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| RESEARCH ARTICLE

Evaluating Hospitality: Tourist Perceptions of Servicescape in Siquijor's Accommodations through the Lens of Bitner's Servicescape Model

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ABSTRACT

In today's highly competitive service landscape, businesses increasingly recognize the strategic value of well-designed physical environments—what Bitner (1992) termed the *servicescape*—to enhance customer satisfaction, brand loyalty, and operational performance. This study employed a quantitative research design using proportional sampling (via Slovin's formula) and high-reliability instruments (Cronbach's $\alpha = 0.92$ –0.95) to assess tourist perceptions across three primary servicescape dimensions: Ambient Condition, Spatial Layout, and Signs, Symbols, and Artifacts. Data were analyzed using weighted means and path analysis to evaluate both the perceived importance and statistical impact of individual environmental factors. Guided by the Expanded Servicescape Model proposed by Mansueto, Magsayo, and Suan (2025)—which introduces expanded subdimensions such as flexibility, symbolic significance, and Instagrammability (see *Figure 1*)—the findings reveal a consistent misalignment between what tourists perceive as important and what most strongly influences their experience. While cleanliness and configuration received the highest ratings, factors like sensory balance, adaptability, and symbolic relevance had greater predictive power. These results underscore the need for service environments that are not only aesthetically pleasing but also emotionally engaging, contextually adaptive, and culturally resonant. The study was conducted independently, without external funding, to ensure objectivity and academic integrity.

KEYWORDS

Servicescape, ambient condition, spatial layout, symbolic design, Instagrammability, Expanded Servicescape Model, tourist perception, path analysis, environmental psychology, hospitality design.

ARTICLE INFORMATION

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1. Introduction

The evolving landscape of customer experience has placed greater emphasis on the role of physical environments in service settings. Businesses, particularly in the hospitality and retail sectors, have recognized the strategic importance of designing their spaces to enhance customer satisfaction and employee performance. Bitner's (1992) Servicescape Model offers a comprehensive framework for understanding how ambient conditions, spatial layout, and symbolic elements shape the overall service experience. Recent research continues to explore these factors, demonstrating their influence on customer perceptions, behavioral intentions, and operational efficiency (Orth et al., 2022; Ananda et al., 2023). In an increasingly competitive market, an optimized servicescape has become a key differentiator for businesses aiming to foster brand loyalty and deliver exceptional customer experiences.

Despite the benefits of a well-designed servicescape, businesses face significant challenges in implementing effective design strategies across various service environments. Striking the right balance between aesthetics and functionality remains a common struggle, as spaces must be both visually appealing and practical. Additionally, evolving customer expectations

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regarding ambiance, layout, and symbolic elements require businesses to continuously adapt. The COVID-19 pandemic further complicated these considerations, making safety and hygiene essential aspects of service environment design (Bessie & Boimau, 2022; Batra & Taneja, 2023). Moreover, the rise of digital transformation has led to the emergence of hybrid service environments, requiring businesses to integrate physical and digital spaces effectively (Dick & Woloszyn, 2023).

To address these challenges, researchers have focused on how specific aspects of the servicescape influence customer experience and business performance. Studies on ambient conditions—such as lighting, scent, and background music—aim to identify optimal configurations for enhancing customer satisfaction and engagement (Fan et al., 2023; Gulzar, 2023). Research on spatial layout examines how design elements like connectivity, openness, and navigation affect comfort and accessibility, particularly for diverse customer groups (Ahmadi et al., 2023; Wang et al., 2023). Additionally, the role of signs, symbols, and artifacts in reinforcing brand identity and guiding customer behavior is a key area of study, with researchers evaluating their impact in both physical and digital service settings (Heo et al., 2023; Nisar & Masood, 2024). These insights provide valuable quidance for businesses looking to enhance their service environments.

This research offers practical solutions for businesses seeking to optimize their servicescapes to improve customer satisfaction, strengthen brand loyalty, and increase operational efficiency. By synthesizing insights from existing studies, it provides a framework for integrating ambient conditions, spatial layout, and symbolic elements cohesively. It also highlights strategies for creating adaptive service environments that align with evolving customer expectations and industry trends. Additionally, contemporary challenges—such as post-pandemic design considerations and the seamless integration of digital and physical service elements—are addressed. By applying these findings, businesses can develop immersive and engaging service environments that foster positive customer experiences and drive long-term success.

1.1 Theoretical Framework

The Servicescape Model, developed by Mary Jo Bitner (1992), explores how the physical environment in service settings influences both customer experiences and employee performance. It highlights three key dimensions: (1) ambient conditions, such as lighting, music, and scent, which shape mood and perception; (2) spatial layout and functionality, which ensure comfort and efficiency; and (3) signs, symbols, and artifacts, which provide visual cues that guide customers and reinforce brand identity. In hospitality, a thoughtfully designed servicescape fosters positive emotions, enhances customer satisfaction, and improves operational efficiency. For instance, in a tourist accommodation, elements like soothing background music, elegant décor, and intuitive wayfinding create a seamless and memorable guest experience. By strategically designing service environments, businesses can cultivate loyalty, encourage repeat visits, and optimize employee performance, making the servicescape a vital tool for success in service industries.

1.2 Conceptual Framework

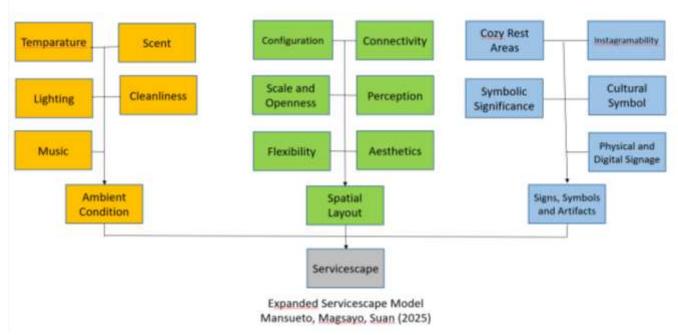


Figure 1 Expanded Servicescape Model by Mansueto, Magsayo and Suan (2025)

The Expanded Servicescape Model by Mansueto, Magsayo, and Suan (2025) broadens the way we understand service environments by categorizing the elements that shape how people experience a space. It builds on traditional models by adding more sensory and symbolic layers. The *Ambient Condition* (yellow section) includes sensory inputs like temperature, lighting, music, scent, and cleanliness—all of which directly affect comfort and mood. The *Spatial Layout* (green section) covers the physical setup: how the space is configured, its scale, openness, adaptability, connectivity, and visual appeal. These elements shape how functional and inviting the environment feels. The *Signs, Symbols, and Artifacts* (blue section) bring cultural and emotional meaning into the space, through features like cozy rest areas, Instagrammable visuals, symbolic elements, cultural representations, and both digital and physical signage. Together, these three components form the *Servicescape* (gray section), which influences customer experience, behavior, emotional responses, and the overall effectiveness of the service environment.

1.3 Review of Related Literature

How a space looks, feels, and functions can make or break a customer's experience. Recent research has taken a closer look at what shapes these experiences by focusing on three key aspects: ambient conditions, spatial layout and functionality, and the use of signs, symbols, and artifacts. Whether it's the lighting and scent in a hotel lobby, the layout of a retail store, or the cultural symbols in a café, these elements work together to influence how people feel, behave, and make decisions in a space. The next sections expand these dimensions, showing how they shape customer satisfaction and engagement across different service industries.

1.3.1 Ambient Condition

Ambient conditions, like temperature, lighting, scent, and sound, play a crucial role in shaping customer experiences across different service industries. Orth et al. (2022) explored how (1) temperature affects online service environments, showing that warmth can influence customer perceptions. In a more hands-on setting, Yun et al. (2022) examined how (2) lighting and (3) background music contributes to customer satisfaction in hair salons. Meanwhile, Bessie and Boimau (2022) looked at how ambient factors, along with spatial layout and symbols, influenced customer satisfaction in banking services during the COVID-19 pandemic. Ananda et al. (2023) expanded on this by studying the impact of (4) scent and lighting on satisfaction and repurchase intentions in both online and offline settings. In hospitality, Fan et al. (2023) investigated how sensory elements like scent and sound shaped guest perceptions at different stages of the pandemic, while Gulzar (2023) provided a broader review of how these factors affect customer experiences in hotels. In healthcare, Batra and Taneja (2023) highlighted the importance of (5) cleanliness and lighting in hospitals, particularly in the post-pandemic era, and how these elements impact patient satisfaction and behavior. Together, these studies reinforce the idea that ambient conditions are not just background details—they actively influence emotions, customer satisfaction, and decision-making in a wide range of service environments.

1.3.2 Spatial Layout and Functionality

The way a space is laid out has a huge impact on how people experience and interact with it. A well-designed space isn't just about looks—it's about functionality, ease of movement, and how people feel when they're in it. Several key elements contribute to effective spatial design, starting with (1) configuration, which refers to how different areas are arranged, how people move through them, and how spaces are divided. Ahmadi et al. (2023) found that optimizing layouts, like using rectangular or Lshaped designs in housing, makes better use of space. Similarly, Wang et al. (2023) showed that adjusting vertical dimensions can improve accessibility, particularly for older adults—an idea that also applies to service environments aiming to be more inclusive. Another crucial factor is (2) connectivity, or how different areas are linked together. Zhang et al. (2024) studied how urban road networks and land use affect movement, a concept that can help businesses design smoother and more intuitive customer journeys. (3) Scale and openness also play a big role in how welcoming and navigable a space feels. Behnejad and Wicks (2022) found that better visibility and openness help people find their way more easily, making spaces feel more intuitive and less overwhelming. Beyond structure, (4) perception—how a space looks and feels—affects how people engage with it. A well-thought-out layout can guide movement, reduce confusion, and create a sense of comfort. At the same time, (5) flexibility is becoming increasingly important, especially in places that need to adapt quickly to different needs. Sun et al. (2022) studied how farmland layouts can be optimized for sustainability, an idea that applies to retail and hospitality, where modular, multi-use spaces improve efficiency. Finally, (6) the aesthetic and psychological impact of spatial design can shape a person's overall experience. Liu et al. (2024) looked at how museums use storytelling in their layouts to create meaningful visitor experiences, a strategy that can also make service spaces more engaging and memorable. Looking at the bigger picture, Ghouchani et al. (2022) emphasized the importance of spatial justice, or designing spaces that are fair and accessible to everyone. By focusing on these key elements—configuration, connectivity, scale, perception, flexibility, and aesthetics—spatial design can create spaces that are not only functional and efficient but also welcoming and human-centered.

1.3.3 Signs, Symbols and Artifacts

Signs, symbols, and artifacts serve as essential elements in various environments, shaping experiences and interactions through their meanings and functions. (1) Cozy rest areas and dynamic spatial arrangements create ever-changing environments that

reflect the independence and dynamism of users, enhancing the symbolic meaning of spaces (Kim et al., 2023). (2) In branding, aesthetic symbols influence customer perception, brand attitude, and the intention to revisit, with Instagramability playing a crucial role in modern consumer behavior (Heo et al., 2023). (3) Artifacts within bureaucratic and service settings also carry symbolic significance, as their materiality can reflect power structures and accessibility, impacting how individuals navigate institutional spaces (Nisar & Masood, 2024). (4) Cultural symbols, such as Japan's "kawaii" imagery, contribute to social cohesion by fostering group harmony within service environments, demonstrating the power of verbal and visual signs in shaping communal experiences (Bîrlea, 2021). (5) Physical and digital signage further influence navigation and interaction in digital servicescapes, where elements such as financial security indicators, interactivity, and symbolic artifacts play a role in user engagement (Dick & Woloszyn, 2023). Together, these studies highlight the multifaceted role of signs, symbols, and artifacts in structuring human interactions across physical, commercial, and digital landscapes.

2. Methodology

This study employed a quantitative research design to systematically evaluate how tourists perceive various dimensions of the servicescape and compare accommodation practices. The approach is data-driven and objective, using statistical tools to extract meaningful insights from participant responses.

2.1 Sampling and Instrument Reliability

A proportional sampling method, determined using Slovin's formula, was applied to ensure representativeness and statistical reliability within the target population. Reliability testing confirmed the internal consistency of the research instrument across all servicescape dimensions. Each section of the questionnaire underwent Cronbach's Alpha testing with 10 respondents per dimension:

Ambient Condition (15 items): $\alpha = 0.92$ Spatial Layout and Functionality (18 items): $\alpha = 0.95$ Signs, Symbols, and Artifacts (15 items): $\alpha = 0.94$

All values exceeded the accepted threshold of 0.70, demonstrating strong internal consistency and supporting the instrument's reliability for measuring tourist perceptions.

2.2 Data Analysis

The primary method of analysis was the weighted mean, which was used to assess the relative importance of each servicescape dimension as perceived by tourists. This allowed for the identification of key strengths and areas needing improvement within each environmental domain.

To further examine how individual components contribute to their respective servicescape categories, Path Analysis was conducted. This enabled the study to move beyond surface-level preferences and evaluate the underlying influence of each factor—such as how lighting or scent contributes to the overall ambient experience.

2.3 Ethical Considerations

All research protocols followed strict ethical guidelines. Participants were informed about the study's purpose and provided voluntary consent. Confidentiality was strictly maintained, and all collected data were used solely for academic research.

3. Result and Discussion

3.1 Ambient Condition

Table 1 Summary of Ambient Condition				
Dimensions	Weighted Mean	Verbal Description		
Temperature	4.48	Very Important		
Lighting	4.42	Very Important		
Background Music	4.24	Very Important		
Scent	4.44	Very Important		
Cleanliness	4.49	Very Important		
Composite Mean	4.42	Very Important		

Legend : 1.00 – 1.80 Not Important; 1.81 – 2.60 Slightly Important; 2.61 – 3.40 Neutral; 3.41 – 4.20 Important; 4.21 – 5.00 Very Important

Based on the data summarized in Table 1, cleanliness emerged as the highest-rated ambient condition, with a weighted mean of 4.49, slightly exceeding other dimensions such as temperature (4.48), lighting (4.42), and scent (4.44). This finding aligns with a growing body of literature emphasizing the critical role of cleanliness in shaping tourist satisfaction and accommodation preferences. Multiple studies conducted between 2021 and 2025 consistently identify cleanliness as either the most influential or among the top-ranking factors affecting tourists' perceptions, behaviors, and loyalty. For instance, Li et al. (2024) found that university student tourists in Taiwan ranked room cleanliness as the most important accommodation attribute, while Spr et al. (2023) demonstrated that cleanliness directly influenced repeat purchase intentions among Malaysian domestic tourists. Similarly, Zhang et al. (2023) analyzed over half a million reviews and noted that cleanliness was one of the top sources of guest dissatisfaction when absent. Moreover, Nessel et al. (2021) identified a substantial market segment defined primarily by their preference for clean environments, and Vinayagam (2025) found cleanliness to be a major predictor of tourist loyalty in urban tourism contexts. These converging findings underscore that cleanliness is not only a core component of perceived ambient quality but also a strategic priority for hospitality providers seeking to enhance satisfaction and foster return visits.

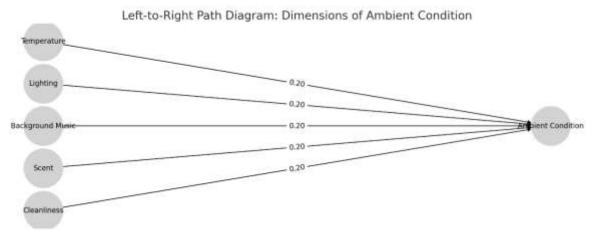


Figure 2 Path Analysis for Ambient Condition

The path diagram illustrates a Left-to-Right Path Analysis that breaks down how various environmental factors contribute to the overall ambient condition in a setting such as a store, restaurant, or service location. It shows that all five components—Temperature, Lighting, Background Music, Scent, and Cleanliness—have an equal impact, each with a standardized path coefficient of 0.20. This means that every factor contributes equally to how customers perceive the ambiance, with each explaining 20% of the variance. No single element dominates, so improving just one—like lighting or scent—won't be enough. To create an ideal customer experience, businesses must maintain balance across all five areas, as neglecting any one can lower the perceived quality of the environment. Although cleanliness often stands out as the most noticeable aspect of a space, it doesn't hold more predictive power than other environmental factors when it comes to shaping perceptions of ambient conditions. In fact, recent research shows that scent, music, temperature, and lighting each have an equal impact on how people experience a space—meaning none should be ignored. Cleanliness may catch the eye first, but scent, for instance, plays a powerful emotional role, influencing mood, spending behavior, and even future intentions (Silva et al., 2021; Koay & Tey, 2024). Likewise, background music alters emotional engagement and even taste perception (Istiani et al., 2024), while temperature subtly shifts sensory experiences and cleanliness judgments (Mazon et al., 2024). Lighting also contributes indirectly by shaping how cleanliness is perceived (Vos, 2022). So, while cleanliness may be the most visible, it's not more important. All factors work in tandem, and a balanced approach is key to truly managing ambient experience.

3.2 Spatial Layout

Table 2 Summary of Spatial Layout

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Dimensions	Weighted Mean	Verbal Description		
Configuration	4.37	Very Important		
Connectivity	4.34	Very Important		
Scale and Openness	4.36	Very Important		
Perception	4.34	Very Important		
Flexibility	4.32	Very Important		
Aesthetic and Psychological Impact	4.26	Very Important		
Composite Mean	4.33	Very Important		

Legend: 1.00 - 1.80 Not Important; 1.81 - 2.60 Slightly Important; 2.61 - 3.40 Neutral; 3.41 - 4.20 Important; 4.21 - 5.00 Very Important

The analysis of spatial layout dimensions yielded a composite mean of 4.33, indicating a high overall level of perceived effectiveness. Among the six evaluated dimensions, *Configuration* recorded the highest weighted mean (4.37), followed closely by *Scale and Openness* (4.36), *Connectivity* and *Perception* (both at 4.34), *Flexibility* (4.32), and *Aesthetic and Psychological Impact* (4.26). These results underscore configuration as the most critical aspect of spatial layout within the study context. This finding is consistent with recent empirical literature highlighting configuration's central role in shaping spatial functionality and user experience. Studies from 2021 onward reinforce this position across a range of settings: from its decisive influence on hotel placement and guest perception (Fan et al., 2023; Chang & Lin, 2024) to its role in residential design patterns and social sustainability in urban environments (Ullah et al., 2022; Soltani et al., 2021). Configuration has also been shown to directly impact productivity in industrial facilities (Arora & Vidya, 2024), behavior and interaction in educational spaces (Sarıberberoğlu & Ünlü, 2024), and privacy adaptation in public housing (Obeidat & Abed, 2022). Furthermore, spatial configuration metrics have proven essential in early-stage office planning and design optimization (Asriana et al., 2022), while advanced evaluation frameworks such as fuzzy logic have emphasized configuration's influence on performance and user impact (Nady et al., 2022).

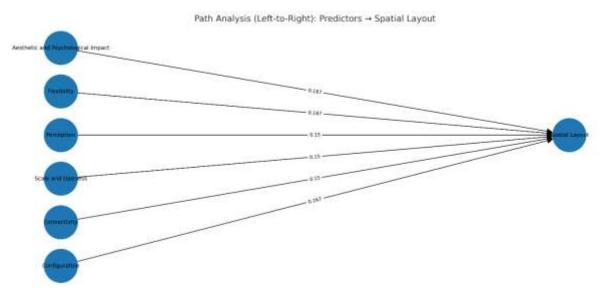


Figure 3 Path Analysis for Spatial Layout

Although configuration is the most noticeable factor in spatial layout—evidenced by its highest weighted mean score (4.37) in Table 2 and supported by numerous studies highlighting its structural importance (Fan et al., 2023; Chang & Lin, 2024; Ullah et al., 2022)—it is not the strongest predictor of spatial effectiveness. Path analysis shows that aesthetic and psychological impact, along with flexibility, exert a greater influence, each with a standardized coefficient of 0.187, compared to configuration's 0.167. This aligns with recent research: Su and Tang (2021) and Li (2024) emphasize the powerful role of design aesthetics and psychological resonance in shaping spatial perception and user experience, while Gregorians et al. (2025) demonstrate through neural imaging how aesthetic appraisal and spatial memory are deeply intertwined. Similarly, Hessari and Chegeni (2022) highlight how flexibility, through multi-functionality and separability, enhances spatial utility more directly than configuration alone. In short, configuration provides the structural framework, but it is flexibility and aesthetic-psychological quality that ultimately drive spatial effectiveness.

3.3 Signs, Symbols and Artifacts

Table 3 Summary of Signs, Symbols and Artifacts

Dimensions	Weighted Mean	Verbal Description
Cozy Rest Areas and Dynamic Spatial Arrangements	4.28	Very Important
Branding and Aesthetic Symbols	4.15	Important
Artifacts in Bureaucratic and Service Settings	4.06	Important
Cultural Symbols and Social Cohesion	4.07	Important
Physical and Digital Signage	4.20	Important
Composite Mean	4.15	Important

Legend: 1.00 – 1.80 Not Important; 1.81 – 2.60 Slightly Important; 2.61 – 3.40 Neutral; 3.41 – 4.20 Important; 4.21 – 5.00 Very Important

The table on Signs, Symbols, and Artifacts highlights a clear imbalance in value placement across dimensions, with Artifacts in Bureaucratic and Service Settings (4.06) and Cultural Symbols and Social Cohesion (4.07) receiving the lowest weighted means. These low scores indicate a consistent pattern of neglect, both in perception and design priorities. Recent studies support this view: Nisar & Masood (2024) and Maheswari et al. (2024) show that artifacts are often overlooked or treated as purely functional, while Lin & Zhang (2024) found them to be perceived as indifferent in user experiences. Similarly, Kampani & Jhamb (2022) and Rachman et al. (2024) point out that cultural symbols and social dynamics are rarely integrated into servicescapes unless driven by local efforts. This underemphasis is problematic, as these elements are crucial for fostering inclusion, identity, and meaningful user engagement—especially in public or culturally diverse environments. Without deliberate attention to these neglected values, service environments risk becoming sterile, impersonal, and disconnected from the communities they aim to serve.

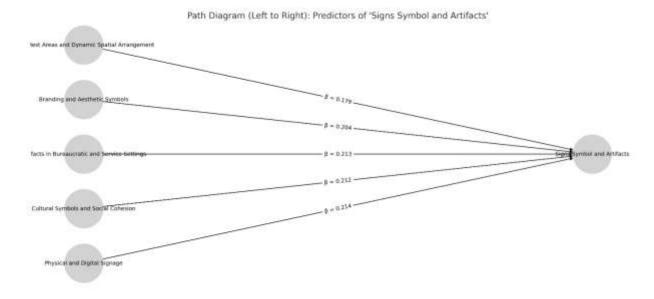


Figure 4 Path Analysis for Signs Symbol and Artifacts

The table reveals that all five predictors—Physical and Digital Signage, Artifacts in Bureaucratic and Service Settings, Cultural Symbols and Social Cohesion, Branding and Aesthetic Symbols, and Cozy Rest Areas and Dynamic Spatial Arrangement—significantly affect the outcome variable, *Signs, Symbols, and Artifacts*, with p-values below 0.001, confirming statistical reliability. Physical and Digital Signage (β = 0.214) and Artifacts in Bureaucratic and Service Settings (β = 0.213) emerged as the strongest predictors, aligning with findings by Saini et al. (2022) and Grave et al. (2021), who highlight signage's role in consumer behavior and the strategic use of artifacts in organizational planning. Cultural Symbols and Social Cohesion (β = 0.212) also showed strong influence, consistent with Marino and Mu (2024), who emphasized their role in fostering identity and cohesion. Branding and Aesthetic Symbols (β = 0.204) and Cozy Rest Areas and Dynamic Spatial Arrangement (β = 0.179) were slightly weaker but still significant; this supports research by Gandla and Vemali (2023) and Kim et al. (2023), which confirm that branding cues and spatial design shape perception and satisfaction. The close range of beta values suggests all variables contribute meaningfully, though not equally, to how signs, symbols, and artifacts function in various environments.

The two tables present complementary but distinct perspectives: while all five variables significantly *predict* the outcome *Signs, Symbols, and Artifacts*, the weighted mean scores reveal a *perceptual gap* in how some dimensions are valued. Notably, Artifacts in Bureaucratic and Service Settings and Cultural Symbols and Social Cohesion, despite being strong predictors (β = 0.213 and β = 0.212), received the lowest mean scores (4.06 and 4.07), suggesting that although these elements strongly influence outcomes, they are undervalued or underprioritized in practice. This disconnect points to a critical oversight in design and policy—what matters most in shaping user experiences is not always reflected in current service environment priorities.

4. Conclusion

Across the three environmental domains—ambient conditions, spatial layout, and signs, symbols, and artifacts—the data reveals a recurring theme: the elements most valued in perception do not always align with those most influential in impact. (1) For ambient conditions, cleanliness received the highest weighted mean (4.49), showing it is the most visually and emotionally noticed factor; however, path analysis shows that all five dimensions—temperature, lighting, background music, scent, and cleanliness—contribute equally to the overall ambiance ($\beta = 0.20$). This indicates that effective environmental design requires a balanced sensory approach, not just a focus on what seems most important at first glance. (2) In terms of spatial layout, configuration emerged as the most appreciated element (4.37), but it was not the strongest predictor of effectiveness; flexibility and aesthetic-psychological impact (both $\beta = 0.187$) had greater influence than configuration ($\beta = 0.167$). This highlights the importance of designing spaces that not only function structurally but also adapt to various uses and resonate with users emotionally. (3) The Signs, Symbols, and Artifacts domain revealed an even sharper disconnect: while artifacts in bureaucratic settings ($\beta = 0.213$) and cultural symbols ($\beta = 0.212$) were among the strongest predictors of environmental impact, they received the lowest perception scores (4.06 and 4.07), signaling neglect in practical implementation. Bridging these gaps between perceived value and actual influence is essential for creating environments that are not only well-received but also deeply functional, inclusive, and meaningful.

5. Recommendations

To align design practices with what truly influences user experience, targeted adjustments must be made across all three environmental domains. (1) For ambient conditions, designers and facility managers should implement synchronized sensory design protocols, such as using programmable smart lighting systems that adjust throughout the day, curated scent diffusers in entry points, playlists tailored to the mood or function of the space, and strict maintenance schedules for cleanliness and air quality. This ensures all sensory factors—not just cleanliness—are intentionally curated to shape a cohesive atmosphere. (2) In terms of spatial layout, planners should integrate modular furniture, movable partitions, and biophilic design elements that promote flexibility and emotional engagement. For example, libraries or co-working spaces can benefit from open-plan zones that can be reconfigured for group or individual use, paired with calming color schemes and natural lighting to support psychological comfort. (3) For signs, symbols, and artifacts, institutions should establish design guidelines that mandate the inclusion of culturally relevant symbols, local art, and contextual artifacts in shared spaces. This might include installing wayfinding signage in multiple languages, incorporating murals or displays that reflect the local community's heritage, or showcasing institutional values through meaningful visual motifs—all developed in collaboration with local stakeholders to ensure authenticity and resonance.

Declaration

This study is conducted independently by the researchers and has not received any funding or support from any accommodation providers. It is carried out solely for academic purposes, ensuring neutrality and objectivity in data collection, analysis, and interpretation. The findings and conclusions drawn from this research are free from any external influence, maintaining the integrity and credibility of the study.

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

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