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The Role of Emotional Intelligence in Residential Interior Design: A Regenerative Approach

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Abstract

Emotional intelligence (EI) is emerging as one of the most critical elements of contemporary interior design, particularly with regards to regenerative strategies, planned to restore human health, improve environmental balance, and promote sustainability in a long-term outlook. At a time when traditional interior design has been much preoccupied with looks, practicality, and the practical arrangement, regenerative design introduces a fresh dimension of psychological and emotional receptiveness and establishes architecture as an active partner in human flourishing. The article examines the existence of EI within residential facilities and evaluates its effects on human health. The emphasis is more so on the Lebanese residential villas, which usher in the inviting blend of cultural symbolism, sensorial identification, and the setting of the environment. The analysis of three villas, Beit al Batroun, Villa Clara and Villa Chams in five dimensions of EI-associated design Villa Clara and Villa Chams (conditions of material empathy, sensory zoning, symbolic resonance, seasonality sensitivity, and social connection) takes place in this paper with the help of qualitative visual analysis and comparative scoring. Quantitative scores are represented by bar and radar charts to show the differences between the villas. Beit al Batroun is found to be the best in material empathy and symbolic resonance, Villa Clara the best in social connection and balanced sensory patterns, and Villa Chams the best in seasonal sensitivity and weak in material empathy. The findings state the EI-based design methods importance and suggest that regenerative residential architecture ought to be systematically inclusive of empathy-grounded spatial organisation, symbolic depth, and environmental sensitivity. The summary to this paper provides the hypothesis that EI provides an empirical and practical medium through which regenerative residential conditions can be achieved that can sustain well-being and cultural continuum.

Keywords: *Emotional Intelligence (EI), Regenerative Design, Residential Architecture, Human Well-being, Sustainable Interior Design*

Introduction

Interior design has been regarded as both a technical and aesthetic practice, one which is interested in terms of space composition, material, and lighting, and the placement of objects in constructed spaces(Hisham Zamil Hamdan et al., 2025). In the recent 20 years, however, design scholarship has developed in increasingly psychological, emotional, and neurobiological aspects of spatial experience. This paradigm shift has brought up new dimensions of how people perceive, react, and engage with the spaces that they live in(Rui & Firzan, 2025). The concept of emotional intelligence (EI), which started off in psychology as perceiving, interpreting, and controlling emotions, has started becoming an influential tool of understanding and influencing interior environments(Bru-Luna et al., 2021).

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Residential interiors, especially, are emotionally loaded areas where individuals are in need of comfort, identity, belonging, and psychological healing. It is not a passive vessel of actions but a dynamic ecosystem that contacts the sensory, symbolic, and emotional lives of the occupants(Maryam Banaei et al., 2017). Emotionally intelligent interior environments can help one to regulate the state of stress, become more creative, and socially bond, express the culture, and be well-being-affirming when designed wisely (Rui & Firzan, 2025).

Meanwhile, regenerative design has changed the paradigm of sustainable architecture by putting the emphasis not on minimizing harm, but rather on reinstating ecological and human systems(Ar Surabhi Bankhele & Ar Surabhi Bankhele, 2019). The regenerative design goes beyond the energy numbers and looks at human flourishing, meaning-making, emotional attachment to the place, and long-term flexibility. This not only renders the integration of EI into the

regenerative frameworks relevant but also indispensable(Kumar et al., 2025a).

The cultural context in Lebanon is especially good to study these intersections since the traditional and modern domestic architecture of the country reflects the multifaceted forms of emotional expression. The deep connection to the landscape, the traditions, sensory aesthetics, and the social rituals established by the Lebanese villas provide a perfect place to analyse the emotionally intelligent design strategies(Julie Weltzien, 2024).

The current paper examines the nature of EI at work in home interior design by comparing three villas in Lebanon. There are five EI-based dimensions, including material empathy, sensory zoning, symbolic resonance, seasonal sensitivity, and social connection, which are operationalized and measured in the case studies. The comparative interpretation is backed up by the visual data through bar and radar charts. This is aimed at explaining a theoretical and practical framework that would put EI as a regenerative design approach that can make human well-being and spatial identity richer.

Literature Review

EI as a Spatial Phenomenon

EI, which has been formalized by Mayer and Salovey (1997) and popularized by Goleman (1995), is the capacity to perceive, cognitively process, control, and react to emotions(Krishnan & Awang, 2024). Even more current definitions move EI to the sphere of environmental perception, expressive communication with the environment, and emotional literacy in geodetic relationships (Elfenbein & MacCann, 2017). The concept of EI is used in architectural and interior design studies to explain how a constructed environment may be emotionally appealing to users by providing comfort, empathy, sensory coherence, and psychological safety(Rui & Firzan, 2024).

Environmental psychology is progressively connected with spatial EI. Ulrich (1991) suggests that stress can be recovered, and the mind is clear in spaces that meet the emotional expectations of humans(Ulrich et al., 1991). EI is a feature reflected in the interior environments in the forms of materials, textures, colors, spatial hierarchy, sound layers, patterns of natural light, and symbolic values in the choice of design. With emotional intelligence, space becomes performative, that is, it determines how individuals feel, act, and socialize(Laura Pagani et al., 2024).

Interior Design and Emotional Well-Being

Multisensory interactions and the perception of safety, coherence of the environment, symbolic significance, and self-expression opportunity are a few factors that affect well-being in residential interiors (Bruno, 2022). The interiors have emotionally intelligent, supportive sensory environments, personal territories, biophilic, and socially inclusive interiors. Recent studies emphasize the role of sensory adjustment by means of lighting, sound, thermal comfort, and touch because these conditions have a direct impact on emotional control (H. Xu et al., 2025). Houses built on these values promote psychological support and alleviation of stress(Yim & Kwon, 2025).

It is important that the user and environment have an emotional fit. Human beings feel comfortable when there are spatial affordances that align with their cultural expectation, their past experiences, and their senses. The emotionally intelligent design will help sustain this alignment through providing environments that recognize user identity, promote autonomy, and emotional expression(Ren et al., 2024).

Regenerative Design and Human Flourishing

Regenerative design is a step further to sustainable design since it is able to restore ecological systems, cultural identity, and human well-being (Mang & Reed, 2013). It puts architecture within the context of living systems that exist within natural and social ecosystems. Regenerative design focuses on cyclic processes, locality, biodiversity, and health-positive environments(Buckton et al., 2023). One of the principles is known as re-enchantment, that is, the human attachment to place by restoring senses and symbolic immersion(Antonopoulou, 2024).

EI is in line with regenerative objectives. Caring material selection promotes environmental well-being, the sense of material coherence helps in the maintenance of psychological well-being, and symbolic resonance reinforces cultural preservation(Stoewen, 2024). The regeneratively designed residential spaces, therefore, render themselves to be rather emotionally supportive ecosystems than mere functional shelters(Maria Vittoria Giuliani, 2003).

Lebanese Residential Architecture and Emotional Context

The Lebanese architecture is a mix of the Mediterranean openness, the Levantine traditions of hospitality, and the vernacular adaptation to the climate. The Lebanese home is regarded as a place of identity and emotional refuge as well as an exchange of social life(Stéphanie Droit and Alia Fawaz, 2019). The classical style of architecture makes use of natural stones, wood, artisanal tiles, and seasonal adaptation of the courts. Modern villas are redefining these traditions and incorporating modern sensitivities (Stoewen, 2024).

The interior environments in Lebanon are highly emotional in terms of family heritages and objects, regional crafts, and landscapes integration. Spatial identity has a tendency to strengthen the memory, belonging, and community ties. These traits render Lebanese villas a learning environment on the subject of

emotionally intelligent interior design(Stéphanie Droit and Alia Fawaz, 2019).

The Role of Sensory and Symbolic Dimensions

The EI of design shows itself in emotional zoning, symbolic narrative, and empathy towards the environment. Sensory zoning is the systematized arrangement of sensation in a space in order to prevent overload and facilitate emotional regulation(Lin et al., 2025). Symbolic resonance happens when interior elements convey significant cultural, personal, or spiritual stories. The combination of these dimensions promotes emotional grounding and identity reinforcement(Y. Xu & Wu, 2022).

Another concept that is slowly evolving is material empathy, where the focus is on the emotional nature of materials: warmth, texture, origin, and environmental impact. Emotions of the materials used must be of comfort, authenticity, and naturalness, which will bring about emotional stability(Wang et al., 2023).

Methodology

The research design used in this study assumed the use of a mixed-method research design, which combined quantitative and qualitative methods to assess the expression of EI between different residential interiors in Lebanon. The mixed-methods approach was suitable since EI in interior design is simultaneously quantifiable (via the sensory, material, and spatial qualities) and qualitative (via the symbolic meaning, environmental responsiveness, and experience)(Akhmetova et al., 2014). Such a visual analysis of three architecturally clear villas, Beit al Batroun, Villa Clara, and Villa Chams, was therefore used in the research as they were chosen based on contextual and architectural richness, as well as accessibility to visual documentation.

Operationalizations of five EI dimensions in spatial design were used: material empathy, sensory zoning, symbolic resonance, seasonal sensitivity, and social connection. These dimensions were based on environmental psychology, biophilic design, and regenerative design theory. All villas were visually checked and assessed on a numeric basis of one to ten on each dimension, in terms of the presence of the characteristic of EI as well as its coherence and depth. The scoring procedure was based on cross-checking and iterative analysis in order to minimise subjective bias.

The bar charts were used to visualize quantitative data to demonstrate comparative differences among the five dimensions of EI. A second visualization, a radar chart, was created to make sense of whole-brain emotional profiles, as well as to show how the design strategy of each villa relates to the overall regenerative and EI. Both visualizations were made with the help of qualitative interpretation that enabled the study to describe not just the differences in numbers but also the differences in experience and symbolism(Kennedy & Hill, 2018). The combination of the use of numerical scoring and reflective interpretation allowed having a complex description of the EI integrated in every interior(Shapiro et al., 2025).

Results

The quantitative analysis has shown that there is a difference between the villas on the five dimensions of EI. The scores of Beit al Batroun were best with respect to the material empathy and symbolic resonance. This is a symptom of its vast utilization of natural textures, organic shapes, and culturally based aspects that would develop a solid emotional foundation. Villa Clara has received the best scores in social connection with the help of the spatial arrangement, which serves to group, open up, and socialize. Villa Chams was highly sensitive to the season, which manifested itself through its light modulation, space flexibility, and volumetric sensitivity to the environment.

These differences can be well depicted in the bar chart, where the differences in each dimension on a case-by-case basis are seen, and which emotional attributes prevail in each villa. Beit al Batroun and Villa Clara have a more balanced score on most of the categories, whereas Villa Chams displays a strong variation, which portrays a more specific focus on emotions. (Figure 1).

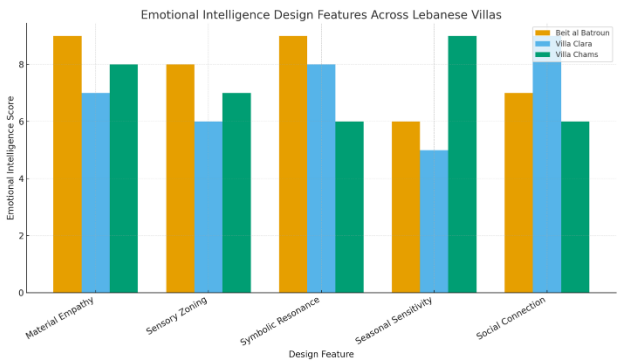

Figure 1: Comparative Emotional Intelligence Scores Across Three Lebanese Villas

The radar chart also offered a qualitative layer because it showed general emotional profiles. The profile of Beit al Batroun had a symmetrical appearance with the maximum in empathy and symbolic continuity, which indicated the well-balanced environment of emotions based on the sense of who I am and craft. The profile of Villa Clara was defined as being strong in social connection and symbolic resonance and moderately seasonally sensitive, meaning that they were more oriented toward hospitality and personal warmth than the cycles of the environment. Villa Chams demonstrated good seasonal intelligence and a smaller symbolic and material scheme, suggesting that design decisions are focusing on climate, rhythm, and natural interaction instead of cultural or emotional symbolism (Figure 2).

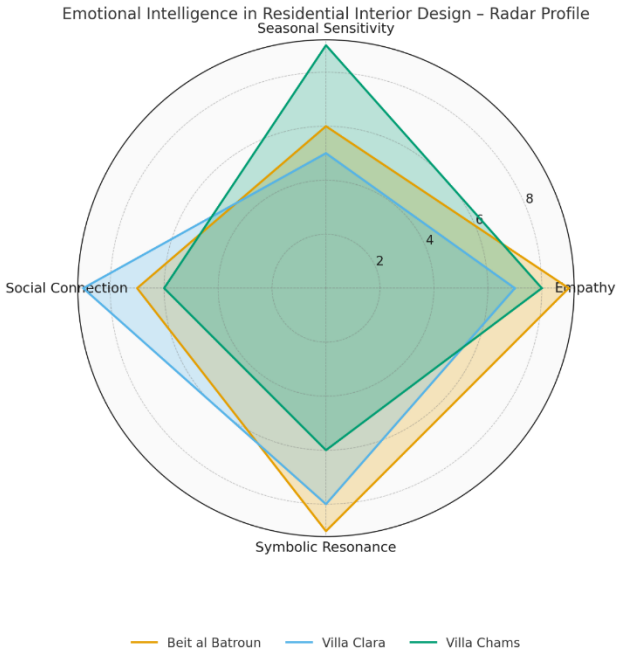

Figure 2: Emotional Intelligence Profile of Lebanese Villas Across Four Design Dimensions

The combination of the bar and radar analyses indicates that EI in interior design is multi-dimensional, and each of the villas represents a unique emotional strategy, which is formed by the material selection, spatial reasoning, cultural allusions, and the reaction to the environment.

Discussion

The results of this research indicate that EI offers a powerful and multi-dimensional model of interpreting the qualitative performance of the residential interior, especially when measured through the prism of regenerative design(Omid Azari et al., 2022). The relative analysis of the three Lebanese villas explains how EI is exhibited differently in relation to the cultural background, material approach, environmental focus, and social purpose of a project. Such differences are what the notion of EI design is not a formula but ecological; emerging out of the interaction of spatial, material, symbolic, and relational forces that interact in coming to affect human well-being together(Donald Arthur Norman, 2004).

The high scores in material empathy and symbolic resonance performance of Beit al Batroun over time show the importance of true materiality and narrative foundation when it comes to creating emotionally sustaining environments(Al Maalouf et al., 2024). Its wide application of natural rock, crafted surfaces, wood, and heritage-related compositions implies that the inhabitants feel emotionally secure and reassured when they are enclosed with the elements reminiscent of cultural memory and environmental continuity(Li et al., 2025). The interior echoes environmental psychology theories that place importance on familiarity and sensory richness, and biographical meaning in creating emotional stability. The symbolic and material attributes act as emotional anchors, thus lowering cognitive stress and improving the sense of belonging(Zhang, 2016). This means that the emotionally intelligent design within a regenerative setting is not only based on the experience of the senses but also on the continuity of culture and maintenance of the local identity(Al Maalouf et al., 2024).

Villa Clara, in its turn, demonstrates an emotionally intelligent profile with its basis mainly in the enhancement of socialization. The highest rating of the villa in the social connection is an architectural composition that favors motion, encounter, and shared appearance. Transparency of spaces, constitutional mobility of furniture plans, and well-defined shared spaces collaborate in prompting interpersonal interaction as well as family unity(Miller, 2016). These design techniques are pretty consistent with regenerative design, which prefigures community resilience, social integration, and shared meaning-making. The EI here can be noted as a factor that is based on the ability of the home to facilitate the relational well-being, diminish social isolation, and create the opportunity that emotional expression and care can be enforced naturally(Toner et al., 2023). According to Villa Clara, social intelligence is supposed to be perceived as a crucial regenerative resource, especially in domestic contexts when social capital is closely connected with the elements of mental health and emotional strength(Donald Arthur Norman, 2004).

Another approach that serves as a complement to Villa Chams is that which shows the emotional strength of environmental attunement. Its high seasonal specificity and great correspondence to natural rhythms show how the active interactions of light, temperature, and landscape could serve to promote emotional control and biophilic attachment(Maria Vittoria Giuliani, 2003). The construction of the villa provokes its residents to monitor the changes of the seasons, change their perception of the space according to the evolved patterns of daylight, and interact with the surrounding world in a profoundly incarnate manner(Holzman et al., 2025). The biophilia and ecological psychology research confirms the notion that this involvement leads to the reduction of stress, cognitive, and emotional grounding(Asojo & Hazazi, 2025). The lower symbolic resonance of the villa is, however, directed towards the drawbacks of the environment, which favors environmental intelligence more than cultural identity(Toner et al., 2023). The implication of this trade-off is that EI in interior design is the advantage of finding the right middle ground between ecological sensibility and narrative breadth; otherwise, the spaces can be perceptually lively, but emotionally two-dimensional(Al Maalouf et al., 2024).

The mixed-methods approach emphasizes that EI in interior design is the result of various dimensions of experiences converging as opposed to a single design act.

The bar chart data depicts individual strengths and weaknesses, whereas the radar chart shows more holistic emotional profiles(Webber, 2017). A combination of these tools proves that emotionally intelligent interiors are expected to work best when material, sensory, symbolic, environmental, and social aspects are combined in a deliberate manner. The regenerative design goes further to place EI in larger contexts of ecological care, human-centered adaptation, and human flourishing over time(Al Maalouf et al., 2024).

One of the fundamental lessons that can be learned from the comparative outcomes is the difference between culturally based, environmentally adaptive, and socially focused emotional strategies(Dussault & Thompson, 2024). The emotionally coherent identity at Beit al Batroun demonstrates the power of emotion grounding based on traditions. Villa Clara focuses on interpersonal and community types of emotional support, and this design of homes is in accordance with social health(Holzman et al., 2025). Villa Chams anticipates environmental intelligence, and it is restorative with reference to nature and rhythmic sense. All the models are unique ways of achieving emotional well-being, and each of them proves that regenerative interiors should be both practical and expressive(Webber, 2017).

These lessons have a larger extension on the current interior design practice. First, the design strategies must be more focused on emotional driver variety so that all the material, symbolic, environmental, and social needs are represented(Zhang, 2016). Second, EI must be incorporated at an early stage of design and be integrated as a conceptual development as opposed to being a decorative aspect. Third, the cultural and geographical backdrop should always be at the heart of the emotionally intelligent design because it is impossible to break emotional resonance and place, heritage, and environmental settings(Omid Azari et al., 2022).

Lastly, the study recommends that research on the assessment of EI in spatial environments should be further developed in the future. The combination of neuroscientific instruments, sensory mapping practices, and participatory design models can enhance insights regarding how occupants perceive and experience interiors on an emotional level(Attaianese et al., 2025). These advancements would strengthen EI as an appraisal measure and as a design philosophy that is the focus of regenerative architecture.

Conclusion

This study revealed that EI is critical in the establishment of supportive, regenerative residential environments that are emotional. The mixed-method approach to the study of three Lebanese villas has shown that there are different profiles of emotions determined by material usage, sense organization, cultural symbolism, environmental processes and social orientation(Obeid et al., 2021). The results present the need to design houses that transcend aesthetics and actively facilitate emotional hedonism, cultural continuity, and environmental harmony.

The regenerative design provides a rich platform through which EI can be utilized in architecture so that the internal environments are characterized by positive contribution to human well-being(Kumar et al., 2025b). Designers can design settings that sustain emotional life and propagate psychological resilience by incorporating material empathy, symbolic richness, season sensitivity, and spaces to foster social connection(Rashmita Bardalai & Jenny Underwood, 2023). The paper comes to the conclusion that EI is to be considered not only as one of the central aspects of the modern interior design practice, but also a fundamental quality of regenerative architectural thought.

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