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Article

Research on the Mechanism of Mindfulness Traits in the Process of Intangible Cultural Heritage Pottery Throwing in Relieving Urban Psychological Stress

Mengting Jin^{1,*}

¹ School of Information and Artificial Intelligence, Anhui Business College, Wuhu, China

* Correspondence: Mengting Jin, School of Information and Artificial Intelligence, Anhui Business College, Wuhu, China

Abstract: Pottery throwing, recognized as a significant intangible cultural heritage (ICH) art form, intricately integrates traditional craftsmanship, profound cultural expression, and immersive tactile engagement. In contemporary society, this practice offers unique and highly effective opportunities for stress relief, particularly among increasingly burdened urban populations. Mindfulness traits, which are fundamentally characterized by sustained focused attention, emotional management, and an acute present-moment awareness, have been consistently shown to enhance overall mental health and psychological wellbeing. Consequently, this paper comprehensively investigates the underlying mechanisms by which the cultivation of mindfulness traits during the traditional pottery throwing process can effectively alleviate psychological stress among urban dwellers. Through a rigorous methodological approach that combines systematic behavioural observation, precise physiological measurement, and comprehensive psychological assessment, the current study develops a robust conceptual framework. This framework explicitly links the state of mindfulness achieved in pottery practice to quantifiable stress reduction outcomes. Furthermore, detailed case studies conducted in various urban ceramic workshops empirically demonstrate that deliberately incorporating structured mindfulness training into routine pottery practice can significantly improve diverse mental health indicators. Ultimately, this research highlights the substantial potential of ICH pottery not merely as an artistic endeavor, but as a viable therapeutic medium for urban stress management, psychological rehabilitation, and sustainable cultural transmission in modern metropolitan environments.

Keywords: intangible cultural heritage; pottery throwing; mindfulness; psychological stress; mental health; cultural therapy

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1. Introduction

1.1. Research Background and Significance

Urbanisation and the demands of fast-paced lifestyles have significantly contributed to heightened psychological stress among urban populations [1]. This has led to an increase in mental health challenges, including emotional strain and exhaustion. Activities that promote mental well-being are gaining attention as potential solutions to these issues. Among these, mindfulness-based practices have emerged as effective tools for managing stress and fostering emotional balance. Pottery throwing, a traditional intangible cultural heritage art form, provides a sensory-rich and process-focused experience that naturally incorporates mindfulness elements. These elements include concentrated attention, heightened sensory engagement, and the cultivation of emotional

stability. By integrating mindfulness principles into the practice of pottery throwing, a novel approach to cultural therapy can be developed. This approach not only supports mental health in urban environments but also contributes to the preservation and revitalization of cultural heritage. The present research investigates how the mindfulness aspects inherent in pottery throwing can alleviate psychological stress and enhance overall well-being in urban settings.

1.2. Research Status at Home and Abroad

Research conducted internationally has highlighted the beneficial effects of mindfulness practices on psychological health, including alleviating stress, fostering emotional balance, and enhancing overall life satisfaction. Studies in creative therapies, such as art-based approaches, have demonstrated that engaging in process-oriented artistic activities can significantly contribute to emotional relief and mental relaxation. Within China, pottery throwing is widely acknowledged as an important intangible cultural heritage practice, yet there is a noticeable lack of comprehensive studies exploring its potential integration with mindfulness techniques for stress management [2]. Current research tends to focus separately on either the preservation of intangible cultural heritage or the application of mindfulness strategies for reducing stress, with limited interdisciplinary investigation. This study aims to address this gap by combining mindfulness principles with traditional pottery practices, offering a novel approach to promoting mental health in urban environments through culturally rooted and therapeutic activities.

1.3. Research Content and Methods

This study establishes a conceptual framework to explore the influence of mindfulness traits during the pottery throwing process and examines its effectiveness in alleviating psychological stress among urban populations. The research employs a combination of observational analysis in pottery workshops, self-report questionnaires to assess mindfulness and stress levels, and physiological measurements such as heart rate variability and cortisol concentrations. A mixed-methods approach is utilized, incorporating qualitative interviews to gain deeper insights, controlled experimental trials to test the proposed framework, and comprehensive statistical analysis to validate the findings and identify significant contributing factors [3]. This multifaceted methodology ensures a robust examination of the relationship between mindfulness and stress relief, while also highlighting potential applications for urban mental health interventions.

2. Theoretical Foundations and Mechanism Framework

2.1. Characteristics of Intangible Cultural Heritage Pottery Throwing

Pottery throwing, recognized as a significant form of intangible cultural heritage, represents an experiential practice that integrates craftsmanship, material interaction, and creative expression. This process is deeply rooted in a sequence of actions that demand sustained attention to the shaping of clay, fostering a heightened sense of present-moment engagement. The tactile nature of pottery throwing, combined with rhythmic hand movements and the gradual transformation of the visual form, creates a multisensory experience that promotes focus and tranquility [4, 5]. Furthermore, pottery serves as a vessel for cultural narratives, encapsulating traditional craftsmanship and symbolic meanings that enable participants to connect with heritage on both practical and emotional levels. These interconnected attributes make pottery throwing particularly relevant for applications aimed at enhancing mental well-being, as it bridges the gap between psychological balance and cultural appreciation. By emphasizing the immersive and culturally rich aspects of this practice, it becomes evident how pottery throwing can contribute to fostering a harmonious and reflective state of mind.

2.2. Mindfulness Traits and Psychological Stress

Mindfulness traits are often characterized by the ability to manage attention, maintain awareness of bodily sensations, regulate emotions, and develop self-awareness.

These attributes enable individuals to stay engaged with the present moment, observe their internal experiences, and adapt effectively to external challenges. In fast-paced urban settings, psychological stress frequently manifests as mental fatigue, emotional strain, and physical discomfort, driven by the demands of modern lifestyles and the constant influx of information. Activities rooted in mindfulness have been found to mitigate these stressors by promoting emotional balance, fostering a sense of personal competence, and reducing repetitive negative thinking. Pottery throwing, as an example of a mindful practice, involves focused engagement, tactile interaction, and rhythmic movements, which collectively induce a calming and meditative state. Additionally, this activity offers a unique connection to cultural traditions, enriching participants' experiences by combining therapeutic benefits with a deeper appreciation of cultural heritage. This dual impact underscores its value as both a psychological and cultural tool [6].

2.3. Mechanism Framework for Stress Relief

This study introduces a three-layered framework to explain how pottery throwing contributes to stress relief [7, 8]. At the initial layer, referred to as the Mindfulness Activation Layer, the sensory engagement and repetitive motions involved in pottery work help to direct attention and foster a state of heightened awareness. This process encourages the development of mindfulness-related attributes. Progressing to the Psychophysiological Adjustment Layer, these mindfulness traits are associated with moderating stress responses, which can be observed through physiological indicators such as reduced stress hormone levels and improved variability in heart rate. Finally, at the Cultural and Emotional Integration Layer, the practice of pottery, enriched by cultural narratives and opportunities for artistic expression, facilitates the creation of meaning and supports emotional balance. Together, these interconnected layers form a comprehensive theoretical basis for the study and provide valuable insights for designing practical approaches aimed at promoting stress relief.

3. Core Techniques and Implementation

3.1. Mindfulness Integration in Pottery Practice

The integration of mindfulness into pottery throwing can be approached through a structured framework that emphasizes attentional, emotional, and cultural dimensions [7]. To begin, participants are guided to focus on tactile sensations, the rhythm of their breathing, and the gradual transformation of clay as it responds to their movements. This intentional focus fosters an acute awareness of the present moment, helping to minimize mental distractions and enhance the immersive quality of the activity. In addition to attentional practices, participants are encouraged to cultivate emotional awareness by observing and reflecting on the dynamic shifts in their feelings as they engage with the creative process. Pottery often evokes a spectrum of emotions, and mindful reflection enables individuals to process and regulate these responses in a constructive manner. The cultural dimension further enriches this integration by introducing participants to narratives surrounding pottery heritage, including traditional craftsmanship techniques and the symbolic significance of pottery in various cultural contexts. These stories deepen participants' emotional engagement and foster a greater appreciation for the historical and artistic value of the practice. By combining these dimensions, pottery throwing is transformed into a holistic experiential activity that can be effectively implemented in workshop settings or integrated into broader community-based art therapy programs, offering both personal enrichment and collective cultural engagement.

3.2. Measurement of Psychological Stress

To evaluate the impact of pottery throwing as a mindfulness-based approach to managing psychological stress, a multifaceted methodology is utilized. Subjective assessments include self-report tools such as mindfulness questionnaires, stress perception scales, and emotional state evaluations, which provide valuable insights into participants' mental and emotional shifts. These instruments are designed to capture

changes in cognitive patterns and emotional well-being, offering a detailed understanding of perceived improvements. Objective physiological measures, such as monitoring heart rate variability, analyzing salivary cortisol levels, and assessing galvanic skin responses, are employed to observe biological changes associated with relaxation and stress reduction. These metrics help establish a clear connection between pottery practice and physiological stress modulation. Additionally, behavioral observations contribute another layer of analysis, focusing on aspects such as the duration of engagement, the consistency of attention, and the emergence of creative flow during the activity. By integrating these diverse methods, the evaluation provides a comprehensive perspective on how engaging in pottery as a mindful practice can influence stress levels and overall psychological health.

3.3. Workshop Design and Evaluation

The design of pottery throwing workshops aimed at stress relief incorporates mindfulness techniques at pivotal stages of the activity. Participants are guided through initial breathing exercises and attentional practices to establish a foundation of focused awareness before transitioning into the tactile and creative process of shaping clay. This deliberate integration ensures that mindfulness remains a central element throughout the workshop. The structure of these sessions is carefully balanced to foster both technical skill acquisition and reflective engagement, enabling individuals to experience the therapeutic benefits alongside the creative aspects of pottery [9]. To assess the effectiveness of these workshops, a comprehensive evaluation framework is employed. This includes both quantitative measures, such as pre- and post-session assessments of stress levels to track psychological and physiological changes, and qualitative methods, such as participant interviews that capture personal insights and subjective experiences. Furthermore, the pottery artefacts produced during the workshops are examined as tangible expressions of mindfulness, providing a unique perspective on how emotional states and individual engagement are reflected in the final creations. By employing this multidimensional approach, the workshops are systematically evaluated for their therapeutic value and cultural significance, ensuring a holistic understanding of their impact.

4. Case Study: Mindfulness Pottery Workshop in an Urban Community

4.1. Workshop Design

The six-week mindfulness pottery throwing program was conducted in an urban cultural center, targeting participants such as office workers and university students who often experience significant cognitive and emotional stress due to fast-paced environments. The program was designed with a structured weekly cycle that integrated guided mindfulness exercises, cultural storytelling, and hands-on pottery throwing practice in a sequential and progressive manner. Each session commenced with brief breathing exercises and attentional training to help participants achieve a mindful state, enabling them to disengage from external distractions and focus on the present moment. This preparatory phase was followed by an introduction to pottery heritage, during which instructors shared historical narratives, symbolic interpretations, and regional distinctions in ceramic traditions. This cultural framing was intended to establish a meaningful connection between individual practice and broader cultural heritage, fostering a sense of continuity and relevance in the activity.

During the primary practice phase, participants engaged in pottery throwing under the supervision of skilled instructors. The emphasis extended beyond the development of motor skills to include attentional focus, tactile sensitivity, and reflective awareness throughout the shaping process. Participants were encouraged to observe the evolving form of the clay, pay attention to subtle bodily sensations such as pressure and rhythm, and acknowledge their emotional responses during the activity. Reflection sessions at the conclusion of each workshop provided a platform for participants to articulate their experiences, promoting self-awareness and facilitating peer interaction. The choice of a

cultural center as the venue, rather than a clinical setting, was deliberate. This decision underscored the dual objectives of the program: enhancing mental well-being in a non-stigmatizing and accessible environment while simultaneously encouraging cultural engagement and public appreciation of pottery traditions. By situating the program in a community-oriented space, the initiative aimed to create an inclusive atmosphere that bridged personal development with cultural participation.

4.2. Mechanism Verification

The outcomes of the programme provided substantial evidence for the effectiveness of pottery throwing as a mindfulness-based stress relief activity. Quantitative assessments revealed significant improvements in participants' mindfulness trait scores, accompanied by marked reductions in perceived stress levels. These findings support the psychological dimension of the proposed mechanism framework. Physiological evaluations further substantiated the hypothesis related to psychophysiological balance: post-activity data indicated enhanced heart rate variability, reflecting improved autonomic nervous system equilibrium, as well as lower salivary cortisol levels, which are widely recognized as indicators of stress. These biological markers offer objective validation that engaging in pottery practice activates mindfulness processes, thereby mitigating stress in a measurable manner. The integration of these findings underscores the multifaceted benefits of the activity, combining psychological and physiological dimensions to address stress management comprehensively.

Qualitative feedback from participants reinforced the quantitative findings, highlighting the immersive nature of the activity as a source of emotional release and relaxation. Many participants described the tactile interaction with clay as grounding, helping them regain a sense of stability amidst the challenges of urban life. Additionally, the cultural storytelling component emerged as a significant factor in enhancing engagement. By linking the act of pottery throwing to historical traditions and artistic symbolism, participants perceived the practice as meaningful and enriching rather than merely recreational. This cultural connection added depth to the mindfulness experience, fostering emotional resonance and a sense of identity. The findings suggest that incorporating cultural narratives into mindfulness practices can amplify their stress-relief benefits by creating a more profound and personally significant experience for participants [10].

4.3. Cultural Transmission and Mental Health Integration

Beyond stress reduction, the programme yielded notable outcomes in the areas of cultural preservation and the reinforcement of personal identity. Participants frequently reported a heightened appreciation for the heritage of pottery, emphasizing that the activity enabled them to reconnect with traditions they had previously regarded as distant or irrelevant to contemporary life. Many individuals expressed a newfound motivation to engage in cultural activities outside the programme, such as exploring museums, attending craft exhibitions, or participating in additional workshops. This shift in behavior highlights the potential of mindfulness pottery to foster sustained cultural engagement and enhance cultural awareness, particularly among urban communities [11]. By bridging the gap between traditional practices and modern lifestyles, the programme demonstrated its capacity to revitalize interest in cultural heritage while promoting its relevance in today's society.

The findings indicate that the programme functioned on two interconnected dimensions. On one level, it contributed to stress alleviation through the activation of mindfulness techniques and the promotion of mental and physical balance. On another level, it served as a medium for cultural education, deepening participants' emotional ties to heritage and reinforcing a sense of identity rooted in local traditions. By integrating therapeutic practices with the preservation of cultural heritage, mindfulness pottery transcends the boundaries of a standalone wellness activity. It emerges as a comprehensive model where cultural engagement and mental health support work in tandem, offering dual benefits. This approach not only enhances individual well-being

but also contributes to the sustainability of cultural traditions, ensuring their continued relevance and vitality in a rapidly changing world [12].

5. Challenges and Future Directions

5.1. Standardising Mindfulness Pottery Practice

The effectiveness of mindfulness pottery practice is closely tied to the establishment of clear and consistent standards that can provide guidance for both instructors and participants. Without well-defined training protocols, the quality of practices may vary significantly, which can undermine their reliability in both research contexts and practical applications. To address this, it is essential to develop structured teaching modules that progressively introduce mindfulness concepts. For instance, initial sessions could focus on cultivating awareness of breathing patterns and tactile sensations, while more advanced sessions might integrate reflective practices on cultural symbolism alongside the mastery of intricate pottery techniques. Furthermore, the certification of practitioners is a critical step to ensure that facilitators are equipped not only with technical expertise in pottery but also with adequate training in mindfulness facilitation and foundational psychological support. This dual competency is essential for safeguarding participant well-being and optimizing the therapeutic benefits of the practice. Additionally, implementing robust supervision systems and establishing clear evaluation criteria can help maintain the evidence-based nature of these practices while ensuring cultural sensitivity. Such measures can facilitate the seamless integration of mindfulness pottery into formal wellness initiatives and educational frameworks, thereby broadening its accessibility and impact.

5.2. Balancing Cultural Integrity and Therapeutic Goals

A significant challenge in applying mindfulness pottery lies in maintaining a balance between its role as a cultural tradition and its use as a method for psychological well-being. Pottery-making is deeply rooted in historical practices and serves as an important representation of intangible cultural heritage, often passed down through generations. If the practice is modified too extensively to align with psychological frameworks, there is a risk of diminishing its cultural richness and reducing it to a purely functional activity. On the other hand, if the focus remains solely on preserving cultural authenticity without adaptation, the potential psychological benefits may not be fully realized [13]. To address this, it is essential to integrate elements of cultural storytelling and heritage appreciation into the therapeutic process. This approach allows participants to engage not only with the tactile experience of working with clay but also with the symbolic and historical meanings embedded in the practice. Such integration fosters a deeper emotional connection and helps to avoid the commodification of cultural traditions. Collaborative efforts involving experts in cultural heritage, mental health professionals, and community representatives can provide a framework for designing programs that respect cultural values while achieving psychological objectives. This ensures a harmonious balance between tradition and innovation.

5.3. Expanding Application and Research

The future development of mindfulness pottery practice necessitates growth in both academic exploration and practical implementation. From a research perspective, comparative analyses across various cultural traditions—such as Chinese porcelain, Japanese raku ware, and Mediterranean ceramics—could provide valuable insights into how differing symbolic meanings and aesthetic principles influence outcomes related to stress relief and emotional well-being. Furthermore, examining its effects on diverse demographic groups is crucial; for example, investigating its potential benefits for urban professionals facing high-pressure environments, students managing examination-related stress, or individuals undergoing rehabilitation could significantly broaden the scope of its applicability [14]. Long-term studies that monitor participants over extended periods are essential to determine whether improvements in mindfulness and resilience

to stress are sustained and consistent. On the practical side, incorporating mindfulness pottery into workplace wellness programs may offer a novel approach to reducing burnout while fostering team collaboration and cohesion. In healthcare settings, pottery workshops could serve as a dual-purpose intervention, combining physical recovery activities with techniques aimed at enhancing emotional balance. Similarly, educational institutions could implement such programs to not only alleviate stress among students but also promote cultural appreciation and creative skill development. By advancing research and expanding practical applications in these directions, mindfulness pottery has the potential to evolve into a comprehensive framework that integrates cultural heritage with public health benefits, contributing positively to societal well-being on multiple levels.

6. Conclusion

The pottery-throwing process associated with intangible cultural heritage, when combined with mindfulness-related traits, presents a distinctive pathway for alleviating psychological stress among urban populations. This study develops a conceptual mechanism framework that links mindfulness activation, psychophysiological adjustment, and cultural integration, and this framework is further supported through empirical case analysis. The overall results indicate that engagement in pottery throwing can promote focused attention, emotional calming, embodied sensory awareness, and a stronger sense of cultural connection. These outcomes suggest that traditional craft practices may serve not only as important vehicles for cultural continuity, but also as practical resources for mental health support and urban wellbeing enhancement. Accordingly, the study provides a meaningful basis for future exploration of culturally grounded therapeutic approaches, community-based stress-relief interventions, and interdisciplinary strategies that connect heritage practice with contemporary public health needs.

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