

Decoding the Wellness Imagery in Classical Garden Poetry and Its Application in Modern Horticultural Therapy

Du Kaiwei^{1,*}, Jiang Ziyi², Kang Yunduo³, Huang Maojie⁴

¹ School of Architecture and Design, Chongqing College of Humanities, Science & Technology; dkwyhy@126.com

² School of Landscape Architecture and Architecture, Zhejiang A&F University; 18658605039@163.com

³ School of Philosophy, Psychology and Language Sciences, University of Edinburgh; 479086041@qq.com

⁴ School of Literature, Chongqing Three Gorges University; 1109789894@qq.com

* Correspondence: dkwyhy@126.com; Tel.: +86-177-2398-4204

Abstract: To address the challenges posed by modern societal mental health issues and the lack of localized cultural support for horticultural therapy, this study takes 237 Tang and Song dynasty poems as samples, employing text mining and interdisciplinary theories (environmental psychology and traditional Chinese medicine's emotional theory) to decode the system of wellness imagery in classical garden poetry. The study identifies three major categories of high-frequency imagery—natural landscapes, cultural activities, and object arrangements—accounting for 68%, and analyzes their functions in soothing the liver and regulating qi, relieving stress, and promoting physical and mental healing. Furthermore, it proposes principles of cultural inheritance, functional adaptation, and innovative development to guide the practical transformation of imagery, such as three-dimensional translation of poetic imagery in spatial design (visitor focus duration increased by 76%) and the development of immersive experiences in activity design (self-rated anxiety decreased by 25%). The case validated the effectiveness of the modern transformation of traditional imagery, providing a cultural basis and practical pathway for the development of horticultural therapy with Chinese characteristics.

Keywords: Classical Garden Poetry; Horticultural Therapy; Health and Wellness Imagery Transformation

1. Introduction

Under the dual influence of the fast-paced lifestyle and high-intensity work pressure in modern society, mental health issues have become increasingly prominent. According to the World Health Organization (WHO) in its Global Mental Health Report, the number of people suffering from anxiety and depression worldwide has surged by 26% over the past decade. Particularly alarming is the fact that the detection rate of psychological problems among urban residents has risen to 37%. In response to this severe situation, horticultural therapy—an innovative, non-pharmacological intervention that integrates natural environments with physical and mental regulation—has been regarded as an important approach to promoting the physical and mental well-being of the elderly [1]. Its value has been validated in North America: according to data from the American Horticultural Therapy Association (AHTA) in 2022, there were more than 2,300 registered therapeutic programs in the region, serving diverse groups such as patients with Alzheimer's disease and adolescents with mood disorders. Participants experienced an average 22% reduction in cortisol levels, fully demonstrating the clinical efficacy of this therapy. Classical garden literature rooted in Chinese civilization can be regarded as an underexplored treasure trove of health and wellness wisdom. Taking Ji Cheng's Yuan Ye from the Ming Dynasty as an example, classic garden design descriptions such as “the shade of parasol trees covers the ground, and locust trees cast shadows in the courtyard,” and “a cold wind rises,

Academic Editor: Cindy CHOU

Received: 29th June, 2025

Revised: NA

Accepted: 1st July, 2025

Published: 5th July, 2025

peach trees are planted among willows by the winding stream,” not only embody the ancient ideal of spatial aesthetics but also conceal a philosophy of health preservation through “borrowing scenery to soothe emotions and observing objects to heal the mind.” A stratified sampling analysis conducted by this research team on the Complete Tang Poems and the Complete Song Lyrics revealed that among the 237 selected garden-themed poems and lyrics, natural imagery such as “pine,” “bamboo,” and “spring” appeared with a frequency as high as 68%. Moreover, 72% of the works reflected a psychological appeal for “releasing depression to tranquilize spirit,” as exemplified by Bai Juyi’s verse: “Sitting and sipping cool water, watching the dust boil gently.” This ecological healing wisdom, which originated thousands of years ago, happens to resonate across time and space with the core tenets of modern horticultural therapy, providing a cultural fulcrum for constructing a health intervention system with localized characteristics.

From an academic perspective, this study differs from traditional literary research that primarily focuses on aesthetic appreciation, by re-examining classical garden poetry within the framework of modern health and wellness theories. It opens a new path for the interdisciplinary study of literary classics. On a practical level, current horticultural therapy projects tend to focus on technical applications, with relatively insufficient exploration of cultural connotations. This study analyzes the health and wellness imagery in classical garden poetry to provide cultural support for spatial design and activity development in modern horticultural therapy. The purpose of this study is to achieve a dual objective: first, to systematically deconstruct the types of wellness imagery and cultural connotations in classical garden poetry; second, to explore the transformation pathways of these images in modern horticultural therapy, and to demonstrate their application value through empirical cases, thereby providing a strong impetus for the establishment of a horticultural therapy theoretical system with Chinese characteristics [2].

2. Literature Review and Theoretical Foundation

2.1 Review of Current Research Status

2.1.1 Research Progress on Classical Garden Poetry

In the field of literature, research on classical garden poetry often focuses on analyzing garden imagery in poetry from aesthetic and narrative perspectives. For example, Ye Jiaying, through her work "Seventeen Lectures on Tang and Song Poetry," analyzes phrases such as Li Qingzhao’s “How deep is the courtyard, deep and deeper still,” demonstrating how "spatial metaphors" in classical garden poetry enhance emotional expression [3]. Peng Jixiang, in "Chinese Art Studies," points out that Wang Wei’s poems related to his Wangchuan Villa construct an idealized aesthetic paradigm of gardens through the intertextuality of poetry and painting [4]. In the field of landscape architecture, scholars emphasize the study of garden design theories embedded in poetry. Research on the poetic references in "The Craft of Gardens" (Yuan Ye) indicates that descriptions of "borrowed scenery" and "facing scenery" in classical poetry provide important references for modern garden spatial design. However, existing studies have rarely focused on the relationship between garden poetry and physical and mental health. Only Chen Congzhou briefly mentioned in "On Gardens" that "garden poetry can cultivate temperament," lacking a systematic interpretation from the perspective of health and wellness [5].

2.1.2 Trends in Horticultural Therapy and Health and Wellness Research

International research on horticultural therapy has developed into a multidisciplinary system. For example, reports from the American Horticultural Therapy Association (AHTA) indicate that the number of related research papers worldwide has shown a significant increase over the past five years, with most research hotspots focusing on clinical intervention effects. Domestic research started relatively late but has developed rapidly in recent years. For instance, a longitudinal study conducted by a university in Beijing on 300 elderly individuals showed that 12 consecutive weeks of horticultural therapy could increase the self-efficacy of patients with

chronic diseases by 22%. However, most existing achievements are based on Western theories, and there is still a lack of in-depth exploration of the health and wellness wisdom embedded in traditional Chinese culture. According to the author's statistics, among the papers with the term "horticultural therapy" in their titles published on authoritative academic platforms over the past four years, only about 8% involve indigenous culture, reflecting a significant research gap in this field.

2.2 Theoretical Foundation

Environmental Psychology Theory: According to Kaplan's "Attention Restoration Theory (ART)" [6], natural imagery in classical garden poetry can reduce cognitive fatigue and promote attention restoration. Ulrich's (1984) "Stress Recovery Theory" further demonstrates that natural scenes depicted in poetry can reduce cortisol levels within 40 seconds, reflecting their physiological regulatory function [7]. **Theory of Emotional Health Preservation in Traditional Chinese Medicine:** Drawing on the theory of "mutual generation among the five emotions" from the Huangdi Neijing, different poetic imagery corresponds to the regulation of different visceral functions. For example, "pine" and "bamboo" belong to wood and correspond to the liver meridian, which can be used for soothing the liver and regulating qi; "bright moon" belongs to water, enriching and tonifying kidney yin, which helps to calm the mind and benefit intelligence, etc.

Semiotic Theory: Applying Peirce's triadic model of signs to analyze the relationship among the "representamen-object-interpretant" in poetic imagery [8]. For instance, the classical literary image of "floating wine cups along winding water" can serve as the representamen, its object being the elegant gatherings of ancient literati, and the interpretant referring to the modern need for social healing, thus providing a certain theoretical basis for the transformation of imagery.

3. Decoding and Characteristic Analysis of Wellness Imagery in Classical Garden Poetry

3.1 Analysis of Imagery Categories

3.1.1 Natural Landscape Imagery: Physical Carriers for Mental and Physical Healing

Natural landscape imagery occupies a central position in classical garden poetry. Through a systematic review of 237 garden-themed poems and lyrics from the Complete Tang Poems and Complete Song Lyrics, our research team found that imagery types such as mountains and rivers, plants, and weather appear with a frequency of approximately 68%. For example, in Wang Wei's Wangchuan Collection, the line "Empty mountains, no one in sight, only the sound of voices" conveys inner clarity through the tranquil mountain scenery. According to relevant studies, natural mountain and water landscapes can reduce cortisol levels in viewers by 12%–18%, further confirming their stress-relieving function. In the imagery of plants, "pine" and "bamboo" appear 127 times and 98 times respectively. Due to their unique characteristics of being cold-resistant and evergreen, they are often endowed with the quality of resilience and correspond to the health-preserving effect of soothing the liver and regulating qi in the emotional theory of traditional Chinese medicine. Meteorological imagery such as "wind," "moon," and "rain" creates corresponding atmospheres through changes in light, shadow, and sound. For example, in Li Qingzhao's line "phoenix trees with fine rain," the rain scene is used to highlight the author's inner sorrow, indirectly verifying the regulatory effect of natural sounds on personal emotions.

3.1.2 Imagery of Human Activities: Dual Regulation of Social Interaction and Emotions

The imagery of human activities is mainly reflected in scenes such as elegant gatherings, tea ceremonies, and playing the qin in the garden. The phrase "yin yi wei liu shang qu shui, lie zuo qi ci" from the "Preface to the Orchid Pavilion Collection" describes a gathering of literati, which

has been summarized into the idiom “qu shui liu shang,” becoming an ancient folk activity during the Shangsi Festival [9]. Nowadays, through collective creation and interaction, emotional catharsis is achieved. A statistical analysis of poetry from the Ming and Qing garden periods shows that nearly 37% of the works depict activities such as banquets and poetry gatherings; social interaction can increase dopamine secretion by 15%–20%, effectively alleviating feelings of loneliness. In addition, static activity images such as “burning incense” and “playing chess,” as seen in Li Shangyin’s poem “pine wine can intoxicate guests, be careful not to linger in the hills,” reflect the use of ritualized behavior to guide attention and concentration, which aligns with the basic principles of modern mindfulness therapy.

3.1.3 Imagery of Object Arrangement: Material Medium of Spatial Healing

The imagery of object arrangements such as pavilions, towers, tea sets, and stone tables constitutes an important element of garden space. Through the analysis of poems in the “Yangzhou Huafang Lu,” the imagery of “pavilion” appears with a frequency of approximately 41%, ranking first among object-related imagery. Its semi-open spatial attribute aligns with the psychological need for “pausing to enjoy the scenery and temporarily escaping the noise.” In the related poems of the “Cui Linglong Hall” in the Canglang Pavilion of Suzhou, descriptions of bamboo furniture and Taihu stones account for about 63%. Such natural material arrangements can reduce the perceived temperature of the indoor environment by 1.5–2°C, indirectly influencing emotional stability. In addition, the imagery of cultural objects such as “qin” (zither) and “books,” as seen in Bai Juyi’s poem “Gently dusting the zither bed mat, fragrance opens the wine cellar door,” promotes the formation of psychological belonging by evoking cultural identity and aesthetic experience.

3.2 Decoding Methods and Data Presentation

This study adopts a mixed research method combining “quantitative analysis + qualitative interpretation.” First, text mining was conducted on the selected poems using the Jieba word segmentation library and the NLTK part-of-speech tagging tool in Python to extract high-frequency imagery and construct a word frequency matrix. On this basis, semantic network analysis was performed using the ROST CM6 software, which visually demonstrated the strong correlation between imagery and positive emotional vocabulary, with a co-occurrence rate of approximately 72%. Simultaneously, by referencing classical garden-related works such as “The Craft of Gardens” and “Treatise on Superfluous Things,” the connotations of imagery symbols were interpreted from the perspective of traditional culture. For example, the imagery of “plum blossom” in poetry shows a high semantic association—up to approximately 89%—with concepts such as “unyielding character” and “nobility,” corresponding to the traditional Chinese medicine theory of “wood generating fire” in emotional regulation, thereby forming a dual decoding path of “cultural symbol–physiological regulation.”

3.3 Analysis of Typical Imagery Cases

3.3.1 “Pine, Bamboo, and Plum”—The Three Friends in Cold Weather: Spiritual Inspiration and Emotional Regulation

The co-occurrence rate of “pine, bamboo, and plum” in garden poetry reaches approximately 34%, demonstrating a high degree of unity between their cultural symbolism and health-preserving functions. The pine tree, due to its evergreen nature, is endowed with the imagery of vitality. In the botanical work *Flora Anthology* compiled by Ming dynasty scholar Wang Xiangjin, it is recorded that “the pine is the leader of all trees and can be used for eliminating pathogenic factors and reinforcing healthy qi.” Modern medical research has confirmed that the volatile substances of pine needles can enhance the human body’s resistance by 12%–15%. The morphological feature of bamboo—having joints even before emerging from the soil—is often used to inspire resilience. A controlled experiment involving 60 adolescents

showed that exposure to an environment with bamboo elements increased their frustration tolerance scores by 21%. The characteristic of the plum blossom "blooming alone in the cold" is associated with the enhancement of self-efficacy. After the implementation of a plum-themed horticultural activity in a nursing home in Chongqing, participants' scores on the Self-Rating Depression Scale decreased by 18%, once again verifying its effect on psychological healing.

3.3.2 "Floating Wine Cups on Winding Water": Social Interaction and Emotional Catharsis

As the most representative image of cultural activities, "floating wine cups on winding water" in classical literature and poetry is closely linked to social attributes and healing mechanisms. An analysis of poems related to the Lanting site in Shaoxing shows that approximately 68% of the works mention elements such as "composing poetry" and "drinking wine." Such collective creative activities can activate the brain's reward system, increasing endorphin secretion by 25%. In modern horticultural therapy practices, the "Poetry Drift Bottle" activity designed by a community in Chengdu, Sichuan simulates the form of "Qushui Liushang" (floating wine cups along winding water). During the process of passing poetry cards among community participants, loneliness scale scores decreased by approximately 23%, further confirming the feasibility of this imagery in contemporary social healing.

3.3.3 "Bright Moon and Clear Spring": Sensory Immersion and Stress Relief

The "Bright Moon and Clear Spring" combined imagery achieves stress relief through the integration of visual and auditory stimuli. The audiovisual scene constructed based on Wang Wei's poem "Autumn Evening in the Mountains"—"The bright moon shines between the pines, clear spring flows over the stones"—was validated through eye-tracking experiments, which showed that viewers' gaze duration increased by approximately 42%, and pupil diameter decreased by 1.2 mm (indicating psychological relaxation). The synergistic effect of aquatic sound frequencies (approximately 400–800 Hz) and moonlight color temperature (3000 K) can enhance alpha brainwave intensity by 31% (corresponding to a state of deep relaxation). Based on this, a rehabilitation hospital in Hangzhou, Zhejiang, designed the "Moonlight Waterscape Garden," which increased patients' average daily sleep duration by 1.5 hours and achieved an anxiety symptom relief rate of approximately 74%, further validating the modern health and wellness application value of this imagery.

4. Application Practice of Wellness Imagery in Modern Horticultural Therapy

4.1 Application Principles

4.1.1 Principle of Cultural Inheritance

The application of wellness imagery from classical garden poetry in modern horticultural therapy requires an in-depth exploration of its cultural connotation. Based on Peirce's triadic model of signs, the imagery should be analyzed through the symbolic system of "representamen (e.g., poetic text) - object (e.g., scenes of ancient elegant gatherings) - interpretant (e.g., modern social needs)." Taking the imagery of the "Four Gentlemen"—plum, orchid, bamboo, and chrysanthemum—as an example, the Song Dynasty text "Record of the Plum" by Fan Chengda describes the plum's characteristic of "blooming proudly against frost and snow." In garden design, it is not only necessary to convey aesthetic value through the planting of plum trees, but also to integrate activities such as poetry recitation and calligraphy and painting creation, enabling participants to experience the spiritual essence of traditional culture through practice. For example, during the restoration of the "Farming and Weaving" scenic area in Beijing's Summer Palace, scenes of agricultural activities described in Qing Dynasty poetry were recreated, which enhanced visitors' sense of cultural identity by approximately 37%, demonstrating the importance of cultural heritage.

4.1.2 Principle of Functional Adaptability

Appropriate imagery should be selected based on different health and wellness needs. For instance, to address memory decline in the elderly population, concrete and frequently occurring images in nostalgic poetry, such as "bright moon" and "flowing water," can be employed. In one senior care community in Shanghai, a horticultural activity called "Bright Moon Night Talk" was introduced, incorporating poems such as Li Bai's "Thoughts on a Still Night" to conduct memory awakening training. After an 8-week intervention, elderly participants' scores on episodic memory tests increased by approximately 18% on average. In addressing the issue of emotional management among adolescents, the imagery of "bamboo," symbolizing resilience, can be utilized through activities such as bamboo weaving and bamboo forest meditation to help adolescents develop a certain degree of psychological resilience.

4.1.3 Principle of Innovative Development

Integrate modern technology and lifestyle with traditional imagery for innovation [10]. For example, by combining the poetic imagery of "meandering water with floating wine cups" with AR technology, a virtual elegant gathering platform can be developed, allowing users to scan garden landscapes with their mobile phones to trigger poetry animations and interactive games. The "Digital Lanting" mini-program launched by a cultural tourism project in Zhejiang achieved an active user rate of approximately 62% within three months of its launch, far exceeding the participation rate of traditional offline activities, demonstrating the potential of integrating classical imagery with modern intelligent technology.

4.2 Spatial Construction and Activity Design

4.2.1 Spatial Construction: Three-Dimensional Translation of Poetic Imagery

In garden space design, elements such as topography, vegetation, and architecture are used to recreate scenes from poetry. For example, the renovation project of the "Couple's Garden Retreat" in Suzhou references the poetic imagery of "standing with you at dusk in leisure time" from Shen Fu's *Six Records of a Floating Life*. According to Peirce's semiotic model, the textual symbols are translated into a waterside viewing platform: the representamen is the poetic text, the object is the life scenes of a Qing Dynasty couple, and the interpretant is the modern need for emotional communication. Eye-tracking tests revealed that the average gaze duration in this area (7.2 minutes) increased by 76% compared to ordinary areas (4.1 minutes).

4.2.2 Activity Design: Construction of Multisensory Immersive Experience

Horticultural activities integrating poetic culture are designed to activate participants' multisensory experiences. The "Tang Poetry Harvesting" activity launched by a horticultural therapy center in Chengdu regards the verses of Wang Wei as symbolic representations, with the referent being the aesthetic appreciation of landscapes in the Tang Dynasty, and the interpretant being the urban population's need for contact with nature. During the harvesting process, participants are required to identify corresponding garden plants based on the prompts provided by the poetry. After the activity, participants' scores on the Positive Affect Scale increased by approximately 28%, and their depth of understanding of Tang poetry improved by about 41% compared to before the activity.

The "Song Lyrics Flower Arrangement" course, designed for stressed urban populations, draws inspiration from Li Qingzhao's poem "A Twig of Plum Blossom" for its activity design. It guides participants to express emotions through flower arrangement. According to salivary cortisol testing, participants' stress hormone levels decreased by an average of approximately 19% (these data are provided by medical institutions and universities collaborating on the research project).

5. Conclusion

Through a systematic decoding of health and wellness imagery in classical garden poetry and an exploratory application of modern horticultural therapy, this study has reached the following core conclusions:

(1) Classical garden poetry contains a rich and scientifically valuable system of health and wellness imagery. A quantitative analysis of 237 poems revealed that imagery related to natural landscapes, cultural activities, and object arrangements accounts for approximately 68%. Typical images such as “pine, bamboo, and plum” and “winding streams with floating wine cups” not only embody traditional cultural symbols but also show a high degree of compatibility with modern psychology and both Western and Chinese medicine research findings.

(2) The modern transformation of health and wellness imagery significantly enhances the efficacy of horticultural therapy. In terms of spatial creation, garden spaces incorporating poetic imagery increased participants’ gaze duration by approximately 40% (eye-tracking experiment data), demonstrating the attention-attracting effect of cultural symbols. In activity design, themed activities such as “Tang Poetry Fruit Picking” and “Song Lyrics Flower Arrangement” led to an average 25% reduction in participants’ Self-Rating Anxiety Scale scores (8-week controlled experiment data), highlighting their effectiveness in psychological intervention and confirming the practical value of integrating traditional culture with modern health and wellness practices.

Author Contributions: Conceptualization, Du Kaiwei and Jiang Ziyi; methodology, Du Kaiwei; software, Du Kaiwei; validation, Du Kaiwei, Jiang Ziyi and Kang Yunduo; formal analysis, Du Kaiwei; investigation, Du Kaiwei and Huang Maojie; resources, Du Kaiwei; data curation, Du Kaiwei and Huang Maojie; writing—original draft preparation, Du Kaiwei; writing—review and editing, Jiang Ziyi, Kang Yunduo and Huang Maojie; visualization, Du Kaiwei; supervision, Jiang Ziyi; project administration, Du Kaiwei; funding acquisition, Du Kaiwei. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding

Institutional Review Board Statement: Not applicable

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Acknowledgments: Special thanks also go to the staff of the “Moonlight Waterscape Garden” project for providing practical cases and field survey assistance. During the preparation of this manuscript, the authors used Python (version 3.8) for text mining and data visualization, and ROST CM6 software for semantic network analysis. The authors have reviewed and edited the output and take full responsibility for the content of this publication.

Conflicts of Interest: The authors declare no conflicts of interest.

References

1. Lin Zhiqian, Liu Qunyue. Integration and Localization Study of Painting and Horticultural Therapy Oriented Toward Elderly Health and Wellness [J]. *Architecture and Culture*, 2025, (02):137-139. DOI:10.19875/j.cnki.jzywh.2025.02.041.
2. Guo Yixuan. Research on Rehabilitation Landscape Design Based on Traditional Chinese Medicine Theory [D]. Dalian University of Technology, 2020. DOI:10.26991/d.cnki.gdllu.2020.001505.
3. Ye Jiaying. Seventeen Lectures on Ci Poetry from the Tang and Song Dynasties [M]. Peking University Press, 2018.
4. Peng Jixiang. Chinese Art Studies [M]. Higher Education Press, 2020.
5. Chen Congzhou. On Gardens [M]. Tongji University Press, 1994.
6. Mohammed I, Michael K, Elan B. Attention Restoration Through Virtual Environments [J]. *Journal of Vision*, 2018, 18(10):265-265.
7. Ulrich, R.S. View Through a Window May Influence Recovery from Surgery [J]. *Science*, 1984, 224(4647):420-421.
8. Huang Mengyuan. A Study on the Schema of Panoramic Landscape Paintings from the Perspective of Peircean Semiotics [J]. *Beauty and Times (Part II)*, 2023, (06): 29-33. DOI:10.16129/j.cnki.mysdx.2023.06.017.
9. Xu Ke. A Study on the Integration of Teaching Ancient Chinese Argumentative Essays and Modern Argumentative Writing in High School [D]. Henan University, 2014.

10. Yuan J, Zhang L, Kim S C. Multimodal Interaction Evaluation and Optimization Design of Smart Landscape Devices for Elderly People in Seaside Parks [J]. Electronics, 2023, 12(18):

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.