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Biophilic Design and Psychological Well-being: Developing a Conceptual Framework through the Lens of the Indian 'Prakriti' Perspective

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Abstract: Modern lifestyles and rapidly urbanizing environments have significantly reduced daily contact with nature, despite humans having evolved in continuous interaction with natural surroundings. This separation has been linked to heightened stress, reduced emotional balance, and cognitive fatigue. Biophilic design, which incorporates natural elements and patterns into interior and architectural spaces, offers a pathway to restoring this connection. This review synthesizes existing research on biophilic design and its psychological outcomes, interpreted through the lens of Prakriti, the natural state of balance in human functioning. A narrative review with thematic analysis was conducted using ResearchGate, Google Scholar, ScienceDirect, and PubMed. Studies were included if they examined biophilic or nature-based design and reported psychological, emotional, cognitive, or behavioral outcomes. Eligible studies were screened, reviewed, and thematically organized. Across settings such as workplaces, classrooms, healthcare spaces, and residential environments,

biophilic elements consistently reduced stress and anxiety, improved mood, enhanced attention and cognitive restoration, and supported psychological well-being. Some studies also reported better social interaction and physiological stress recovery. Interpreted through Prakriti, these findings suggest that biophilic environments help re-align human functioning with natural needs. Overall, biophilic design emerges as a meaningful contributor to mental health and restorative living.

Keywords: *Biophilic Design, Prakriti, Psychological Outcomes, Cognitive Restoration, Psychological Well-Being*

1. Introduction

Across history and cultures, human life has been deeply interwoven with nature, not merely as a source of survival, but as a foundation for emotional balance, cognitive clarity, and overall well-being. However, rapid industrialization and technological advancement have progressively disrupted this human-nature bond, contributing to rising stress, attentional fatigue, emotional dysregulation, and deteriorating mental health. In response to this growing disconnection, scholars and designers have increasingly turned toward biophilic design as a scientifically informed approach to reintegrating nature into everyday built environments. The concept of biophilia, derived from the Greek words bios meaning life and philia meaning affection, refers to the innate human tendency to seek connection with nature and other living systems (Colman, 2015).

The term biophilia was first introduced by Erich Fromm, who described it as the "passionate love of life and of all that is alive" (Fromm, 1973/2013). Later, Edward O. Wilson expanded this idea into an evolutionary framework, proposing that humans possess an innate tendency to affiliate with life and life-like processes (Wilson, 1986; Kellert & Wilson, 1993). These ideas provided the psychological and biological foundations for what later evolved into the concept of biophilic design, which focuses on embedding natural elements, such as vegetation, water, daylight, airflow, and organic spatial forms, into built spaces to support psychological functioning. Contemporary research consistently revealed that exposure to biophilic environment is associated with reduced stress, improved mood, enhanced cognitive functioning, and emotional regulation (Assari & Tajarloo, 2021). Plant species incorporated into the biophilic space have been classified by their scientific and common names (Youn et al., 2025) (See Table: 1)

Table 1: *Plant species incorporated into the biophilic space*

Plant Category	Scientific Name	Common Name
Palms	Rhapis excelsa	Lady Palm
Palms	Chamaedorea elegans	Parlor Palm
Ferns	Davallia mariesii	Squirrels-foot Fern
Accent Plants	Dracaena sanderiana 'Victoria'	Lucky Bamboo
Accent Plants	Hoya carnosa	Wax Plant
Climbers	Epipremnum aureum 'Lime'	Lime Pothos
Climbers	Trachelospermum asiaticum var. variegatum	Variegated Asiatic Jasmine
Climbers	Hedera helix 'Sagittifolia'	English Ivy
Shrubs	Ardisia pusilla	Small Coralberry
Shrubs	Ardisia japonica	Marlberry

A growing body of evidence indicates that exposure to natural elements plays a significant role in reducing stress, pain, and depressive symptoms. Studies have consistently shown that interaction with houseplants and flowers promotes relaxation and stress reduction (Deng & Deng, 2018; Dijkstra et al., 2008; Jiang et al., 2021; Song et al., 2017; Ikei et al., 2014; Mochizuki-Kawai et al., 2020), while viewing nature indoors alone is sufficient to induce relaxation responses (Jo et al., 2019). Broader biophilic interventions have also been associated with reduction in stress levels (Yin et al., 2019). In addition to visual exposure, tactile engagement with natural materials appears beneficial, as touching white oak wood has been shown to increase relaxation and modulate prefrontal cortex activity (Ikei et al., 2017). Exposure to outdoor natural environments further contributes to reduced psychophysiological stress (Antonelli et al., 2019; Stier-Jarmer et al., 2021; Stigsdotter et al., 2018), with evidence suggesting decreases in both perceived and physiological stress responses (Shuda et al., 2020).

Beyond stress regulation, nature exposure has demonstrated clear benefits for pain management. Exposure to flowers has been associated with improvements in fibromyalgia-related pain and postoperative pain outcomes (Park & Mattson, 2009; Yavne et al., 2019). Similarly, exposure to green spaces more broadly has been shown to positively influence mental health and overall well-being (Van den Berg et al., 2015). In clinical populations, exposure to flowers has been found to reduce depressive symptoms among individuals with

fibromyalgia (Yavne et al., 2019). Furthermore, engagement with natural environments consistently increases positive affect and decreases negative affect, highlighting the emotional benefits of nature-based exposure (Yao et al., 2021; McMahan & Estes, 2015).

The Biophilia Hypothesis

The earliest psychological formulation of biophilia was presented by Erich Fromm in his book The Anatomy of Human Destructiveness (Fromm, 1973/2013). Fromm conceptualized biophilia as an intrinsic orientation toward growth, creativity, and life affirmation, contrasting it with necrophilia, which he described as a pathological attraction towards destruction and control (Fromm, 1973/2013). According to Fromm, biophilia flourishes only under healthy social conditions characterized by security, justice, and freedom (Fromm, 1964, as cited in Gunderson, 2014). In such environments, individuals prefer growth over possession, experience wonder, engage with life holistically, and pursue meaningful change through reason and love (Fromm, 1973/2013). While Fromm provided the psychological foundation, Edward O. Wilson reframed biophilia within an evolutionary context. He defined biophilia as the innate human tendency to focus on life and life-like processes (Wilson, 1986). Wilson argued that human preferences for natural landscapes, vegetation, and living system are not random but shaped by evolutionary survival pressures (Kellert & Wilson, 1993). Although early empirical support was limited, Wilson maintained that the consistent presence of biophilic tendencies across cultures justified deeper scientific exploration (Wilson, 1986).

Despite its influence, the Biophilia Hypothesis has faced conceptual criticism. Joye and De Block (2011) questioned Wilson's broad inclusion of "life-like processes," arguing that such ambiguity weakens its contribution to biodiversity conservation. They suggested that artificial stimulations could potentially satisfy biophilic needs. However, empirical research continues to demonstrate that real natural environments produce superior psychological restoration, particularly in healing contexts where direct nature exposure is limited. From an ecological perspective, Simaika and Samways (2009) emphasized that biophilia promotes a conservation ethic rooted not only in survival but in the fundamental human need "to live" meaningfully. Thus, biophilia emerges not merely as a psychological trait but as a unifying principle linking human well-being with environmental sustainability.

Theoretical Models of Nature-Based Restoration

To explain how biophilic environments result in psychological benefits, three major theoretical models have been proposed: Attention Restoration Theory (ART), Stress Reduction Theory (SRT), and Conditioned Restoration Theory (CRT).

1. ***Attention Restoration Theory (ART***), proposed by Kaplan (1995), ART suggests that modern life heavily relies on directed attention, a mentally demanding system that becomes fatigued with prolonged use. Nature restores this depleted attentional capacity through involuntary attention, which operates effortlessly (Kaplan, 1995). According to ART, restorative environments must possess three key properties:
   - Being away: psychological distance from habitual stressors.
   - Extent: coherence and sufficient scope to engage the mind.
   - Compatibility: alignment between environmental features and personal intentions.

   Natural settings characterized by flowing water, foliage movement, and open skies naturally meet these conditions, allowing directed attention to recover (Egner et al., 2020).
2. ***Stress Reduction Theory (SRT***): In contrast to the cognitive focus of ART, Ulrich's Stress Reduction Theory (1983; 1991) emphasizes the affective and physiological pathways of restoration. SRT proposes that nature elicits immediate emotional responses, calmness, pleasure, and interest, which precede cognitive processing (Ulrich et al., 1991). These emotional shifts reduce physiological arousal, blood pressure, and stress hormones through parasympathetic nervous system activation (Harvard Health Publishing, 2024). As a result, emotional stabilization and relaxation occur rapidly following exposure to natural settings.
3. ***Conditioned Restoration Theory (CRT):*** To integrate limitations of ART and SRT, Egner et al. (2020) introduced Conditioned Restoration Theory. CRT proposes that restoration occurs through associative learning and conditioning. Repeated experiences of relaxation in nature create strong memory-based associations, such that even minimal natural cues can later trigger restorative responses (Egner et al., 2020). CRT further emphasizes multi-sensory engagement, where sound, touch, smell, and temperature interact alongside visual stimuli (Egner et al., 2020). It also raises the issue that excessive passive exposure to nature may reduce its restorative novelty, emphasizing the importance of intentional engagement.

Neuropsychology of Built Space

Humans spend nearly 90% of their lives indoors, making architectural design a critical determinant of mental, emotional, and psychological well-being (U.S. Environmental Protection Agency [EPA], 2021). With rising global mental health challenges, affecting one in eight individuals worldwide, spaces are increasingly recognized not just as shelters, but as

ecosystems shaping perception, emotion, cognition, and behavior (World Health Organization [WHO], 2022). Empirical evidence consistently demonstrates that spatial and sensory conditions, such as lighting, temperature, color, acoustics, and material texture, produce measurable psychological and physiological responses. Spatial coherence, emerging from symmetry balance, and wholeness, fosters a sense of psychological comfort and environmental trust (Alexander, 2001, 2004). Natural daylight exposure alone has been associated with a 56% improvement in mood and a 51% increase in productivity (Boubekri et al., 2014). Conversely, poorly regulated interiors increase anxiety, cognitive fatigue, and depressive symptoms; a large cross-national study across 12 countries found 72% of participants experienced higher stress in crowded, noisy interiors compared to quieter, biophilic spaces (Urban Mind Project, 2020).

Advancements in neuroscience further clarify how architecture directly modulates brain functioning. Functional magnetic resonance imaging (fMRI) studies reveal that exposure to high ceilings and symmetrical spaces enhances alpha brainwave activity by over 35%, a neural marker associated with calmness, creativity, and relaxed alertness (Coburn et al., 2017). Similarly, environments incorporating curved forms and natural material are linked with lower heart rate and reduced cortisol secretion, indicating direct physiological grounding of emotional experience in spatial design. The transformation of architectural space into meaningful “place” occurs through continuous human interaction, memory, and emotional attachment. Poorly designed environments act as chronic stressors and contribute to allostatic overload, thereby worsening stress-related disorders and cognitive exhaustion (Valentine, 2023). A large European survey involving 1,200 participants found that 78% reported strong emotional connection to spaces reflecting cultural heritage or personal memory (European Council for Urban Living, 2022).

Historically, architectural traditions across cultures have employed symbolic geometry, proportion, and harmony to evoke emotional regulation and spiritual awareness (Ruggles, 2017; Mehaffy, 2020; Salingaros, 2020). Humans demonstrate a universal attraction toward organized complexity, which supports both aesthetic satisfaction and psychological comfort (Lavdas & Schirpke, 2020). Sacred geometries such as mandalas, domes, and pyramidal forms have been shown to induce heightened contemplative states. A comparative analysis of 47 sacred structures worldwide reported that 83% of respondents experienced these forms as evoking awe and emotional calmness (Khwaja et al., 2020). Modern therapeutic architecture increasingly integrates these principles. Mindfulness-centered designs, biophilic elements, and sensory modulation reduce mental fatigue and anxiety, with studies reporting 32% anxiety reduction in spaces across Japan, Netherlands, and India (Lee & Ahn, 2021).

Urban stressors such as overcrowding, noise, and sensory overload intensify the psychological need for restorative architecture. Urban residents show a 27% higher prevalence of anxiety than rural population, largely due to environmental overstimulation and limited access to restorative spaces (Peen et al., 2010). In response, architects increasingly integrate green interiors, acoustic planning, symbolic form, and biophilic strategies to counteract environmental stress. Collectively, this evidence establishes that biophilic architectural design possess measurable power to regulate emotion, cognition, stress, and even contemplative awareness.

Indian Perspective on Biophilic Design

India has embodied the principles of biophilic design for thousands of years through its educational, healing, and spiritual traditions. Long before the formal scientific formulation of the Biophilia Hypothesis by Wilson (1984), Indian systems such as the Gurukul education model, Ashram-based living, and Indian architecture emphasized deep, continuous, and meaningful human-nature relationships. These indigenous frameworks provide a culturally rich foundation for understanding the relationship between natural environments and overall well-being.

1. The Gurukul system of education, one of the earliest structured models of learning in India, originated during the Vedic period and was deeply embedded within natural settings. Students (shishyas) lived with their teacher (guru) in ashrams or hermitages, which were typically situated in forested and ecologically rich environments. This close and continuous interaction with nature facilitated not only academic learning but also moral, spiritual, and practice life training. Education in the Gurukul system emphasized experiential learning, self-discipline, character formation, and value inculcation rather than examination-oriented assessment (Mukherjee, 2011). From a biophilic design perspective, the Gurukul represents an early example of a learning environment that fostered an innate human-nature connection through natural light, open spaces, greenery, and sensory engagement with the natural world. Gurukul system also promote attentional restoration through exposure to natural surroundings. It also promotes emotional regulation, cognitive flexibility, and creativity facilitated by quiet, and green environments. This aligns closely with Attention Restoration Theory (Kaplan & Kaplan, 1989), and Stress Reduction Theory (Ulrich et al., 1991), which demonstrate that natural environments enhance cognitive functioning and reduce physiological stress.

2. Ashram-based living, have traditionally been designed as nature-integrated living spaces, reflecting early principles of biophilic design. They are commonly situated in ecologically serene locations such as forests, riverbanks, or hills. Architectural layouts emphasize open courtyards, natural ventilation, abundant daylight, and the use of locally available natural materials such as mud, stone, and wood. The spatial organization of ashrams encourages visual and sensory contact with nature, including gardens, water bodies, sacred groves, and meditation spaces under trees. This nature-responsive architectural design supports calmness, attentional restoration, and emotional balance, reflecting an indigenous model of biophilic built environments.
3. Traditional Indian architecture consistently integrates courtyards (Brahmasthan) for natural light and ventilation, water bodies such as kunds, stepwells, and sacred trees like Peepal, Banyan, and Neem to provide shade, oxygenation, and symbolic connection with nature. Spatial orientation is guided by solar movement and Vaastu principles, ensuring alignment with natural rhythms of light, heat, and airflow. These architectural strategies are deeply embedded within vernacular traditions, where region-specific buildings are constructed using locally available materials and climate-responsive techniques. Across India, forms such as mud houses, bamboo dwelling and houseboats reflect ecological sensitivity through natural ventilation, daylight optimization, and thermal comfort. Together, these interconnected spatial, material, and ecological design features create restorative environments that support attentional balance, reduce cognitive fatigue, minimize emotional irritability, and reduce environmental stress. The philosophical foundation of this integration is further reflected in Vaastu Shastra, which is based on the Vaastu Purusha Mandala, a cosmic diagram organizing built space in harmony with natural and cosmic forces. The central courtyard functions as an energy core, allowing light, air, and vegetation to enter living spaces, thereby reinforcing environmental harmony, emotional regulation, and psychological well-being. This indigenous, nature-integrated architectural system closely parallels contemporary biophilic design principles, demonstrating that traditional Indian built environments nurtured sustained human- nature interaction and mental well-being (Ali et al., 2022).

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2. Review of Literature

Author(s) & Year	Methodology	Key Findings
Tekin et al. (2025)	Systematic review and bibliometric analysis of 435 peer-reviewed studies	Research is heavily focused on institutional buildings; neuroscience-informed design, neuroarchitecture, artificial intelligence tools, virtual reality and biometric methods are underutilized. It highlights critical research gaps and the need for evidence-based, neuroscience-driven biophilic design.
Youn et al. (2025)	Experimental study using functional near-infrared spectroscopy and standardized psychological questionnaires	Biophilic environments reduced activity in the dorsolateral prefrontal cortex, lowered fatigue, anxiety, and depressive symptoms, and enhanced mood and attentiveness.
Bulaj et al. (2025)	Conceptual and interdisciplinary narrative review	Intentionally designed restorative home environment can enhance the effectiveness of digital therapeutics, wearable technologies, and drug-digital combination therapies. It positions the home as a therapeutic ecosystem and highlights the synergy between digital health and built environments.
Huntsman & Bulaj (2022)	Viewpoint article with applied interior design examples	Integration of biophilic design with light therapy, mindfulness practices, sensory regulation, and sleep optimization reduced symptoms and improved self-care behaviors. It demonstrates residential spaces as non-pharmacological adjunct

		therapies for chronic physical and mental health conditions.
Assari & Tajarloo (2021)	Systematic review of literature across six scientific databases	Biophilic design was associated with reduced stress and anxiety, improved mood, cognition, restorative experiences, and social well-being.
Masoudinejad & Hartig (2020)	Experimental image-based perceptual study	Increased sky visibility and presence of greenery significantly enhanced perceived restoration and environmental preference. It highlights the psychological importance of visual access to nature in urban residential environments.
Van den Bogerd et al. (2020)	Longitudinal field experiments in university and secondary school settings	Classrooms containing indoor plants were rated higher in environmental quality and showed improvements in student attention. It demonstrates cognitive and perceptual benefits of biophilic classroom design.
Yin et al. (2020)	Experimental study using virtual reality simulations and physiological stress indicators	Participants exposed to biophilic indoor environments showed faster reductions in stress and anxiety compared to non-biophilic environments. It supports the role of biophilic design in psycho-physiological stress regulation.
Lee (2019)	Experimental research	Biophilic hotel environments elicited stronger positive emotions, higher perceived quality, and improved behavioral intentions. It extends biophilic design benefits to hospitality and service industry settings.

Purani & Kumar (2018)	Laboratory-based experimental study using visual stimuli	Biophilic service environments improved attention, mood, and consumer preference. It demonstrates how environmental restoration influences consumer psychological states.
Sanchez et al. (2018)	Pilot experimental case study	Incorporation of greenery and daylight improved productivity, creativity, and employee well-being.
Mangone et al. (2017)	Mixed-method experimental research	Natural workspaces were perceived as more relaxing, fascinating, and suitable for diverse work activities. It highlights employee preference for nature-integrated work environments.
Kelz et al. (2015)	Quasi-experimental study	Greening interventions reduced physiological stress and enhanced psychological well-being among students.
Gray & Birrell (2014)	Longitudinal observational study	Biophilic design improved productivity, collaboration, workplace satisfaction, and stress reduction.
Benfield et al. (2013)	Quasi-experimental classroom-based study	Students in classrooms with natural views reported better course evaluations and achieved higher academic grades. It demonstrates indirect academic and psychological benefits of visual access to nature.

3. Methods

Aim: To examine and synthesize existing literature on the relationship between biophilic design and psychological outcomes.

Procedure: A narrative review employing thematic analysis was conducted. A comprehensive literature search was carried out using ResearchGate, Google Scholar,

ScienceDirect, and PubMed. Search terms included combinations of biophilic design, nature-based design, green interiors, and psychological outcomes. Studies were included if they examined biophilic or nature-based design and reported psychological, cognitive, emotional, or behavioral outcomes, and were published in English. Titles and abstracts were initially screened for relevance, followed by a full-text review of eligible studies. The extracted studies were synthesized using a thematic approach, with outcomes grouped into key themes.

4. Result

The existing body of research indicates that exposure to natural elements within built environments produces measurable psychological and physiological benefits. However, these findings are often presented in fragmented theoretical perspectives. To address this gap, the present review synthesizes interdisciplinary evidence into two integrative conceptual models that clarify the mechanisms underlying biophilic wellness pathways. The two proposed models are described below.

Prakriti-Based Model

The Prakriti-based model outlines how natural design elements within built environments can positively influence psychological functioning. At its core is the concept of Prakriti, understood as a principle of natural balance that supports human well-being. The model proposes that when environment reflect natural qualities, they help restore this balance and promote healthier mental states.

The first element, Biophilic Design, represents the practical application od Prakriti in physical spaces. Through features such as natural light, air flow, greenery, and organic forms, biophilic design introduces cues that connect individual with nature. These elements are not simply decorative; they engage the sense and create environment more aligned with human biological tendencies.

Figure 1: *Prakriti-based model*

The next component, Environmental Feature, refers to the specific natural qualities present within a space. These features act as direct points of interaction between people and the environment, offering sensory experiences that mirror outdoor settings. These interactions influence internal Psychological Processes. Exposure to natural features supports attention restoration, stress recovery, emotional regulation, and reduced cognitive overload. These processes occur subtly and often automatically, allowing individuals to regain mental clarity and calm without deliberate effort. As a result, the model leads to positive Psychological Outcomes, including improved mood, reduced anxiety, enhanced well-being, and better cognitive performance. From a Prakriti perspective, these outcomes reflect a return to equilibrium, a state in which environment harmony support mental and emotional health.

This framework highlights how integrating natural elements into built spaces can actively strengthen psychological health. By drawing on both ecological philosophy and empirical research, the model positions biophilic design not only as an architectural approach, but also as a meaningful contributor to human flourishing.

The Integrated Biophilic Wellness Pathway Model

The Integrated Biophilic Wellness Pathway Model depicts how biophilic environments influence well-being through a set of interconnected psychological and physiological processes. Rather than depicting isolated associations, the model conceptualizes biophilic design as an active environmental input that initiates a sequence of regulatory mechanisms shaping human health. The process begins with biophilic environmental inputs, such as indoor plants, natural materials, and visually soothing design features. These elements reduce environmental stressors and promote perceptual comfort, forming the foundational layer of the model.

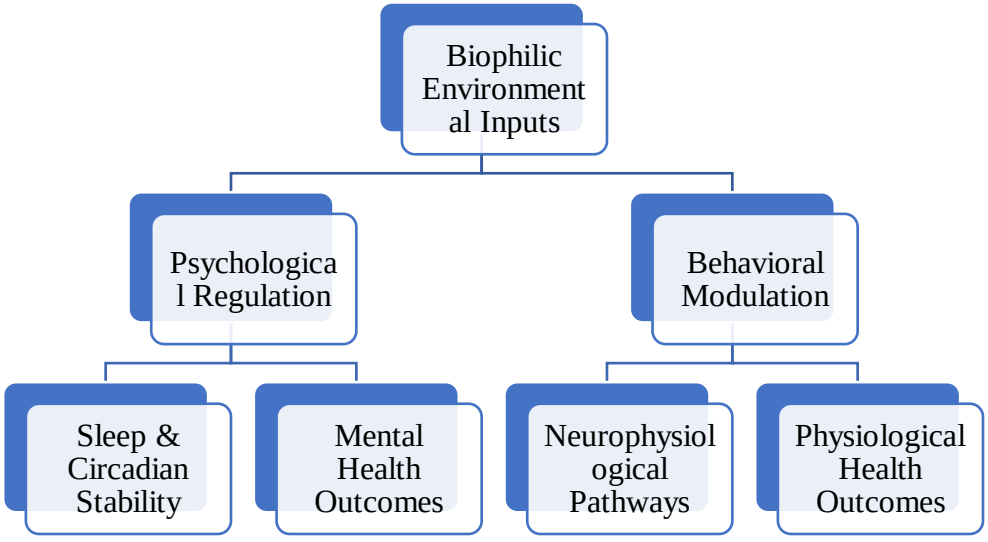

Figure 2. *The Integrated Biophilic Wellness Pathway Model*

These environmental inputs then shape two parallel pathways: psychological regulation and behavioral modulation. Psychological regulation involves reductions in stress, emotional stabilization, and restoration of attentional capacity, consistent with established theories like Attention Restoration Theory and Stress Recovery Theory. At the same time, behavioral modulation reflects the way supportive environments encourage restorative habits, such as listening to calming music, engaging in meaningful routines, and reductions in cognitive load. As these pathways unfold, they converge to strengthen sleep and circadian stability and to activate neurophysiological processes. Improved sleep enhances autonomic balance, while neurophysiological mechanisms, particularly regulation of the HPA axis and neural recovery processes, support the body's broader resilience systems.

Ultimately, these interconnected pathways lead to significant mental and physiological health benefits. Individuals may experience reduced anxiety, improved emotional well-being, clearer cognition, enhanced immune functioning, and increased resilience. The inclusion of feedback loops in the model highlights the dynamic nature of these processes, suggesting that improved health outcomes can further reinforce engagement with biophilic environments and healthy behaviors. Overall, this model offers a holistic and accessible framework for understanding how biophilic design influences well-being. By connecting environmental features with psychological, behavioral, and neurophysiological mechanisms, it highlights the relevance of biophilic principles in therapeutic settings, residential design, and emerging digital health environments.

5. Discussion

Human beings have evolved in continuous interaction with natural environments, yet interaction with natural environments, yet modern lifestyles often limit this connection to minimal or symbolic forms. Biophilic design emerges from the recognition that this separation may carry out psychological costs, particularly for mental well-being, attention, and emotional regulation. By integrating natural elements into built spaces, biophilic design attempts to restore aspects of this lost relationship. The present review brings together a wide range of studies showing that biophilic design is consistently linked with positive psychological outcomes across different settings and populations. When viewed through the idea of Prakriti, the natural state and balance of human existence, these findings suggests that the built environment plays a much deeper role in psychological functioning than is often acknowledged. Rather than merely shaping comfort or aesthetics, spaces that integrate natural

elements appear to support fundamental emotional, cognitive, and physiological processes. The common themes identified in the review of literature are discussed below:

***Stress and anxiety reduction*:** One of the clearest patterns across the reviewed literature is the reduction of stress and anxiety following exposure to biophilic elements. Studies conducted in workplaces, classrooms, schoolyards, and therapeutic environment repeatedly reported lower stress levels after the introduction of natural lighting, greenery, ventilation, water elements, and nature-based sounds (Gray & Birrell, 2014; Sanchez et al., 2018; Kelz et al., 2015). What strengthens these findings is the frequent use of physiological indicators such as heart rate variability, blood pressure, and salivary measures, suggesting that the effects extend beyond subjective perception. From a Prakriti-based perspective, this reduction in stress may reflect a return to psychophysiological equilibrium. Modern built environments often expose individuals to artificial lighting, noise, and visual monotony, which may continuously activate stress response. The consistent calming effect of both real and virtual nature exposure indicates that humans remain biologically attuned to natural cues are mediated through technology (Yin et al., 2020).

***Emotional Well-being and Mood: Nature as an Emotional Regulator*-**Beyond reducing distress, biophilic design was also associated with improvements in mood, morale, and emotional tone across multiple environments. Exposure to greenery, water features, natural lighting, and environmental education contributed to more positive emotional states in classrooms, workplaces, hotels, and service spaces (Benfield et al.,2013; Purani & Kumar, 2018; Lee, 2019). These outcomes suggest that biophilic environments do more than neutralize negative emotions, they actively support emotional vitality. In everyday terms, this may explain why people often describe natural spaces as “uplifting” or “refreshing.” Within the framework of Prakriti, emotional well-being can be understood as a natural consequence of alignment between human needs and environmental conditions. When spaces reflect natural patterns and rhythms, emotional regulation appears to occur more effortlessly.

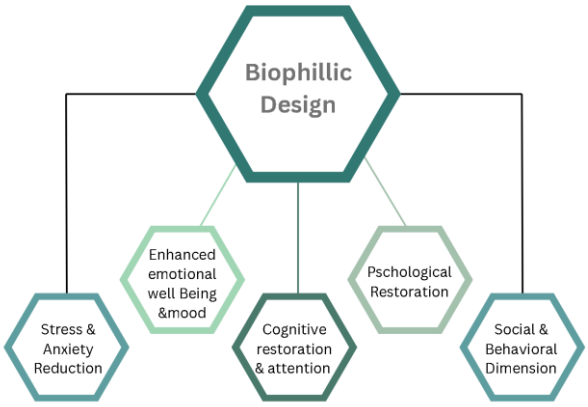

Figure 3. *Common Themes Identified*

Cognitive Restoration and Attention: Supporting the Overloaded Mind- Another important theme emerging from the reviewed studies is the cognitive benefit of biophilic design. Reduced mental and attentional fatigue, along with improved cognitive performance, productivity, creativity, and academic outcomes, were consistently observed following exposure to natural elements (Gray & Birrell, 2014; Mangone et al., 2017; Van den Bogard et al., 2020). These effects were evident not only in workplaces but also in classrooms and service environments. Such findings are particularly relevant in contemporary contexts characterized by constant cognitive demand. Natural elements seem to provide a mental pause, a space where attention can recover without conscious effort. This aligns with attention restoration perspectives, but it also resonates with the idea that the human mind evolved in close interaction with natural environments. In Indian psychology, clarity of mind (Manas Shuddhi) is considered essential for effective functioning and learning. Natural environments appear to support this clarity by reducing cognitive overload and allowing mental recovery. This is particularly relevant in academic and workplace contexts where sustained attention is required. From a Prakriti perspective, cognitive clarity may emerge when the environment supports rather than overwhelms mental functioning.

***Psychological Restoration*:** Several studies highlighted psychological restoration as a key outcome of biophilic design. Biophilic environments may provide micro-restorative experiences within daily life, allowing individuals to momentarily disengage from constant cognitive and emotional demands. Simpler features such as window views, flower boxes, greenery, water elements, and exposure to natural soundscapes were associated with increased feelings of restoration, fascination, and psychological distance from daily demands (Masoudinejad & Hartig, 2020). Notably, these effects were observed even in ordinary residential and recreational settings. This suggests that psychological restoration does not necessarily require immersion in large natural landscapes. Instead, small, thoughtfully integrated natural elements may be sufficient to trigger restorative experiences. Such findings are particularly relevant for urban environments, where access to nature is often limited.

***Social and Behavioral Dimension*:** The impact of biophilic design was not limited to individual psychological states. Several studies reported improvements in social behavior, collaboration, work satisfaction, and engagement in biophilic workplace and service environments (Gray & Birrell, 2014). In commercial and hospitality contexts, natural elements were associated with more positive customer perception, behavioral responses (Lee, 2019). These findings suggest that biophilic environments may subtly shape social interactions by

creating spaces that feel more welcoming, less stressful, and more supportive. In the broader sense of Prakriti, this reflects the interconnected nature of individual well-being and social harmony.

Taken together, the reviewed findings revealed that biophilic design holds more than aesthetic or architectural value. Instead, it reflects a deeper psychological connection between human beings and the natural environment. When viewed through the lens of Prakriti, biophilic environments may be understood as restoring a sense of balance that contemporary spaces tend to disrupt. Finding across settings consistently indicate lower stress, improved mood, increased attentional capacity, and richer social interaction when natural elements are thoughtfully incorporated. These outcomes point to a fundamental truth: psychological health is inseparable from the environments in which we think, work, learn, heal, and social interact. What emerges from the integration of scientific research and the idea of Prakriti is a clearer appreciation of the role natural element play in human functioning. Rather than treating nature as an optional comfort, biophilic design position it as part of our basic psychological ecosystem. Built spaces that reflect natural rhythms, and that offer opportunities foe calmness, fascination, and recovery, appear to support emotional and cognitive functioning in ways that conventional environmental often cannot. This broader understanding highlights the relevance of biophilic design not only for architecture and planning but also for psychology, public health, and cultural perspectives on well-being.

6. Conclusion

The evidence reviewed in this paper underscores the psychological value of integrating natural elements into everyday environments. Biophilic design has been linked with a wide range of positive outcomes, including reduced stress, improved emotional states, enhanced cognitive functional, and healthier social engagement. These findings reflect a consistent pattern across age groups, culture contexts, and types of spaces, from classrooms and offices to clinical and residential environments. Through the framework of Prakriti, these outcomes can be understood as part of a larger process of restoring harmony between individual and their surroundings. The presence of natural features appears to support the mind and body in the ways that align with the human evolutionary history. As urbanization increase and digital engagement becomes even more central to daily life, the relevance of biophilic design is likely to continue growing. What becomes clear is that the built environment is not simply a backdrop to human activity, it actively shapes how people think, feel, and function. This review highlights the importance of recognizing nature as a luxury psychological resource, rather than

a luxury. By integrating the principal of Prakriti into contemporary design, it may be possible to creates environments that help sustain clarity, vitality, and emotional balance in the face of modern demands.

6.1 *Future Implications*

The findings reviewed here point toward several meaningful area for further exploration and practice.

1. *Clinical and Therapeutic Settings*: There is growing potential to incorporate biophilic features into hospitals, therapy spaces, and mental health facilities. Natural light, soundscapes, indoor plants, and spatial layouts that echo natural patterns may support recovery and emotional regulation. Future research could clarify which elements are most effective for specific clinical needs.
2. *Urban Policy and Planning:* As cities become more densely built, the integration of biophilic principles into public architecture and infrastructure may play a central role in promoting population, level well-being. Evidence, based guidelines could help shape schools, offices, transport hubs, and housing development that actively reduce psychological strain.
3. *Technology and Digital Environments*: Growing reliance on virtual environments highlights the role of digitally mediated nature. Virtual and simulated natural spaces may offer restorative benefits, especially for those with limited exposure to outdoor environments, requiring further empirical exploration.
4. *Cultural Perspectives and Indigenous Knowledge*: Prakriti and other indigenous frameworks can expand biophilic design Western paradigms, fostering more culturally inclusive environmental models.

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