

Article

Integrating art, aesthetics, and immersive media to promote employee well-being and psychological health

Fangming Ke, Vuthipong Roadkasamsri*

Faculty of Fine-Applied Arts and Cultural Science, Mahasarakham University, Kantharawichai District, Maha Sarakham 44150, Thailand

* **Corresponding author:** Vuthipong Roadkasamsri, vuthipong.r@msu.ac.th

CITATION

Ke F, Roadkasamsri V. (2025). Integrating art, aesthetics, and immersive media to promote employee well-being and psychological health. *Human Resources Management and Services*. 7(3): 4696.
<https://doi.org/10.18282/hrms4696>

ARTICLE INFO

Received: 1 July 2025
Revised: 23 July 2025
Accepted: 28 July 2025
Available online: 15 September 2025

COPYRIGHT



Copyright © 2025 by author(s). *Human Resources Management and Services* is published by PiscoMed Publishing Pte. Ltd. This work is licensed under the Creative Commons Attribution (CC BY) license.
<https://creativecommons.org/licenses/by/4.0/>

Abstract: This study examines the viability and user acceptance of a Cultural Healing Virtual Museum as a novel method for enhancing employee well-being and psychological health in organizational environments. The research shows how combining art and design can create engaging cultural experiences, looking at how visual appeal, space layout, and interactive technology can help reduce stress, build emotional strength, and teach employees about culture. The study focuses on middle-aged working individuals, especially those facing stress and sub-health issues, utilizing a mixed-methods approach with 381 participants. *Notably, 87.14% of participants reported awareness of the concept of cultural healing, and over 78% indicated a willingness to engage with immersive cultural wellness tools.* Research indicates a pronounced inclination toward culturally relevant virtual settings that integrate traditional healing practices—such as Traditional Chinese Medicine (TCM), calligraphy, and meditation themes—with modern digital aesthetics. The findings demonstrate that art-based immersive components markedly improve emotional well-being, cultivate trust in organizational health programs, and elevate the propensity to participate in preventative self-care activities. Principal elements influencing engagement comprised visual coherence, symbolic significance, and emotional impact. Even though most feedback was positive, some participants expressed concerns about how comfortable they were with technology and using virtual reality, pointing out the need for easy training and designs that include everyone. These findings suggest that immersive wellness strategies rooted in art and heritage can contribute directly to human capital development by boosting proactive health behavior and reducing psychological strain. This research highlights the possibility of incorporating art, cultural heritage, and immersive technology into workplace wellness initiatives to bolster employee well-being, improve psychological health, and facilitate human capital development.

Keywords: employee well-being; virtual museum; art and design; psychological health; human capital

1. Introduction

The increasing significance of cultural healing in holistic health education signifies a wider shift toward integrated well-being, which prioritizes not only physical health but also mental, emotional, and psychological health, particularly in organizational settings (Black et al., 2024; Buser et al., 2025; Rasweswe et al., 2021). In response to escalating levels of occupational stress, burnout, and suboptimal health among mid-career professionals, organizations are progressively implementing proactive strategies to enhance employee psychological well-being and cultivate a healthier workplace environment (Cooper and Cartwright, 1994; Grawitch and Ballard, 2019; Krekel et al., 2019; Noblet and LaMontagne, 2006; Richardson and Rothstein, 2008). Immersive virtual environments are emerging as innovative platforms for

providing culturally significant and visually appealing wellness experiences. When included in workplace wellness initiatives, these spaces provide an accessible, non-clinical method for psychological support, stress alleviation, and preventive care (Chirico and Gaggioli, 2019; Raghuram and Fang, 2022; Wiederhold and Riva, 2019). The incorporation of art, design, and cultural healing methodologies into digital tools facilitates employees' reconnection with embodied well-being, emotional self-regulation, and cultural education—elements crucial for sustaining engagement, resilience, and productivity (Sonnetag and Fritz, 2015).

To further contextualize this approach, the Job Demands-Resources (JD-R) model (Bakker and Demerouti, 2007, 2013, 2024; Mazzetti et al., 2023) offers a compelling framework for understanding how immersive cultural healing environments may alleviate burnout and enhance engagement. By reducing psychological strain and increasing access to self-regulation resources, the Cultural Healing Virtual Museum contributes positively to the balance between demands and resources in the workplace. Similarly, psychological contract theory (Rousseau, 1995) emphasizes the importance of perceived organizational support in fulfilling implicit employee expectations. By offering culturally responsive well-being interventions, organizations can reinforce a positive contract climate, enhancing employee commitment and trust—both critical to strategic HRM outcomes such as talent retention, engagement, and organizational citizenship.

This study examines the viability and user acceptance of a Cultural Healing Virtual Museum as a digital intervention aimed at enhancing employee well-being, specifically among middle-aged adults (ages 35–65) suffering from sub-health issues such as chronic fatigue, anxiety, or emotional exhaustion. The virtual museum is designed as an educational and therapeutic environment, offering immersive narratives on Traditional Chinese Medicine (TCM), meditation, calligraphy, and other cultural healing practices through symbolic design, spatial storytelling, and multisensory interaction. These design features are meant to help reduce stress, create emotional bonds, and refresh the mind—key parts of mental healing and long-lasting job performance.

To contextualize this approach, real-world applications support the viability of immersive tools in organizational wellness. For example, Birrenbach et al. (2025) found that emergency doctors reported much less stress after short VR relaxation sessions, with their average stress scores going down from 4 to 2, which is a significant change ($p < 0.001$). Similarly, a VR-based forest therapy pilot among IT and healthcare workers achieved marked improvements in psychological well-being and anxiety reduction over just two weeks (Kwon et al., 2025). These precedents reinforce the potential of immersive, design-oriented tools in promoting emotional resilience and preventive mental health in workplace contexts.

Design thinking is essential in assessing the effectiveness of these technologies. Virtual environments that emphasize aesthetic coherence, intuitive navigation, and cultural symbolism are more likely to captivate users and maintain emotional engagement. The success of VR platforms used in the workplace depends on their ability to offer meaningful, culturally relevant, and easy-to-access experiences as digital wellness tools change from simple information displays to emotionally engaging systems. However, even though virtual and augmented reality (VR/AR)

tools have been helpful in training for healthcare and education for young people, there is still a big gap in research about how they can be used for middle-aged workers in workplace wellness programs, especially in non-Western and diverse cultures. Most current research concentrates on young demographics, clinical interventions, or broad health promotion, so neglecting the organizational applications pertinent to mid-career adults.

This study examines the role of immersive, design-oriented virtual environments in enhancing organizational wellness strategies, promoting preventive mental health, emotional resilience, and self-regulated well-being for employees under significant work-related stress (Delany-Moretlwe et al., 2015; Grawitch and Ballard, 2019; Raghuram and Fang, 2022). Among the key findings, 81.37% of participants reported that symbolic cultural content (e.g., TCM-based themes) enhanced their emotional engagement, while over 76% found the multisensory features calming and beneficial for managing stress. The study aims to assess (1) how practical a cultural healing virtual museum is for workplace wellness, (2) how open employees are to using immersive media for their well-being, (3) how design and visual appeal influence user engagement, and (4) the psychological and cultural benefits employees report. This research presents a novel approach to art-based interventions in organizational health and human capital development, supported by evidence that culturally relevant and aesthetically appealing platforms can enhance self-care, motivation, and sustained behavioral change (Hibbard and Greene, 2013; Kruk et al., 2018).

This study utilized a meticulously crafted mixed-methods approach to assess the feasibility, acceptance, and design specifications of a Cultural Healing Virtual Museum aimed at enhancing employee well-being, therefore building established conceptual underpinnings and addressing recognized research gaps.

2. Materials and methods

2.1. Research design

This study used a combination of methods focused on participation and personal experiences to assess how practical and well-received the Cultural Healing Virtual Museum is as a workplace wellness program. The target demographic consisted of middle-aged employees (ages 35–65) experiencing sub-health conditions—defined as chronic but non-clinical physical or emotional symptoms, such as fatigue, anxiety, and psychological distress. These conditions are often attributed to sustained occupational stress and high-performance demands. This age range was intentionally selected based on literature identifying mid-career professionals as particularly vulnerable to stress-related health decline while simultaneously possessing sufficient digital literacy to engage with immersive technologies effectively (Grawitch and Ballard, 2016; Noblet and LaMontagne, 2006). This population represents a critical focus for organizational well-being strategies, underscoring the need for proactive interventions that promote emotional resilience, mental health maintenance, and sustained workforce engagement.

We used stratified and snowball selection methods to select a total of 381 individuals, ensuring diverse representation in terms of age, gender, occupational role, and educational background. Recruitment avenues encompassed professional networks, corporate wellness program distribution lists, social media platforms,

neighborhood health centers, and human resources outreach events. This hybrid recruitment method facilitated the participation of both technologically proficient professionals and those less acquainted with immersive technologies. Stratified sampling made sure that different job types were fairly represented, while snowball sampling helped reach groups of employees who are culturally involved or care about health. **Figures 1 and 2** illustrate the distribution of age and gender.

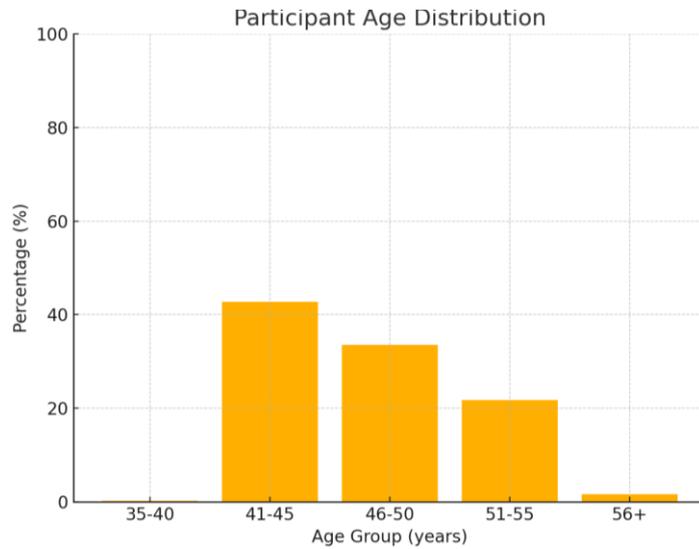


Figure 1. Age distribution.

The age distribution is predominantly within the 41–50 range (76.38%), indicating employees in their prime career stages who are also most susceptible to cumulative work-related stress. Most participants were freelancers, government employees, or educators, often defined by differing levels of stress, time limitations, and a requirement for adaptable wellness solutions. The prevalence of junior college and undergraduate degree holders in the workforce suggests a familiarity with technology, necessitating a simple and accessible design over specialized medical or academic material.

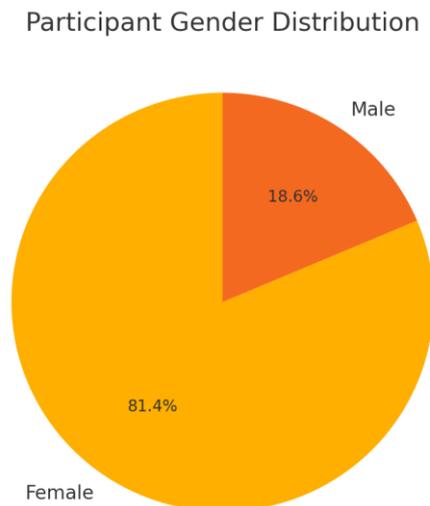


Figure 2. Gender distribution.

Figure 2 shows a clear difference in gender, with females making up 81.36%, which suggests that women may be more interested or have easier access, possibly because they are more involved in self-care and wellness activities.

These demographics inform the creation of user-centered interfaces, symbolic clarity, and culturally relevant visual language specifically designed for employee health environments.

2.2. Instruments for data elicitation

A combination of quantitative surveys and qualitative focus group talks was utilized to assess user needs, preferences, and perceived workplace relevance. Online surveys were directed at digitally literate personnel, but offline surveys and interviews were provided to individuals less acquainted with virtual tools, thereby assuring inclusion across varying levels of digital proficiency. Focus groups collect profound insights regarding aesthetic preferences, symbolic design anticipations, and emotional reactions to immersive wellness material inside a workplace environment.

2.2.1. Prototype of the cultural healing virtual museum

The Cultural Healing Virtual Museum features a graphic prototype that replicates spatial arrangement, aesthetic design, and symbolic content. The design functioned as a conceptual foundation for surveys and focus groups, allowing participants to contemplate potential workplace integration, cultural significance, and emotional resonance. Participants examined the prototype prior to doing evaluations on engagement, practicality, and congruence with organizational wellness objectives. A combination of quantitative surveys and qualitative focus group talks was utilized to assess user needs, preferences, and perceived relevance in the workplace. Online surveys were directed at digitally literate personnel, whereas offline surveys and interviews were provided for individuals less acquainted with virtual tools, thereby assuring inclusion across varying levels of digital competence. Focus groups offer profound observations about aesthetic preferences, symbolic design anticipations, and emotional reactions to immersive wellness material inside a professional environment.

2.2.2. Questionnaire

The survey included 25 questions that were multiple-choice and used a scale for responses, divided into five sections: (1) personal information and health at work, (2) knowledge of cultural healing methods, (3) experience with digital tools and VR, (4) participation in workplace wellness programs, and (5) preferences for design and content. The survey was conducted with and without prototype exposure to evaluate perceptual variations (Refer to **Appendix** for the complete questionnaire.)

To ensure cultural authenticity, the design incorporated symbolic elements rooted in traditional Chinese medicine and East Asian visual culture. Examples include theyin-yang symbol (representing balance and duality), bagua patterns (used to convey harmony and energy flow), and plum blossom motifs (symbolizing resilience and renewal). These symbols were selected through consultation with cultural experts and validated through pilot testing. User feedback indicated that such elements enhanced emotional engagement and conveyed cultural credibility: “The plum blossoms reminded me of traditional healing spaces—it made the environment feel trustworthy.” Another participant commented, “Seeing the yin-yang made me feel like the space was

meant for reflection, not just relaxation.” Participants consistently interpreted these elements as emotionally grounding, reinforcing the design’s symbolic effectiveness and cultural relevance. Participants demonstrated sufficient digital literacy to effectively engage with immersive technologies (Grawitch and Ballard, 2016; Noblet and LaMontagne, 2006).

2.2.3. In-depth interviews

Comprehensive interviews were performed with 15 key informants from the fields of health promotion, workplace wellness management, cultural practices, and digital education. The interviews examined perspectives on holistic health, emotional self-regulation, cultural healing, and the practicality of incorporating these techniques into organizational wellness initiatives. The insights gained from these interviews informed iterative modifications to the survey instrument, ensuring that it was aligned with employee well-being priorities and workplace design factors.

2.3 Data analysis

Quantitative data were examined through descriptive statistics (frequency distributions, means, and standard deviations) to identify patterns in design choices, emotional reactions, and expected job applicability. Qualitative data were thematically analyzed to reveal insights into symbolic aesthetics, stress-relief potential, and user narratives around self-regulation and workplace well-being.

To maintain transparency and ensure scientific rigor, detailed information regarding the reliability and validity of the survey instrument, including internal consistency (Cronbach’s alpha), test-retest reliability, and content validation by expert reviewers—has been provided in Supplementary File. This includes psychometric evidence supporting the robustness and practical relevance of the data collection tools used in this study.

3. Results

All participants were shown a conceptual prototype of the Cultural Healing Virtual Museum (**Figure 3**), created using fundamental design mockups to demonstrate space arrangement, visual appeal, and possible user interactions.



Figure 3. Virtual museum prototype.

This prototype enabled participants to assess it in terms of visual aesthetics, symbolic significance, and interaction design, as detailed in the subsequent sections.

3.1. Feasibility of a cultural healing virtual museum

To thoroughly comprehend feasibility, it is imperative to analyze participants' fundamental health problems and preventive care practices.

3.1.1. Health conditions and preventive needs

This relationship is further illustrated in **Figure 4**, which presents participants' reported health status and self-rated health conditions.

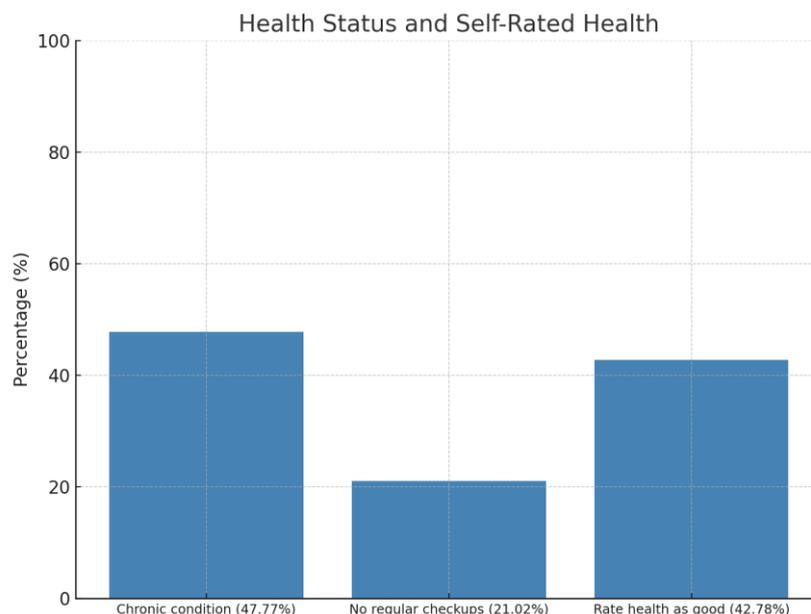


Figure 4. Health status and self-rated health conditions.

This figure depicts the health practices and self-perceptions of participants. While 47.77% reported chronic diseases and 21.02% did not receive regular exams, 42.78% evaluated their health as ‘excellent,’ indicating a disparity between real health status and perceived well-being. Reduced self-rated health scores for individuals categorizing their health as ‘fair’ ($M = 3.25$) or ‘poor’ ($M = 3.31$) highlight a significant deficiency in preventative involvement. Interview data underscored the necessity for accessible and uncomplicated design. In addition to physical health and preventive measures, comprehending participants’ awareness of cultural healing practices offers crucial background for assessing overall feasibility.

3.1.2. Awareness of cultural healing

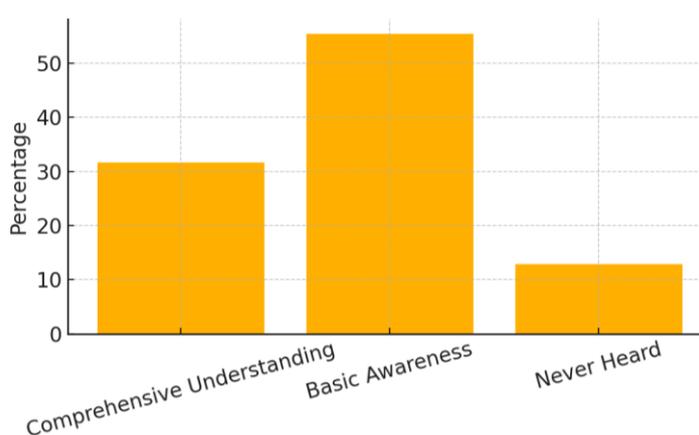


Figure 5. Awareness of cultural healing.

Figure 5 summarizes the levels of participants’ awareness of cultural healing practices. A substantial proportion of respondents (87.14%) reported familiarity with cultural healing. Among them, 31.7% expressed a comprehensive understanding, while 55.4% had only basic or surface-level knowledge. Just 12.9% indicated they had never encountered the concept.

Interview comments reflected curiosity and openness, though many participants lacked depth of understanding. For instance, one respondent noted, *“I’ve heard of acupuncture and meditation, but I don’t know how they’re connected or used together.”* Another added, *“If it were explained step-by-step, like a museum guide, I might try it.”* These responses drive home the importance of accessible cultural education through intuitive, non-expert-friendly formats.

Following the assessment of cultural healing awareness, we asked participants to evaluate the overall feasibility of establishing a Cultural Healing Virtual Museum.

3.1.3. Perceived feasibility of the cultural healing virtual museum

Figure 6 illustrates participants’ detailed responses regarding the perceived feasibility of the cultural healing Virtual museum.

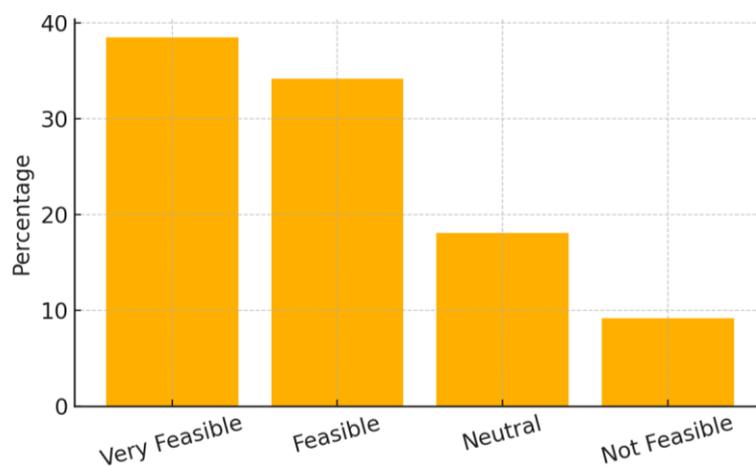


Figure 6. Perceived feasibility of the cultural healing virtual museum.

Figure 6 illustrates participant responses regarding the feasibility of a Cultural Healing Virtual Museum as a wellness platform. Over 72% of respondents rated the initiative as “feasible” or “very feasible,” citing benefits such as cultural engagement, mental clarity, and stress relief. Only 8.9% expressed doubt, citing technological unfamiliarity and lack of time during the workday as barriers.

Participants suggested that feasibility would improve if the platform were accessible via mobile devices and integrated with wellness breaks or onboarding. As one participant stated, *“If it fits easily into my day and doesn’t require too much setup, I’d definitely try it.”* These insights support the potential implementation of hybrid or modular versions tailored to workplace settings.

3.2. Acceptance of virtual reality technologies

To gain insights into this overall acceptance, participants were asked to indicate their specific preferences for different VR format options.

3.2.1. VR format preferences

Figure 7 provides a visual summary of participants’ preferences for various VR formats within the Cultural Healing Virtual Museum.

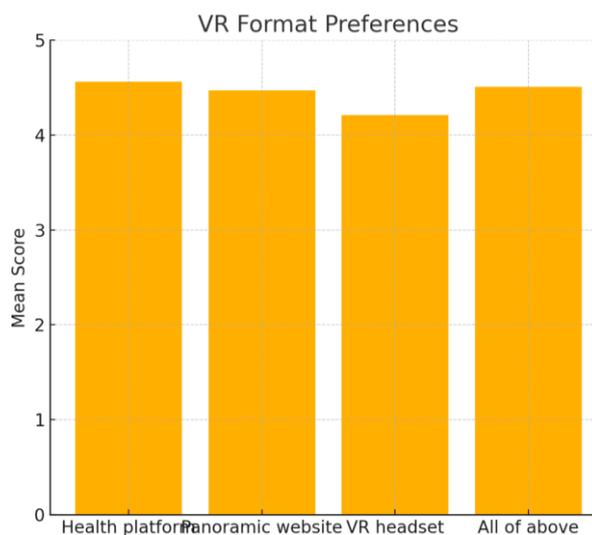


Figure 7. VR format preferences.

Figure 7 depicts the participants' preferences for VR formats. An organized health education platform was the most preferred choice ($M = 4.56$), followed by a panoramic website ($M = 4.47$), immersive VR headset experiences ($M = 4.21$), and "All of the Above" ($M = 4.51$). The minimal preference for "None of the Above" ($M = 4.20$) underscores a general receptiveness to various digital media. Interview observations highlighted cultural distinctiveness and emotional honesty. A participant stated, "When the visuals align with my cultural experience, I feel a greater sense of connection." Another articulated, "I desire it to avoid a generic quality; it must embody my traditions and symbols to ensure my trust." A third participant remarked, "Utilizing authentic traditional colors and patterns creates a sense of personalization, distinguishing it from a conventional application." These quotations indicate the importance of creating culturally integrated and visually impactful virtual experiences to guarantee emotional engagement and educational efficacy.

Participants expressed their views on the overall efficacy of VR in providing cultural health education, alongside their format choices.

3.2.2. Perceived effectiveness of VR

Figure 8 provides the participants' perception of VR effectiveness and their interest.

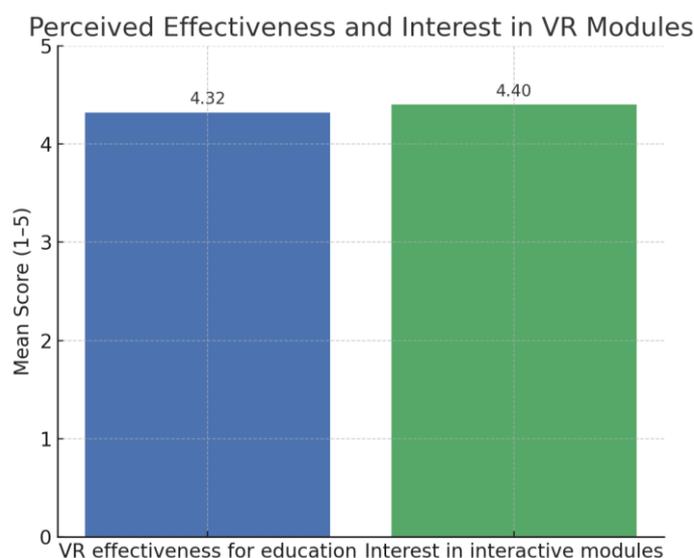


Figure 8. Perceived effectiveness and interest in VR modules.

Figure 8 depicts the participants' assessment of VR efficacy and their engagement with VR modules. Participants concurred that virtual reality is efficacious for cultural and health education ($M = 4.32$) and exhibited significant interest in interactive modules ($M = 4.40$). The interviews reflected this enthusiasm, with one participant stating, "VR makes me feel as though I am truly present; it enhances my comprehension and retention more effectively than merely reading or viewing a video." Another participant remarked, "I would appreciate the opportunity to investigate healing practices in a virtual environment that allows for movement and interaction, rather than merely passively absorbing information." A respondent highlighted, "Interactive modules provide me with control over my learning pace, rendering it more enjoyable and personalized." These insights underscore the perceived significance of immersive, self-directed experiences in facilitating cultural and health education via virtual reality.

In addition to the broad acceptability of VR technology, it was essential to investigate the underlying personal and environmental aspects that affect participants' readiness to participate with the virtual museum.

3.3. Factors influencing willingness to engage

To explore these underlying factors in more detail, the analysis first focused on the relationship between life satisfaction, beliefs about inner transformation, and willingness to engage.

3.3.1 Engagement drivers: Life satisfaction, inner transformation, and activity patterns

To better understand what motivates user participation, this section examines how participants' overall life satisfaction and physical activity habits correlate with their engagement levels, as illustrated in **Figure 9**. The figure collectively highlights the psychological and behavioral factors influencing user engagement with the Cultural Healing Virtual Museum. Life satisfaction levels and physical activity

patterns emerged as significant predictors of receptivity to immersive wellness experiences.

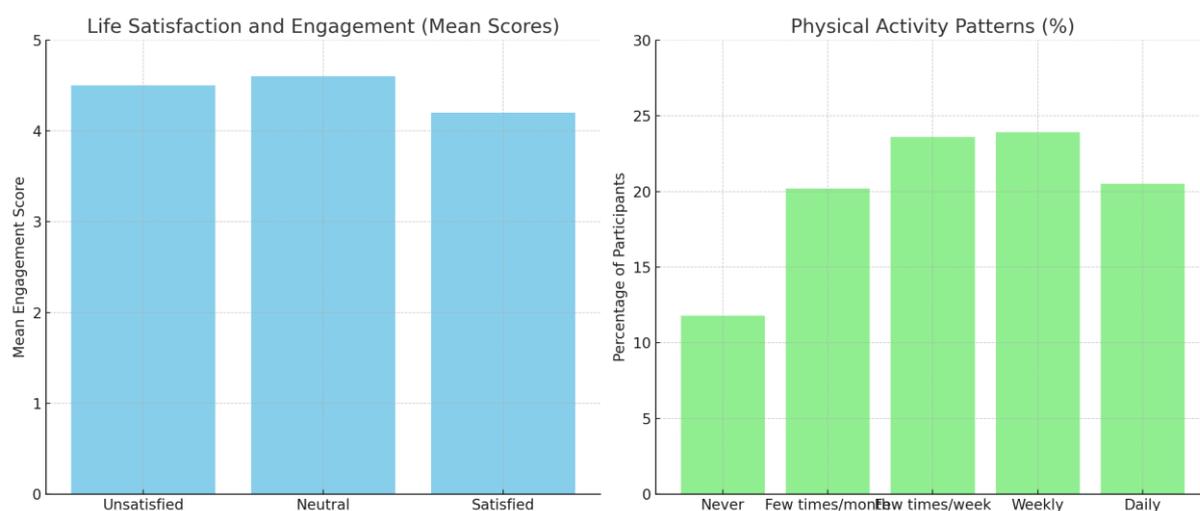


Figure 9. Psychological and behavioral predictors of engagement with the cultural healing virtual museum.

This figure integrates participants' life satisfaction levels (left) and physical activity habits (right), revealing both emotional readiness and wellness-oriented behaviors as key engagement drivers. Higher interest in immersive wellness experiences was reported among those with neutral or lower life satisfaction, as well as among those who engaged in regular physical activity. These patterns support the potential of the virtual museum to reach both motivated and underserved employee segments.

Participants reporting *neutral* ($M = 4.60$) or *unsatisfied* ($M = 4.50$) life satisfaction levels exhibited a heightened openness to using the virtual museum, viewing it as a pathway to emotional renewal and inner healing. *Agreement with the statement "Inner transformation is key to healing" was strong* ($M = 4.29$), underscoring participants' alignment with holistic wellness philosophies. Interview feedback reinforced this perspective: one participant reflected, "If it evokes tranquility, akin to a temple or forest, I will desire to explore and linger." Others favored environments with "nature or meditation visuals" and "minimal, soothing design elements" that cultivate a sense of calm and facilitate emotional self-regulation. These preferences suggest that design elements such as symbolic natural imagery, serene color palettes, and immersive soundscapes play a crucial role in emotional readiness and deepened engagement.

Complementing these psychological insights, physical activity data provided behavioral context. A substantial portion of participants reported regular engagement in health-promoting behaviors—daily (20.5%), weekly (23.9%), or several times per week (23.6%)—demonstrating an existing motivation for self-care. However, even those with less frequent activity—monthly (20.2%) or none (11.8%)—expressed curiosity and willingness to participate, indicating the potential for growth through motivational design.

Interview responses support the idea that engagement can be strengthened by aligning virtual content with users' personal routines and aspirations. One participant

shared, “I practice yoga every morning, so I would appreciate a visual or immersive experience.” Another noted, “I am currently not very active, but an engaging or aesthetically pleasing virtual guide could inspire me to increase my activity.” Additionally, several participants emphasized the value of “seeing personal progress or milestones,” which they felt would instill pride and reinforce ongoing participation.

Upon evaluating the personal and behavioral determinants affecting the propensity to participate, the analysis shifted to the participants’ particular preferences about content and design in the virtual museum.

3.3.2 Design and content preferences

To begin exploring design preferences in detail, participants were first asked about the specific types of content they would like to see in the virtual museum.

3.3.2.1 Content interests in virtual museum

Figure 10 presents a visual summary of participants’ top content interests for inclusion in the Cultural Healing Virtual Museum.

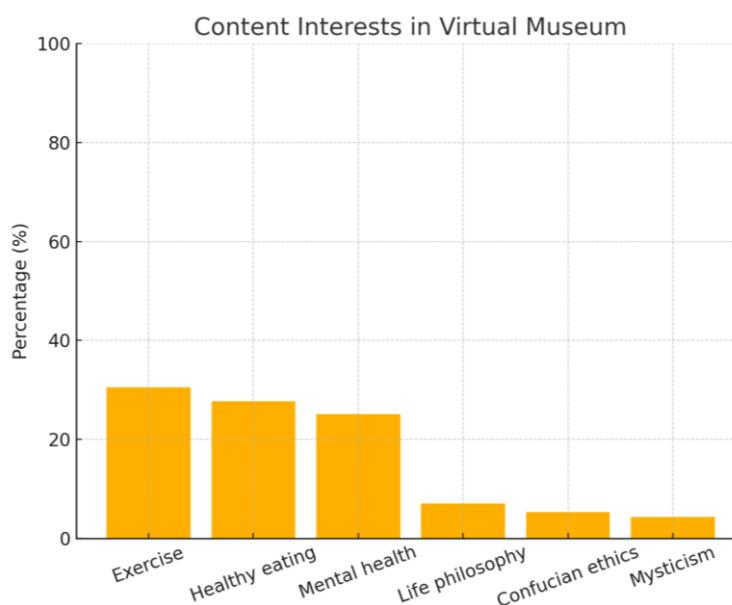


Figure 10. Content interests in virtual museum.

Figure 10 depicts the participants’ interests in virtual museum content. The primary interests comprised fitness and workouts (30.5%), healthy eating and well-being (27.8%), and mental health and emotional regulation (25.1%). Conversely, more abstract or philosophical subjects, like life philosophy (7.0%), Confucian ethics (5.3%), and mysticism (4.3%), garnered diminished attention. These findings underscore a significant user desire for pragmatic, action-oriented material that facilitates physical and emotional self-care.

We requested participants to indicate their preferred presentation methods for interacting with the virtual museum’s resources, along with their topic interests.

3.3.2.2. Presentation formats

Figure 11 illustrates participants’ preferences for different presentation formats when engaging with cultural healing content in the virtual museum.

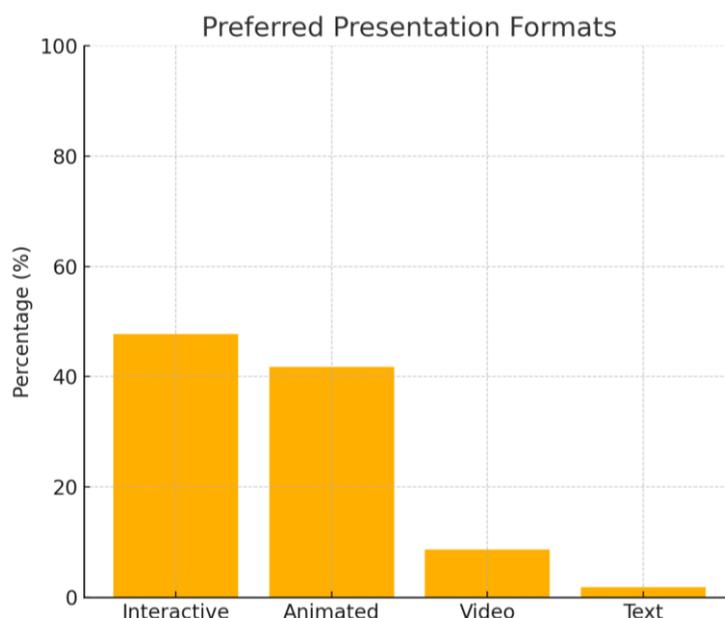


Figure 11. Preferred presentation formats.

Figure 11 depicts the participants' choices on the format of virtual museum presentations. Interactive simulations (47.8%) and animated visuals (41.8%) were the most desired formats, while passive formats like video (8.6%) and text (1.9%) were less popular. These trends correspond closely with insights derived from interviews. One participant remarked, "I prefer to click and explore instead of merely reading—that sustains my interest." Another remarked, "When I can engage or observe movement, I perceive myself as an integral part of the experience, rather than merely an observer." A third individual stated, "Animations or interactive elements facilitate my comprehension of concepts that are difficult to articulate verbally." Design the platform as an experience environment featuring dynamic, modular, and self-paced components to accommodate various learning styles and sustain interest.

In addition to presenting style, participants specified their favored technology formats for engaging with the virtual museum.

3.3.2.3. Preferred technologies

Figure 12 illustrates participants' preferred technological formats for engaging with the Cultural Healing Virtual Museum.

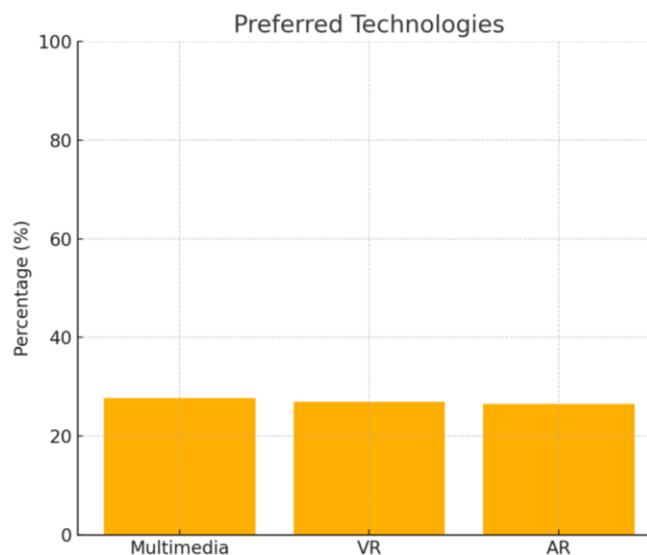


Figure 12. Preferred technologies.

Figure 12 illustrates participants' technological preferences, revealing a nearly balanced interest in multimedia tools (27.7%), virtual reality (27.0%), and augmented reality (26.5%). This distribution underscores the need for an inclusive and adaptable platform that accommodates varying levels of technological access and familiarity. While interest in immersive technologies like VR and AR remains strong, the data also highlight a clear preference among many participants for mobile-friendly multimedia platforms—tools that are readily accessible via smartphones or tablets without requiring specialized equipment.

Interview responses further reinforced this point. One participant noted, “I appreciate innovative technology, yet I require a straightforward solution that functions on my phone or tablet.” Another echoed this need for flexibility, stating, “Not everyone possesses VR at home; thus, a combination of conventional multimedia and AR is more pragmatic.” These findings suggest that HR practitioners can be reassured that the platform's design does not demand high-end infrastructure. Instead, it prioritizes accessibility, user autonomy, and ease of integration into existing wellness strategies.

Thus, the Cultural Healing Virtual Museum is not only a novel immersive experience—it is also a mobile-accessible, multimedia-rich solution, making it feasible for broad employee use regardless of technological sophistication. Ensuring compatibility with common personal devices supports equitable participation, addressing potential barriers in organizational rollouts and strengthening the case for real-world implementation in diverse workplace settings.

After examining content and design choices, the investigation concentrated on participants' judgments regarding the prospective advantages and drawbacks of utilizing the Cultural Healing Virtual Museum.

3.4. Perceived benefits and limitations

To further understand these perceived benefits, the analysis first examined participants' openness to cultural learning as a foundation for engagement.

3.4.1. Openness to cultural learning

Figure 13 visually summarizes participants' levels of openness to cultural learning and their willingness to engage in traditional healing practices.

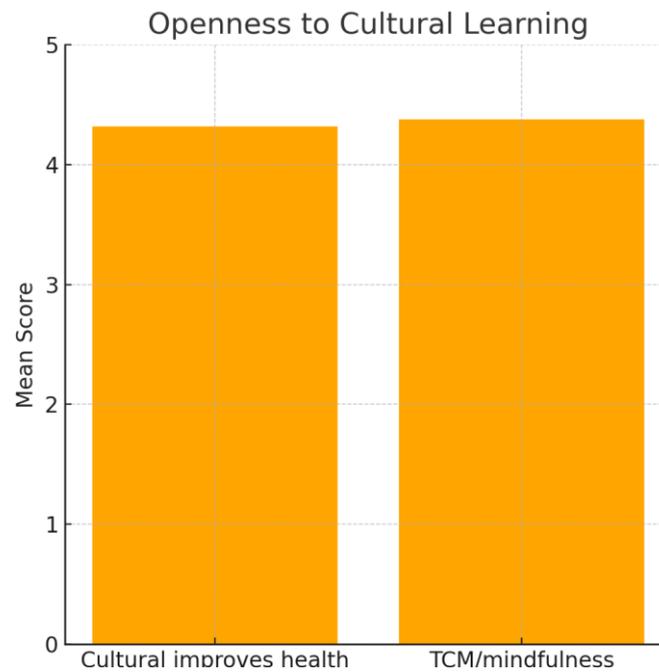


Figure 13. Openness to cultural learning.

Figure 13 depicts the participants' receptiveness to cultural education. Participants exhibited an almost equal preference for multimedia tools (27.7%), virtual reality (27.0%), and augmented reality (26.5%), indicating a widespread interest in integrated immersive experiences. This inclination toward diverse technologies signifies the necessity for an inclusive and versatile platform. There was a strong consensus about the enhancement of health through cultural learning ($M = 4.32$) and an increased receptiveness to Traditional Chinese Medicine and mindfulness practices ($M = 4.38$). These findings highlight the capacity of immersive tools, such as virtual museums, to facilitate cultural healing within personal health regimens. Insights from the interview underscored a desire for guided, self-directed, and multimodal experiences, accentuating the significance of emotional tone and cultural authenticity. A participant stated, "I acquire knowledge more effectively when guided gradually, akin to a soothing voice directing meditation." Another articulated, "Experiencing traditional practices in an immersive manner would enhance my comprehension and appreciation of them." A third participant remarked, "I prefer a thorough explanation—I wish to investigate at my pace and genuinely comprehend the significance of each symbol or ritual." These quotations demonstrate how emotional resonance, and culturally accurate narratives can facilitate profound learning and engagement.

Despite this general openness, it was crucial to investigate participants' reservations and ambiguities over their involvement with the virtual museum.

3.4.2. Hesitations and uncertainty

Figure 14 illustrates the distribution of participants' hesitations and uncertainties about using the Cultural Healing Virtual Museum.

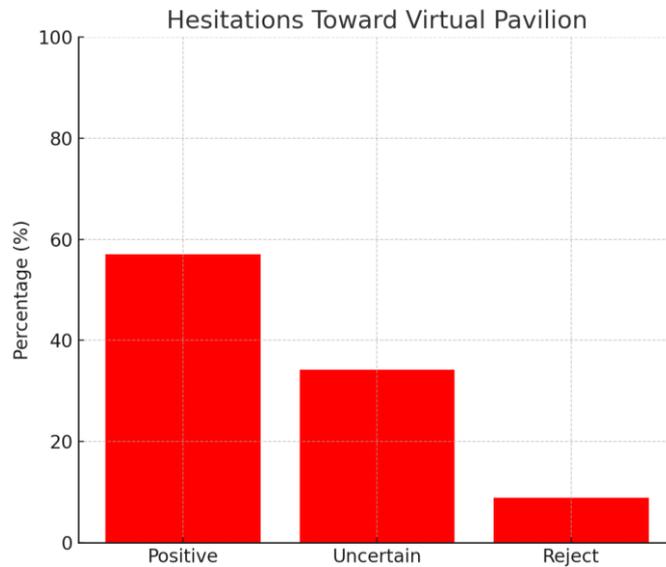


Figure 14. Hesitations toward visual museum.

Figure 14 depicts the participants' reservations regarding the visual museum. While 57.0% responded affirmatively, a notable 34.2% conveyed uncertainty or moderate curiosity, suggesting possible obstacles to adoption. Merely 8.9% overtly dismissed the concept, indicating that focused design interventions and user education could potentially enhance engagement among the reluctant demographic. The interview feedback elucidates this reluctance. A participant expressed, "I am intrigued, yet I fear it may be overly complex or that I will be uncertain about how to begin." Another stated, "I require a step-by-step guide initially; otherwise, I feel disoriented and abandon the task swiftly." A third participant remarked, "If there are instances or narratives from other users, I may feel more assured in my attempt." Design implementation should incorporate low-friction entry points, including guided previews, soothing onboarding aesthetics, and user testimonials to transform curiosity into enduring engagement.

3.5. Synopsis of insights and principal findings

Participants exhibited elevated overall feasibility ratings for the Cultural Healing Virtual Museum, demonstrating considerable interest among individuals already cognizant of preventative health habits. Qualitative feedback indicated that elderly folks and those with limited technological experience necessitate clear, accessible entry points. Statements like "If I need to download too many things or learn new controls, I might give up" underscore the essential requirement for streamlined onboarding and mobile-first accessibility. A widespread awareness of traditional healing techniques existed, while the level of comprehension differed. Interviewees highlighted the importance of trust established through culturally relevant imagery and language. A participant articulated, "I desire it to avoid a generic feel; it must embody my traditions and symbols to inspire trust," demonstrating the importance of symbolic design and narrative in cultivating credibility and emotional resonance.

Quantitative results indicated a significant receptiveness to various digital media (structured platforms, panoramic websites, and virtual reality). Interviewees emphasized the necessity for cultural specificity and adaptability, stating, "At times, I

prefer to observe or listen, while at other moments, I wish to fully engage in a space—having both alternatives is crucial.” Such an environment necessitates a hybrid strategy that accommodates varying degrees of immersion and technological proficiency. Participants at various satisfaction levels demonstrated a robust eagerness to engage, appreciating inner transformation and emotional resonance. Design inclinations favored serene, nature-inspired settings, with remarks such as “If it evokes tranquility, akin to a temple or forest, I would be inclined to explore,” suggesting the importance of calming, symbolic visuals and auditory landscapes to facilitate contemplative participation.

A significant proportion of respondents were already active or health-conscious; nevertheless, even less active individuals exhibited interest when stimulated by compelling images and milestone monitoring. As one participant commented, “Seeing my progress or milestones would make me feel proud and keep me coming back,” demonstrating the potential of adding gamified or symbolic aspects to establish wellness identity and foster habit building. Participants predominantly favor interactive simulations and animated images rather than passive formats such as text and video. Statements like “Animations or interactive pieces assist me in comprehending concepts that are difficult to articulate” exemplify the necessity for dynamic, experiential learning to maintain engagement and enhance knowledge.

Enthusiasm for multimedia, virtual reality, and augmented reality was virtually equal, highlighting inclusivity and technical adaptation. A participant succinctly articulated this flexibility: “Not everyone possesses VR at home; thus, a combination of conventional multimedia and AR is more pragmatic,” highlighting the necessity for a multi-platform design approach. A robust receptiveness to cultural learning via immersive media was articulated, highlighting authenticity and emotional profundity. One participant remarked, “Experiencing traditional practices immersivity would enhance my understanding and respect for them,” so affirming the significance of immersive culture storytelling in health education.

Despite significant general interest, apprehension remained among certain individuals due to concerns over complexity and a deficiency of confidence. Participants recommended a structured, step-by-step onboarding process and testimonials to enhance comfort, with one individual stating, “I require a clear, sequential guide initially; otherwise, I feel disoriented and tend to abandon the process swiftly.”

The promotion of employee well-being and psychological health appeared as a pervasive topic throughout the study. Participants indicated that virtual cultural healing spaces could function as effective instruments for alleviating stress, improving concentration, and fostering emotional resilience in professional environments. A participant stated, “Access to a calming resource during work breaks would significantly aid in my ability to reset and alleviate feelings of overwhelm.” Another individual stated, “If my employer provided this service as a wellness initiative, I would perceive that they genuinely valued our mental health.” These observations indicate that incorporating culturally sensitive and visually pleasing virtual experiences into workplace wellness initiatives can proactively enhance psychological health, resulting in cultivating a more engaged, balanced, and loyal workforce.

The integrated quantitative and qualitative results indicate a distinct need for a culturally enriched, adaptable, and emotionally resonant virtual healing platform. Despite elevated enthusiasm, success hinges on overcoming usability obstacles, providing many technological options, and anchoring material in genuine cultural narratives and aesthetics. The incorporation of direct user feedback offers essential direction for enhancing design, content, and implementation strategies focused on general health promotion and workplace well-being.

4. Discussion

This study looked at how practical, accepted, and well-designed a Cultural Healing Virtual Museum is for improving health education and cultural understanding among middle-aged adults dealing with health issues. The results corroborate and enhance other studies that emphasize the capacity of immersive and culturally relevant technologies to foster comprehensive well-being (Hibbard and Greene, 2013; Moro et al., 2017; Rasweswe et al., 2021). The Cultural Healing Virtual Museum combines cultural narratives with interactive design, presenting a novel paradigm that corresponds with new frameworks that point out the importance of emotional, symbolic, and sensory experiences in health involvement (Carrozzino and Bergamasco, 2010; Matuk, 2016).

High feasibility scores and broad receptiveness to the platform highlight a growing willingness among middle-aged individuals to participate in virtual health and wellness interventions, contingent upon their accessibility, intuitiveness, and cultural relevance. Participants' preference for mobile-friendly, accessible entry points underscores a vital design principle: although VR and AR technologies possess transformative capabilities for immersive learning, inclusive design strategies must prioritize usability and adaptability to cater to varying levels of technological expertise. Interview feedback corroborates this, as participants said that excessive setup difficulty would dissuade them: "If I need to download too many items or learn new controls, I might abandon it."

In accordance with design-centered health engagement theories, participants predominantly preferred interactive simulations and animated visuals to static or passive forms (Carrozzino and Bergamasco, 2010; Matuk, 2016). This preference highlights the significance of dynamic, multimodal content in maintaining user engagement, augmenting emotional connection, and enriching learning. Moreover, the significant focus on culturally authentic visual and narrative elements—such as the preference for traditional symbols and natural aesthetics—highlights the imperative of creating designs that evoke emotional resonance and foster cultural trust: "I don't want it to feel generic; it should embody my traditions and symbols so I can trust it."

Another crucial observation is the increased receptiveness among those who indicate neutral or unsatisfactory life satisfaction and a profound conviction in inner transformation as vital to therapy. This finding aligns with previous research showing that being emotionally ready and open to self-discovery greatly influences involvement in alternative and integrative health methods (Negi, 2024; Singha and Singha, 2024). Participants' feedback indicated that serene, nature-inspired designs

evoke a sense of safety and encourage exploration: “If it feels tranquil, like a temple or forest, I would be inclined to explore and remain longer.”

Such tranquil aesthetics may also serve a secondary function in mitigating screen fatigue—a rising concern in remote and hybrid work environments where overstimulation and visual clutter can exacerbate cognitive load. By offering visually restful, symbolically rich, and emotionally grounding environments, the platform supports longer, more meaningful engagement without contributing to digital exhaustion.

Despite general enthusiasm, a significant minority exhibited hesitation, indicating apprehensions around technical unfamiliarity and digital fatigue. Hybrid models integrating web-based access with optional immersive VR elements may provide a viable approach for first implementation. Facilitating educational methodologies, including incremental tutorials, progressive onboarding, and culturally attuned assistance, can enhance confidence and mitigate obstacles to adoption. “I require a resource that demonstrates the process incrementally; otherwise, I feel disoriented and abandon my efforts swiftly.”

To ensure real-world feasibility, several practical mechanisms for workplace deployment must be considered. These include clear time allocations (e.g., 10–15-min guided sessions during lunch breaks or transition periods), optional integration into existing Employee Assistance Programs (EAPs), and privacy protocols such as secure login, anonymized user data, and role-based access to engagement metrics. Manager training can be delivered via short onboarding modules or in wellness orientations to cultivate a psychologically safe and culturally sensitive environment for use. Technical support should be embedded within IT or wellness teams to offer scalable troubleshooting. These operational considerations are essential for the Cultural Healing Virtual Museum to coexist effectively with current HR systems.

To ensure effective deployment within diverse organizational environments, multiple implementation models should be considered. Web-based versions offer broad accessibility and minimal setup, while immersive VR components provide deeper engagement for technologically proficient users. Cost considerations include initial design and development, licensing fees, maintenance, and staff onboarding. Organizations may begin with lightweight web-based rollouts and scale into immersive options based on usage metrics and feedback. Integration with existing HR systems, particularly Employee Assistance Programs (EAPs)—can streamline delivery, ensure policy alignment, and avoid redundancy. These models allow organizations to layer culturally relevant wellness interventions atop established mental health infrastructures, maximizing reach while managing costs.

Moreover, a preliminary cost-benefit analysis suggests that implementing virtual cultural wellness platforms may yield measurable organizational returns. Based on projections informed by Birrenbach et al. (2025) and Kwon et al. (2025), reductions in stress-related absenteeism and improvements in employee engagement translate into potential healthcare cost savings and increased productivity. Such evidence strengthens the argument for aligning cultural healing initiatives with strategic workforce development and HRM investment.

The study underscores the platform’s potential to enhance employee well-being and psychological wellness. Participants proposed that integrating cultural healing

experiences into workplace wellness programs could function as an effective mechanism for stress alleviation and mental health support, thereby cultivating a more engaged and resilient workforce. “Access to a calming resource during work breaks would significantly aid in my ability to reset and mitigate feelings of overwhelm.”

The integration of culturally symbolic elements, such as Traditional Chinese Medicine (TCM), enhances emotional engagement and aligns with DEI principles by validating diverse cultural identities within workplace wellness programs. This cultural personalization offers a sense of familiarity and psychological safety, particularly for mid-career employees from non-Western backgrounds. The underlying design framework is adaptable and could be scaled to reflect other cultural healing paradigms—such as Ayurveda, Indigenous rituals, or Islamic calligraphy—depending on local workforce composition and regional values.

The integration with existing HR systems has been clarified, referring to Employee Assistance Programs (EAPs) and aligning with wellness policies. These engaging programs can be created to work alongside current systems instead of taking their place—acting as an extra layer in HRM frameworks and providing culturally relevant options for emotional healing and mental strength. This approach not only enhances employee support but also fosters a more inclusive workplace culture. By prioritizing mental health resources, organizations can empower their workforce to thrive both personally and professionally.

The findings align with strategic HRM goals, such as talent retention and workforce sustainability. By integrating immersive cultural wellness interventions, organizations demonstrate a commitment to holistic employee support—aligning with contemporary HR strategies that value emotional safety, identity affirmation, and inclusive engagement. These tools not only reduce stress but also foster a resilient, high-trust work culture, contributing to long-term employee loyalty (Bakker and Demerouti, 2007, 2013, 2024; Mazzetti et al., 2023; Rousseau, 1995).

The return on investment (ROI) discussion includes citations (Birrenbach et al., 2025; Kwon et al., 2025) that link reduced absenteeism to improved engagement. Evidence suggests that culturally inclusive wellness programs yield measurable returns by decreasing stress-related absences, improving psychological resilience, and enhancing work engagement—particularly in mid-career populations. These outcomes directly support strategic HRM objectives related to employee retention, productivity, and cost-effective well-being investments.

As organizations increasingly prioritize employee well-being, the integration of such wellness programs into broader HRM strategies becomes essential. By fostering an inclusive environment, companies can not only reduce turnover but also cultivate a more motivated and productive workforce, ultimately driving long-term success.

This research illustrates that the potential for cultural healing in virtual settings depends on both technological innovation and the thoughtful integration of cultural narratives, symbolic aesthetics, and user agency. The Cultural Healing Virtual Museum serves as an exemplary example for integrating art, culture, and health education in an inclusive, emotionally impactful, and profoundly significant manner. The capacity to engage varied audiences and promote comprehensive well-being illustrates the importance of culturally informed, design-oriented strategies in digital health innovation. As hybrid and remote work models become increasingly prevalent,

virtual cultural spaces like the Cultural Healing Virtual Museum offer a scalable and inclusive infrastructure for promoting well-being, cultural belonging, and emotional resilience in diverse organizational contexts.

5. Conclusion

This study assessed the feasibility, acceptance, and design specifications of a Cultural Healing Virtual Museum aimed at middle-aged adults in sub-health, with the objective of incorporating cultural healing practices into virtual health education. The results indicate significant potential for this platform, especially among individuals already involved in wellness activities and receptive to cultural education.

The study revealed significant overall feasibility, with participants highlighting the necessity of intuitive, mobile-compatible, and visually engaging interfaces. Although the acceptability of virtual reality and immersive technology was predominantly robust, certain reservations arose concerning technological familiarity and digital fatigue. The user's readiness to participate was intricately connected to personal wellness aspirations and a quest for inner transformation, highlighting the necessity for emotionally impactful and symbolically significant design.

Participants clearly favored interactive simulations and practical, action-focused content, indicating that future virtual health platforms should move from simply sharing information to creating engaging, user-friendly learning experiences. Participants constantly brought attention to authenticity and culturally rooted aesthetics, accentuating the relevance of incorporating traditional symbols, narratives, and sensory experiences.

Although numerous participants saw potential advantages, such as enhanced health literacy, emotional management, and a stronger connection to cultural heritage, apprehensions over accessibility and user-friendliness indicate the importance of low-barrier entry points and effective onboarding procedures.

This study suggests that a Cultural Healing Virtual Museum is both viable and desirable, contingent upon its design prioritizing inclusivity, cultural authenticity, and user-centered participation. These findings provide essential direction for designers, health educators, policymakers, and cultural practitioners aiming to integrate technology with traditional healing knowledge in novel and accessible manners.

6. Implications

This study offers significant insights for the design and execution of culturally aware digital health interventions:

For health educators and designers: The findings underscore the significance of culturally relevant, interactive, and visually engaging formats in the design of digital health platforms. Educators and designers must prioritize adaptable, user-centric experiences that correspond with diverse technical competencies and health literacy levels.

To public health policymakers: Significant interest among middle-aged individuals in accessible, culturally grounded wellness services indicates an opportunity to incorporate virtual cultural healing into preventive health initiatives.

Collaborations across sectors involving health authorities, cultural organizations, and technology developers are essential for ensuring inclusivity and efficacy.

For cultural professionals and community organizations: The findings highlight the capacity of virtual environments to preserve and disseminate cultural healing knowledge to broader audiences. Community-driven curation and genuine storytelling must remain vital to sustain cultural integrity while broadening outreach.

Technology developers should prioritize mobile compatibility, straightforward navigation, and reduced technical hurdles, emphasizing the necessity for inclusive design strategies that accommodate people with less digital proficiency.

7. Limitations

This study acknowledges certain limitations, particularly the gender imbalance among participants (81.36% female), which constrains the generalizability of results across a broader workforce. While this may reflect greater female engagement with wellness programs, future studies should ensure gender-balanced sampling, especially targeting underrepresented groups in male-dominated sectors. This imbalance also necessitates disaggregated analysis in subsequent research to examine differential impacts and design efficacy across gender identities.

8. Suggestions for subsequent investigations

To expand upon these findings and rectify the identified limitations, subsequent research should contemplate:

Longitudinal investigations: Monitor user involvement, health results, and cultural shifts. We evaluate perception over time to identify long-lasting impact and behavioral changes.

Broaden demographic focus: Incorporate a wider variety of age groups, geographic areas, and health conditions to improve generalizability and promote inclusivity.

Comparative platform studies: Assess various immersive technologies (e.g., VR, AR, mixed reality) and delivery methods to identify the most effective formats for diverse user demographics.

Perspectives on gender and social equity: Examine design preferences, engagement patterns, and accessibility obstacles across gender and socioeconomic divisions to facilitate equitable implementation.

Co-creation and participatory design: Engage target users and cultural practitioners more extensively in the design and development process to enhance cultural authenticity, usability, and emotional impact.

Author contributions: Author contributions: Conceptualization, FK and VR; methodology, FK and VR; software, FK; validation, FK and VR; formal analysis, K; investigation, K; resources, VR; data curation, FK; writing—original draft preparation, FK; writing—review and editing, FK and VR; visualization, FK; supervision, VR; project administration, FK; funding acquisition, FK. Both authors have read and agreed to the published version of the manuscript.

Conflict of interest: The authors declare no conflict of interest.

References

- Antleij, K., Nezami, A., Nakisa, B., et al. (2022). What Is the Role of Museums and Meaningful Extended Reality Experiences in Supporting Mental Health and Well-Being in Space? The Place in Space of Cultural and Heritage-Based Extended Reality Experiences. *Journal of Space Philosophy*, 11(1).
- AlGerafi, M. A., Zhou, Y., Oubibi, M., & Wijaya, T. T. (2023). Unlocking the potential: A comprehensive evaluation of augmented reality and virtual reality in education. *Electronics*, 12(18), 3953. <https://doi.org/10.3390/electronics12183953>
- Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309–328.
- Bakker, A. B., & Demerouti, E. (2013). Job demands-resources model. *Revista de Psicología del Trabajo y de las Organizaciones*, 29(3), 107–115.
- Bakker, A. B., & Demerouti, E. (2024). Job demands-resources theory: Frequently asked questions. *Journal of Occupational Health Psychology*, 29(3), 188.
- Beauchet, O., Matskiv, J., Galery, K., et al. (2022). Benefits of a 3-month cycle of weekly virtual museum tours in community dwelling older adults: Results of a randomized controlled trial. *Frontiers in Medicine*, 9, 969122. <https://doi.org/10.3389/fmed.2022.969122>
- Birrenbach, T., Lavallaz, J. D., Zimmermann, R., et al. (2025). Feasibility, subjective effectiveness, and acceptance of short virtual reality relaxation breaks for immediate perceived stress reduction in emergency physicians: Pilot study. *JMIR XR Spatial Comput*, 1(1), e72605. <https://xr.jmir.org/2025/1/e72605/>
- Black, C., Frederico, M., & Bamblett, M. (2024). Healing through culture: Aboriginal young people's experiences of social and emotional wellbeing impacts of cultural strengthening programs. *Child Abuse & Neglect*, 148, 106206. <https://doi.org/10.1016/j.chiabu.2023.106206>
- Buser, J. M., McCabe, E. M., Meenagh, K., et al. (2025). Holistic healing: A multidisciplinary approach to addressing psychosomatic and mental health challenges in a young refugee. *Journal of Pediatric Health Care*, 39(2), 284–288. <https://doi.org/10.1016/j.pedhc.2024.10.007>
- Carrozzino, M., & Bergamasco, M. (2010). Beyond virtual museums: Experiencing immersive virtual reality in real museums. *Journal of Cultural Heritage*, 11(4), 452–458. <https://doi.org/10.1016/j.culher.2010.03.002>
- Chan, H. S., Chu, H. Y., & Chen, M. F. (2022). Effect of horticultural activities on quality of life, perceived stress, and working memory of community-dwelling older adults. *Geriatric Nursing*, 48, 303–314. <https://doi.org/10.1016/j.gerinurse.2022.02.004>
- Chan, H. Y., Ho, R. C. M., Mahendran, R., et al. (2017). Effects of horticultural therapy on elderly health: Protocol of a randomized controlled trial. *BMC Geriatrics*, 17, 1–10. <https://doi.org/10.1186/s12877-017-0491-9>
- Chu, H. Y., Chen, M. F., Tsai, C. C., et al. (2019). Efficacy of a horticultural activity program for reducing depression and loneliness in older residents of nursing homes in Taiwan. *Geriatric Nursing*, 40(4), 386–391. <https://doi.org/10.1016/j.gerinurse.2019.01.011>
- Delany-Moretlwe, S., Cowan, F. M., Busza, J., et al. (2015). Providing comprehensive health services for young key populations: Needs, barriers and gaps. *Journal of the International AIDS Society*, 18, 19833. <http://dx.doi.org/10.7448/IAS.18.2.19833>
- Ding, L., Lin, Y., Xiang, G., & Peng, M. (2025). Exploring the emergence of the 'incense-burning and Buddha-worshipping' phenomenon among China's generation Z: Unveiling the role of healing experience. *Tourism Recreation Research*, 1–19. <https://doi.org/10.1080/02508281.2025.000000>
- Gooding, H. C., Gidding, S. S., Moran, A. E., et al. (2020). Challenges and opportunities for the prevention and treatment of cardiovascular disease among young adults: Report from a National Heart, Lung, and Blood Institute Working Group. *Journal of the American Heart Association*, 9(19), e016115. <https://doi.org/10.1161/JAHA.120.016115>
- Grawitch, M. J., & Ballard, D. W. (2016). The psychologically healthy workplace: Building a win-win environment for organizations and employees. American Psychological Association.
- Heo, J., Stebbins, R. A., Kim, J., & Lee, I. (2013). Serious leisure, life satisfaction, and health of older adults. *Leisure Sciences*, 35(1), 16–32. <https://doi.org/10.1080/01490400.2012.708125>
- Hibbard, J. H., & Greene, J. (2013). What the evidence shows about patient activation: Better health outcomes and care experiences; Fewer data on costs. *Health Affairs*, 32(2), 207–214. <https://doi.org/10.1377/hlthaff.2012.1061>

- Kennedy, A. A., Thacker, I., Nye, B. D., et al. (2021). Promoting interest, positive emotions, and knowledge using augmented reality in a museum setting. *International Journal of Science Education, Part B*, 11(3), 242–258.
- Kruk, M. E., Gage, A. D., Arsenault, C., et al. (2018). High-quality health systems in the Sustainable Development Goals era: Time for a revolution. *The Lancet Global Health*, 6(11), e1196–e1252. [https://doi.org/10.1016/S2214-109X\(18\)30386-3](https://doi.org/10.1016/S2214-109X(18)30386-3)
- Kwon, Y., Lee, S., Han, H., & Park, J. (2025). Enhancing sleep and reducing occupational stress through forest therapy across job groups: Evidence from a VR-based intervention. *Psychiatry Investigation*, 22(3), 182–190. <https://xr.jmir.org/2025/1/e72605/PDF>
- Lee, H., Jung, T. H., tom Dieck, M. C., & Chung, N. (2020). Experiencing immersive virtual reality in museums. *Information & Management*, 57(5), 103229. <https://doi.org/10.1016/j.im.2019.103229>
- Li, Y., Yang, R., Zou, J., et al. (2024). Human-centric virtual museum: Redefining the museum experience through immersive and interactive environments. *International Journal of Human–Computer Interaction*, 1–12.
- Liu, Y., Me, R. C., & Yusoff, I. S. M. (2023). The efficacy of horticultural therapy interventions based on mental health indicators in community-dwelling older adults: A scoping review. In: *Human Factors and Ergonomics Malaysia Biennial Conference*. Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-14645-7_29
- Matuk, C. (2016). The learning affordances of augmented reality for museum exhibits on human health. *Museums & Social Issues*, 11(1), 73–87.
- Mazzetti, G., Robledo, E., Vignoli, M., et al. (2023). Work engagement: A meta-analysis using the job demands-resources model. *Psychological Reports*, 126(3), 1069–1107.
- Moro, C., Štromberga, Z., Raikos, A., & Stirling, A. (2017). The effectiveness of virtual and augmented reality in health sciences and medical anatomy. *Anatomical Sciences Education*, 10(6), 549–559. <https://doi.org/10.1002/ase.1696>
- Moss, C. A. (2010). *Power of the five elements: The Chinese medicine path to healthy aging and stress resistance*. North Atlantic Books.
- National Academies of Sciences, Engineering, and Medicine, Division of Behavioral and Social Sciences and Education, Health and Medicine Division; Board on Behavioral, Cognitive, and Sensory Sciences, et al. (2020). *Social isolation and loneliness in older adults: Opportunities for the health care system*. National Academies Press.
- Negi, S. K. (2024). Exploring the impact of virtual reality and augmented reality technologies in sustainability education on green energy and sustainability behavioral change: A qualitative analysis. *Procedia Computer Science*, 236, 550–557.
- Noblet, A., & LaMontagne, A. D. (2006). The role of workplace health promotion in addressing job stress. *Health Promotion International*, 21(4), 346–353. <https://doi.org/10.1093/heapro/dal029>
- Ou, L., Young, L., Chen, J., et al. (2009). Discharge delay in acute care: Reasons and determinants of delay in general ward patients. *Australian Health Review*, 33(3), 513–521. <https://doi.org/10.1071/AH090513>
- Randeree, E. (2009). Exploring technology impacts of Healthcare 2.0 initiatives. *Telemedicine and e-Health*, 15(3), 255–260. <https://doi.org/10.1089/tmj.2008.0109>
- Rasweswe, M. M., Mogale, R. S., Musie, M. R., & Rikhotso, R. S. (2021). Re-defining holistic healing: From transdisciplinary perspectives in South Africa. *European Journal of Integrative Medicine*, 42, 101300. <https://doi.org/10.1016/j.eujim.2021.101300>
- Sánchez-Rodríguez, D., Calle, A., Contra, A., et al. (2016). Sarcopenia in post-acute care and rehabilitation of older adults: A review. *European Geriatric Medicine*, 7(3), 224–231. <https://doi.org/10.1016/j.eurger.2016.02.003>
- Singha, R., & Singha, S. (2024). Enhancing well-being: Exploring the impact of augmented reality and virtual reality. In: *Applications of virtual and augmented reality for health and wellbeing*. IGI Global.
- Shen, J. L., Hung, B. L., & Fang, S. H. (2022). Horticulture therapy affected the mental status, sleep quality, and salivary markers of mucosal immunity in an elderly population. *Scientific Reports*, 12(1), 10246. <https://doi.org/10.1038/s41598-022-15352-3>
- Tu, H. M. (2022). Effect of horticultural therapy on mental health: A meta-analysis of randomized controlled trials. *Journal of Psychiatric and Mental Health Nursing*, 29(4), 603–615. <https://doi.org/10.1111/jpm.12801>
- Yan, X., & Geng, T. (2024). Healing spaces improve the well-being of older adults: A systematic analysis. *Buildings*, 14(9), 2701. <https://doi.org/10.3390/buildings14092701>
- Yao, Y. F., & Chen, K. M. (2017). Effects of horticulture therapy on nursing home older adults in southern Taiwan. *Quality of Life Research*, 26, 1007–1014. <https://doi.org/10.1007/s11136-016-1485-x>

Appendix

Questionnaire—Cultural healing virtual museum study

i. Section 1: Demographics and health status

- 1) What is your age?
 - 35–40
 - 41–45
 - 46–50
 - 51–55
 - 56–60
 - 61–65
- 2) Gender:
 - Male
 - Female
 - Other/Prefer not to say
- 3) What is your highest level of education?
 - Less than high school
 - High school
 - Bachelor’s degree
 - Postgraduate degree
- 4) Do you currently have any chronic health conditions?
 - Yes
 - No
- 5) How often do you go for health checkups?
 - Regularly (annually or more)
 - Occasionally (every 2–3 years)
 - Rarely
 - Never
- 6) How would you rate your current health status?
(Likert scale: 1 = Very poor, 5 = Excellent)

ii. Section 2: Cultural healing awareness

- 7) How familiar are you with the term “Cultural Healing”?
 - Very familiar
 - Somewhat familiar
 - Heard of it but unsure
 - Not familiar at all
- 8) Have you ever practiced any cultural healing methods (e.g., Traditional Chinese Medicine, Ayurveda, mindfulness)?
 - Yes, regularly
 - Occasionally
 - Tried once
 - Never
- 9) Do you believe cultural healing practices can improve physical or mental well-being?
 - Strongly agree

- Agree
- Neutral
- Disagree
- Strongly disagree

iii. Section 3: Technology experience

- 10) How comfortable are you using digital technology (computers, mobile apps, online platforms)?
(Likert scale: 1 = Not comfortable at all, 5 = Very comfortable)
- 11) Have you ever used VR (Virtual Reality)?
- Yes, frequently
 - Yes, once or twice
 - Heard of it, but never used
 - No
- 12) Have you used AR (Augmented Reality) or interactive websites for learning or health purposes?
- Yes
 - No
- 13) What challenges, if any, do you face when using new technologies?
- Lack of access to devices
 - Low digital literacy
 - No interest
 - None

iv. Section 4: Virtual platform engagement

- 14) If a Cultural Healing Virtual Museum were available, how likely are you to use it?
- Very likely
 - Likely
 - Maybe
 - Unlikely
 - Not at all
- 15) How effective do you think VR/AR could be for health education?
- Very effective
 - Somewhat effective
 - Neutral
 - Not effective
- 16) Would you be interested in a self-paced, interactive VR experience that guides you through healing practices?
- Yes
 - No
 - Unsure
- 17) How much would seeing a design prototype influence your interest in using a virtual platform?
(Likert scale: 1 = Not at all, 5 = Very much)

v. Section 5: Content and design preferences

- 18) Which content would you most like to see in a Cultural Healing Virtual Museum? (Select up to 2)
- Exercises and wellness routines
 - Healthy eating and recipes

- Emotional health and mindfulness
 - Cultural philosophy and ethics
 - Traditional medical systems
- 19) Which presentation format do you prefer for learning health content?
- Interactive simulations
 - Animated videos
 - Articles and text
 - Live lectures
- 20) What technological format would you prefer?
- Immersive VR headset
 - 360-degree panoramic website
 - Mobile-friendly multimedia site
- 21) Do you prefer content that combines traditional knowledge with modern science?
- Yes
 - No
 - Not sure
- 22) What kind of tone would most engage you?
- Spiritual and meditative
 - Scientific and factual
 - Practical and instructional
 - Cultural and historical
- 23) What features would increase your trust in a digital health platform? (Select all that apply)
- Expert testimonials
 - Government or university backing
 - User reviews and ratings
 - Clear data privacy policies
- 24) How much does inner transformation (e.g., mindfulness, values, spirituality) matter in your healing process?
(Likert scale: 1 = Not important, 5 = Extremely important)
- 25) Would you recommend a Cultural Healing Virtual Museum to others?
- Yes
 - No
 - Maybe