2.88$, $SD = 1.30$) and “Jamming Session” ($M = 2.43$, $SD = 1.18$) score lower, indicating rituals are seen as less essential in these environments. See Table 3.

Effectiveness of pre-performance rituals

We also asked students to rate the effectiveness of pre-performance rituals in various areas. The results showed that students generally believe these rituals are beneficial. The average scores for each category were all above the midpoint of our rating scale, indicating that students feel rituals help them to some extent. Specifically, “Calm Nerves” and “Reduce Anxiety” were rated the highest, with average scores of $M = 3.72$ ($SD = .55$) and $M = 3.62$ ($SD = .54$), respectively. This suggests that students find rituals especially helpful for managing stress related to performance. The areas of “Right Mindset” and “Boost Confidence” also received high scores ($M = 3.68$ ($SD = .47$) and $M = 3.67$ ($SD = .57$), respectively), pointing out that students see rituals as having a positive effect on their performance and confidence levels. The factors “Improving Luck” and “Reducing Perfectionism” scored the lowest, with averages of $M = 2.92$ ($SD = .10$) and $M = 2.69$ ($SD = .91$). This indicates that students, on average, do not view rituals as a cure-all solution, particularly not for enhancing luck or dealing with perfectionist tendencies. See Table 4.

Table 4. Effectiveness of Pre-Performance Rituals.

Use	<i>M</i>	<i>SD</i>
Reduce perfectionism	2.69	.91
Improve luck	2.92	1.00
Facilitate connection with audience	3.00	.88
Enhance technical precession	3.25	.76
Remembering memory recall	3.29	.72
Improve memory recall	3.31	.72
Improve expressiveness	3.35	.67
Boost resilience	3.36	.63
Promote relaxation	3.52	.55
Energizing	3.52	.65
Enhance performance	3.54	.50
Enhance emotional preparation	3.54	.57
Improve focus	3.60	.56
Reduce anxiety	3.62	.54
Boost confidence	3.67	.57
Right mindset	3.68	.47
Calm nerves	3.72	.55

Note. Students were asked, "In your personal experience, have you found pre-performance rituals to be effective at: 1 (Strongly disagree)—4 (Strongly agree)."

To better understand the effectiveness of pre-performance rituals, we also analyzed data on participants self-reported perception of how much worse they would do if they did not enact their ritual. Respondents almost uniformly felt that not performing their rituals would negatively affect their performance, with 70% expecting at least a 10% drop. Interestingly, a small percentage of students thought their performance might improve without their rituals. However, a closer look at their other survey responses suggests they might have misunderstood the question, as their other responses showed support for the value of pre-performance rituals. These findings underscore the significant role that rituals play in students' preparation and performance, highlighting the importance of these practices in their performance strategy.

Development of pre-performance rituals

Our results demonstrate diverse pathways through which music education students develop their performance rituals. A significant majority reported that their rituals naturally evolved and changed over time (73%) and that they experimented with developing the ritual (60%), suggesting a process of personal adaptation and trial and error.

Students also identified observational learning as another key factor; whereas 43% developed their ritual by observing and adopting their practices, an additional 33% specifically stated that observing musicians was particularly influential. The role of formal instruction was also observed, with more than half (54%) indicating that they were introduced or taught a ritual by educators. The influence of peer networks was also noted by students, but much less frequent, with 31% advised by fellow performers, suggesting a community aspect to ritual adoption.

In a separate question, we asked students if their teacher(s) shared their own experience with pre-performance rituals. 31% of students said "no," 47% of students said "yes" but briefly, and 18% said that yes, their teacher has shared their experience in great detail (with 5.6% miss-

ing data). These results tell us that students are amenable to receiving instruction from professors on how to implement rituals as a part of their musical preparation journey.

Group pre-performance rituals

When asked if students had ever engaged in a shared group ritual, we found that more than half of the students (68%) indicated having engaged in a shared group ritual. Among those who have participated in shared group rituals, a substantial majority (91% of participants) indicated that these practices enhanced their sense of belonging. The open-ended responses revealed various reasons for this increased sense of community, with students highlighting the importance of shared vulnerability, camaraderie, community building, and the creation of a non-judgmental, supportive family unit. For example, one sophomore voice student noted the value of “doing the same thing and opening up to vulnerability together.” Another freshman voice student stated: “I think it did, as it gave everyone a sense of were [we’re] all in this together stressed or not sort of deal. Even though [we’re] were all nervous, it helps to know we are all nervous together.” These responses suggest that group pre-performance rituals play a significant role in fostering a sense of unity and emotional support among ensemble members.

Among the students who had not engaged in group rituals, 62% believed that such practices would have enhanced their sense of belonging. Conversely, the remaining students felt that music preparation is more of a personal journey, suggesting a diversity of perspectives on the role of group rituals in music education.

Superstitious beliefs and general anxiety

We next aimed to uncover the factors that correlate with students’ belief in the effectiveness of ritual use, which we operationalized through participants’ self-reported perceptions of how much worse they would perform if they were not able to use their ritual prior to a performance. We examined two possible correlates of this measure: their level of belief in superstitions, as measured by the Superstition Self-Rating Scale, and their own assessment of their anxiety compared with their peers. We used a bivariate correlation analysis to explore several claims. First, we questioned if rituals are mainly seen as effective for performance by students who are more anxious, looking for a way to feel a sense of control. Interestingly, our analysis showed that students’ self-reported anxiety levels did not significantly relate to their belief in ritual performance effectiveness ($p > .05$). We also found that the superstition level did not correlate to students’ belief in the effectiveness of ritual use ($p > .05$).

Discussion

Rituals resonate deeply with music students

Our research uncovered a strong connection between music students and pre-performance rituals, with 93% of participants reporting engagement in these practices. We developed a nuanced framework to analyze rituals based on their direct instrumental purpose, indirect psychological/physical influence, and symbolic personal significance. This framework revealed a clear distinction between rituals directly impacting the performance itself, like last-minute practice routines, and the more prevalent rituals intended to exert an indirect effect, such as visualization and affirmations. Notably, nearly half of these indirect rituals contained symbolic components, indicating that students view their rituals as deeply meaningful on a personal or communal level, transcending mere procedures.

The widespread adoption of rituals signals an inflection point for music pedagogy. Educators can now actively guide students in refining and leveraging their rituals rather than passively acknowledging them. This integration requires a harmonious melding of technical instruction with nurturing the mental and emotional fortitude that students have embraced through their ritualistic practices.

Why do students use rituals?

Our findings illuminate why rituals resonate so strongly; students primarily turn to them as a means of regulating anxiety and uncertainty in high-stakes performance scenarios. Our results also revealed that casual settings like jam sessions, lacking that looming performance pressure, see far less ritual use. This pattern aligns with findings from anthropology, where people often use rituals to navigate highly uncertain situations or when a lot is at stake. For example, Malinowski (1948) observed that religious beliefs and rituals help individuals cope with psychological needs, especially during times of insecurity and uncertainty. He noted that the Trobriand Islanders engaged in complex religious rituals before high-risk fishing expeditions in the open sea, seeking reassurance, control, and a way to ease fear and anxiety. However, they skip these elaborate rituals for safer, more predictable activities like lagoon fishing. Lang et al. (2015) provide compelling evidence that anxiety triggers spontaneous ritualized behaviors, which are characterized by repetitive, rigid, and predictable actions. In their study, participants exposed to anxiety-inducing conditions exhibited increased repetitiveness and rigidity in their movements, as measured by motion-capture technology. These behaviors were closely linked to physiological responses, such as elevated heart rates, suggesting that ritualization serves as a coping mechanism to regain a sense of control in uncertain or stressful situations.

Modern anthropological research continues to support these observations about rituals' role in managing anxiety during high-stakes situations across cultures. Lang et al. (2020) demonstrated experimentally that religious rituals significantly reduced both self-reported and physiological measures of anxiety among Hindu women facing stressful situations. Similarly, Sosis (2007) found that during periods of heightened uncertainty and threat, women in the town of Tzfat in northern Israel used ritual psalm recitation as an effective coping mechanism that enabled them to maintain their daily routines.

In a similar fashion, our study reveals that students do not randomly or universally choose to perform rituals. Instead, they strategically use them in situations marked by great uncertainty or when facing particularly high stakes. The lack of a strong connection between overall anxiety or superstitious beliefs and participants' perceptions of ritual effectiveness further supports this. It shows that students do not rely on rituals out of general anxiety or superstition. Instead, students engage in rituals believing they will help manage their anxiety for high-stakes performance situations specifically. In addition, our results indicate that the vast majority of students do not rely on rituals as a magical means to enhance performance or to increase their luck. This insight provides music educators with a clearer understanding of why students might adopt certain pre-performance practices, highlighting the importance of fostering realistic expectations regarding the benefits of these rituals.

How are students developing their rituals?

Music students take an adaptive, personalized approach to developing their pre-performance rituals. A remarkable 73% have tailored their practices through experimentation and

refinement over time. However, the journey is not a solitary one. Teachers and peers play an important roles, with more than half the students crediting formal instruction or community influence for guiding them toward these rituals.

Research highlights students' openness to rituals and the role educators play in guiding this process (Hawkes, 2021; Tief & Gröpel, 2021). Broomhead et al. (2018) demonstrated that music teachers can weave pre-performance rituals into education. This indicates that students can intentionally develop rituals, with teachers having the unique opportunity to assist, motivate, and introduce students to rituals, encouraging a more deliberate adoption and use. Even routines can elevate if teachers help students view them as rituals. Research by Brooks et al. (2016) demonstrates the significant effect of simply labeling behaviors as rituals on improving performance, emphasizing the necessity for teachers to encourage students to recognize and label their pre-performance routines as such.

Uniting through ritual

While rituals provide immense personal value, they also serve a vital communal function within musical ensembles. Our study revealed that more than two-thirds of students have engaged in group pre-performance rituals, with an overwhelming 91% of those students reporting an enhanced sense of belonging and camaraderie. Rituals transcend mere performance preparation, creating supportive environments rooted in shared vulnerability, struggles, and values. They are fundamental social acts, building cohesion and reinforcing group identity (Rappaport, 1999; Whitehouse & Lanman, 2014). This aligns with psychological perspectives positing that rituals help groups overcome adaptive challenges by marking membership, signaling a commitment to shared values, and ultimately strengthening cooperation and unity (Cosmides & Tooby, 2013).

This social aspect of rituals is further supported by research on their underlying mechanisms. A study by Cho et al. (2018) found that emotionally arousing rituals in group settings significantly enhance neural synchrony—where participants' brain activity becomes aligned—particularly in high-arousal contexts. This neural synchronization fosters a shared emotional state and increases perceived ritual efficacy, helping individuals feel more connected and effective as part of the group. These findings emphasize that rituals are not merely symbolic but also neurobiological processes that enhance social coordination and group cohesion, making them particularly powerful tools for building a sense of unity in musical ensembles.

Blacking's (1974) seminal work provides further theoretical grounding for understanding pre-performance rituals in their social context. Through his ethnographic study of the Venda people, Blacking observed that music was deeply interwoven into everyday life, serving as a way to mark transitions, pass time, and accompany both routine and significant life events. For the Venda, music was not just an artistic expression but a means of organizing and reinforcing social relationships and communal values. Rituals, often performed with music, played a central role in these social processes, structuring events like births, marriages, and community gatherings. Blacking argued that music and its associated rituals were vital for fostering a sense of collective identity and belonging, as they created shared emotional experiences and reinforced cultural cohesion. Similarly, our finding that 91% of students report enhanced belonging through group rituals echoes Blacking's insights, highlighting how musical rituals in contemporary contexts continue to serve as powerful tools for building community and maintaining social bonds. Students' own words powerfully captured this unifying impact. One voice student described holding a group ritual as making

them feel “all in this together, stressed or not.” This resonates with self-determination theory’s emphasis on relatedness as a core psychological need foundational to well-being, motivation, and persistence (Ryan & Deci, 2000).

Implications

Our study and that of others (Brooks et al., 2016; Hawkes, 2021; Osborne et al., 2014; Tief & Gröpel, 2021) reveal the importance of deliberately incorporating pre-performance rituals into music education as part of a bigger approach to support students’ socio-emotional learning. We encourage teachers to play a deliberate role in fostering environments where students can intentionally explore and develop personal and group rituals. Such deliberate efforts can significantly enrich students’ learning experiences, offering them tools to navigate the psycho-emotional demands of performance. By facilitating spaces for students to share and co-create rituals, educators can promote a sense of community and collective identity among ensemble members. This communal aspect not only enhances individual and group performance but also fosters a supportive network where students feel understood and valued and develop a sense of group identity.

Moreover, encouraging students to label their practices as rituals can imbue these actions with deeper meaning and efficacy. The act of naming serves as a powerful tool in transforming routine preparations into profound, performance-enhancing rituals. This semantic shift can significantly affect students’ perception of their rituals, reinforcing their belief in the practices’ effectiveness and their overall engagement in the musical journey. Educators, therefore, have the opportunity to guide students in recognizing the value of their rituals, not only as a means to improve performance but also as essential components of their artistic and emotional development.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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Appendix I

Copy of original survey items. The response options for the items were originally presented vertically

Before a big performance, people sometimes like to engage in all kinds of behaviors.

Pre-performance rituals are specific behaviors, actions, or routines that people intentionally engage in to enhance their overall performance quality.

Some examples include:

- Wearing lucky attire, visualizing the performance
- Imagining success in upcoming performance
- Reciting positive affirmations
- Using a specific mantra or phrase
- Reviewing mental or physical cues
- Following a specific routine or sequence
- Listening to particular music
- Eating specific foods or drinks

We are interested in hearing about some of your pre-performance rituals.

Do you use at least one pre-performance ritual? YES NO

Please describe your pre-performance ritual(s) in as much detail as possible:

Which of the Following Pre-Performance Rituals Do You Use? (Check All That Apply).

- | | | |
|---|--|--|
| • Visualizing the performance | • Using a specific mantra or phrase | • Simple meditation or mindfulness exercises |
| • Imagining success in upcoming performance | • Eating specific foods or drinks | • Taking a moment for deep, calming breaths |
| • Reciting positive affirmations | • Engaging in relaxation techniques | • Using scents or aromatherapy |
| • Reviewing mental or physical cues | • Engaging in group rituals with fellow performers | • Engaging in a brief vocal warm-up routine |
| • Wearing lucky attire | • Reviewing notes or rehearsing silently | • OTHER (please describe) |
| • Following a specific routine or sequence | • Physical warm-up exercises | |
| • Listening to particular music | | |

How Often Do You Incorporate This Pre-Performance Rituals Before: 1 (Never)–5 (Always).

- | | | |
|--------------------------|------------------------|--------------------------------|
| • Auditions | • Rehearsal Session | • Music Competitions |
| • Solo Rehearsals | • Music Exam/Juries | • Streaming online performance |
| • Group Rehearsals | • Recording Session | • Broadcasting performances |
| • Live Performance | • Jamming Session | • OTHER (please describe) |
| • Solo Live Performance | • Music Festival/Event | |
| • Group Live Performance | • Performance | |

In Your Personal Experience, Have You Found Pre-Performance Rituals to be Effective at: 1 (Strongly Disagree)–4 (Strongly Agree).

- | | | |
|---------------------------------|---|---|
| • Enhancing Overall Performance | • Setting the Right Mindset | • Boosting Resilience in the Face of Challenges |
| • Calming Nerves | • Energizing before Performance | • Remembering pieces of music |
| • Boosting Confidence | • Enhancing Emotional Preparation | • Reducing perfectionism |
| • Aiding Memory Recall | • Enhancing Technical Precision | • Improving expressiveness |
| • Reducing Anxiety | • Facilitating a Connection with the Audience | • Improving luck |
| • Improving Focus | | |
| • Promoting Relaxation | | |

How Did You Develop Your Pre-Performance Ritual(s)? Please Select all That Apply.

- | | | |
|---|--|---|
| • Introduced and taught by a teacher or mentor | • Discovered through personal research | • Observing other musicians |
| • Observed and adopted from someone else | • Experimented and found effective | • Scientific research or articles on what works |
| • Found inspiration from a famous musician's ritual | • Followed rituals from cultural traditions | • Recommendations from music teachers or mentor |
| • Naturally evolved and changed over time | • Introduced during formal training or education | • Advice from fellow performers |
| • Recommended by a friend with success | • Emerged spontaneously and felt right | • Other (please describe) |

Imagine You Forgot to Do Your Pre-Performance Ritual. How Do You Think You Would Perform?

-
- | | |
|--|--|
| <ul style="list-style-type: none">• 25% better or more• 20% better• 15% better• 10% better• 5% better• I would perform the same regardless of whether I did the pre-performance ritual or not | <ul style="list-style-type: none">• 5% worse• 10% worse• 15% worse• 20% worse• 25% worse or more |
|--|--|
-

Do you think pre-performance rituals can be taught to students? Please explain

Did your music teacher encourage adopting pre-performance rituals? If so, describe the strategies used to promote their adoption:

Generally speaking, have your music/instrument teacher(s) shared their own experiences with pre-performance rituals?

No, they have not shared their experiences

Yes, they have mentioned their experiences briefly

Yes, they have shared detailed experiences

OTHER: Please describe

How Would You Feel if One of Your Music Instructors Asked You to Join in on a Group Pre-Performance Ritual(s)?

GROUP PERFORMANCE RITUAL.
Have you been in a group ensemble or orchestra with a shared ritual?

- ☐ Yes
- ☐ No

IF YOU ANSWERED YES TO THE QUESTION ABOVE: Did it enhance your sense of belonging? Why?

IF YOU ANSWERED NO TO THE QUESTION ABOVE: Do you think having a shared ritual would have improved your sense of belonging? Why

Do you agree with the following statements: 1 (*Strongly disagree*)–4 (*Strongly agree*)

- Black cats can bring bad luck
- During altered states, such as sleep or trances, the spirit can leave the body
- The number “13” is unlucky
- Rubbing frog baby’s nose will help bring me luck for exams

Compared with other music students, how would you rate your overall level of anxiety? Much less anxious Less anxious About the same More anxious Much more anxious

Please indicate your gender

Please indicate your ethnicity

What is your primary instrument?

Appendix 2

Codebook to Help Categorize Types of Rituals.

Type of ritual	Definition	Explanation	Examples
Direct	These are rituals that contain a direct link to the intended performance.	There should be a clear, direct connection between the action and the performance process the individual wishes to achieve. Psychological examples are almost never considered direct rituals.	Pianist who stretches his fingers Guitarist who makes sure the guitar is tuned before each performance Rehearsing musical piece before a performance
Indirect	Indirect rituals refer to activities known for their psychological, emotional, or physical benefits that indirectly might enhance performance.	Indirect rituals enhance performance through well-recognized psychological, emotional, or physical benefits. The key difference between indirect and symbolic rituals is that indirect rituals are broadly recognized and established, whereas symbolic ones are personal and unique to the individual.	Deep breathing exercises, meditation, visualization, and anxiety reduction exercises
Symbolic	Symbolic rituals contain elements which we operationalized as actions that hold personal or communal significance for musicians. They are tied to the musician's beliefs, emotions, or memories.	The action has a story, a history, or a particular significance to the person or group beyond its surface appearance. This could involve traditions, beliefs, or personal habits developed over time that carry symbolic weight. The action is performed beyond logical or practical performance enhancement.	Wearing lucky socks Breathing in the audience's energy Talking to an instrument Walking around the performance venue